



THE INDEX OF PUBLISHED RESEARCH

A-Z of Research on ME/CFS
and Long Covid



FOREWORD

Welcome to the ME Association Index of Published ME/CFS Research

This is an A-Z of research studies and selected key documents and articles, listed by subject matter, on myalgic encephalomyelitis or chronic fatigue syndrome (ME/CFS) and Post-Covid Syndrome (Long Covid).

The Index is updated at the end of every month, and we publish a weekly blog of recent research that are available on the ME Association website and social media platforms. These are supplemented by periodic research reviews on topical subjects and are also aimed at the lay audience.

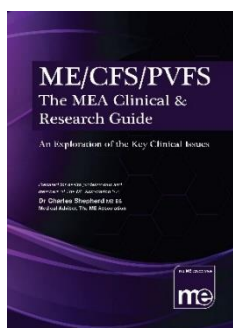
The Index adopts the subject headings used in **The ME Association Clinical and Research Guide** (shown opposite) which provides an authoritative review of clinical knowledge and research evidence and is updated annually:

- The latest edition [can be purchased from the website](#) shop.
- It is also available to purchase from [Amazon in Kindle](#) format.
- Free copies are available [to healthcare professionals who register](#) and who will also receive the quarterly ME Medical magazine.

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- In return for your support, you will receive the quarterly magazine, **ME Essential** – quite simply the best M.E. magazine in the UK today!



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Please note: Research published after May 2022 (the date of the last update to the MEA Clinical and Research Guide or 'Purple Book') is denoted by *NEW in purple following the citation in the listing below.

For those papers added after October 2022 and we have commented on in our [Weekly Research Roundup](#) this is denoted by Comment in purple following the citation in the listing below.

1. NOMENCLATURE AND DEFINITION

Asprusten TT, et al. (2015) Study findings challenge the content validity of the Canadian Consensus Criteria for adolescent chronic fatigue syndrome. *Acta Paediatrica* 104 (5):498-503 **Link:**

<https://www.ncbi.nlm.nih.gov/m/pubmed/25640602/>

Brurberg KG, et al. (2013) Case definitions for chronic fatigue syndrome/myalgic encephalomyelitis (CFS/ME): a systematic review. *BMJ Open* 4 (2). **Link:** <https://bmjopen.bmj.com/content/4/2/e003973>

Campagne J, et al. (2022) Separating Patients with SEID from Those with CFS in the French ME/CFS Association, with Some Thoughts on Nomenclature. *Diagnostics* 12: 1095. **Link:** doi.org/10.3390/diagnostics12051095

Carruthers BM, et al. (2003) Myalgic Encephalomyelitis/Chronic Fatigue Syndrome: Clinical work case definition, Diagnostic and Treatment Protocols. *Journal of Chronic Fatigue Syndrome* 11(1): 327-338 **Link:** <http://phoenixrising.me/wp-content/uploads/Canadian-definition.pdf>

Carruthers BM, et al. (2011) Myalgic Encephalomyelitis: International Consensus Criteria. *Journal of Internal Medicine* 270 (4): 327-338 **Link:** <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3427890/>

Clayton EW. (2015) Beyond Myalgic encephalomyelitis/chronic fatigue syndrome: An IOM report on redefining an illness. *JAMA* 313 (11): 1101-1102. **Link:** <https://jamanetwork.com/journals/jama/article-abstract/2118591>

Fukuda K, et al. (1994) The Chronic Fatigue Syndrome: A Comprehensive Approach to Its Definition and Study. International Chronic Fatigue Syndrome Study Group. *Annals of Internal Medicine* 121 (12): 953-959. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/7978722>

Gaglio C, et al. 2022 Orthostatic intolerance and neurocognitive impairment in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS). *Epidemiologic Methods* 11 (1): 20210033. **Link:** doi.org/10.1515/em-2021-0033 (*NEW) **Comment**

Goudsmit EM, Shepard C et al. (2009) ME: Chronic Fatigue Syndrome or a distinct clinical entity? *Health Psychology Update* 18 (1): 26-33 **Link:** http://www.foodsmatter.com/me_and_cfs/cfs_me_causes_general/articles/goudsmit-me-clinical%20entity-10-12.html

Howard H. (2018) Recent insights into 3 under recognized conditions: Myalgic encephalomyelitis–chronic fatigue syndrome, fibromyalgia, and environmental sensitivities–multiple chemical sensitivity. *Canadian Family Physician* 64 (6): 413-415. **Link:** <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5999262/>

Institute of Medicine (2015) Beyond Myalgic Encephalomyelitis/Chronic Fatigue Syndrome: Redefining an Illness, Washington, DC: *The National Academies Press*. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/25695122>

Kujawski S, et al. (2021) Network Analysis of Symptoms Co-Occurrence in Chronic Fatigue Syndrome. *International Journal of Environmental Research and Public Health* 18 (20): 10736. **Link:** <https://pubmed.ncbi.nlm.nih.gov/34682478/>

Jason LA, et al. (2010) The Development of a Revised Canadian Myalgic Encephalomyelitis Chronic Fatigue Syndrome Case Definition. *American Journal of Biochemistry and Biotechnology* 6 (2): 120-135. **Link:**
<https://thescipub.com/PDF/ajbbbsp.2010.120.135.pdf>

Jason LA, et al. (2015) Myalgic Encephalomyelitis: Symptoms and biomarkers. *Curr Neuroparmacol.* 13(5):701-34. **Link:**
<https://www.ncbi.nlm.nih.gov/pubmed/26411464>

Jason LA, et al. (2015) Reflections on the Institute of Medicine's systemic exertion intolerance disease. *Polish Archives of Internal Medicine*, 125 (7-8): 576-581. **Link:** <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4826027/>

Jason LA, et al. (2016) Are Myalgic Encephalomyelitis and Chronic fatigue syndrome different illnesses? A preliminary analysis. *Journal of Health Psychology* 21(1): 3-15. **Link:**
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4125561/>

Jason LA, et al. (2017) Clinical Criteria Versus a Possible Research Case Definition in Chronic Fatigue Syndrome/Myalgic Encephalomyelitis. *Fatigue* 5 (2): 89-102. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/29062593>

Jason LA, et al. (2022) Establishing a consensus on ME/CFS exclusionary illnesses, *Fatigue: Biomedicine, Health & Behavior*.
Link: doi.org/10.1080/21641846.2022.2150487 (*NEW) **Comment**

Jason LA and Johnson M (2020) Solving the ME/CFS criteria and name conundrum: the aftermath of IOM. *Fatigue: Biomedicine, Health and Behaviour* 8 (2). **Link:**
<https://www.tandfonline.com/doi/abs/10.1080/21641846.2020.1757809?journalCode=rftg20>

Johnston S, et al. (2013a) The prevalence of chronic fatigue syndrome/ myalgic encephalomyelitis: A meta-analysis. *Journal of Clinical Epidemiology* 5(1):105-10. **Link:**
<https://www.ncbi.nlm.nih.gov/pubmed/23576883>

Johnston S, et al. (2013b) Johnston S, Brenu EW, Staines D & Marshall-Gradisnik S. The adoption of chronic fatigue syndrome/myalgic encephalomyelitis case definitions to assess prevalence: a systematic review. *Annual Epidemiology* 23(6):371-6. **Link:**
<https://www.ncbi.nlm.nih.gov/pubmed/23683713>

Johnston S, et al. (2016) Epidemiological characteristics of chronic fatigue syndrome/myalgic encephalomyelitis in Australian patients. *Journal of Clinical Epidemiology* 8:97-107. **Link:**
<https://www.ncbi.nlm.nih.gov/pubmed/27279748>

Lancet, The (1956) A New Clinical Entity? [Leading article]. *The Lancet* 267(6926): 789-790. **Link:**
[http://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(56\)91252-1/abstract?showall=true](http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(56)91252-1/abstract?showall=true)

Lancet, The (2015) What's in a name? Systemic exertion intolerance disease [Editorial]. *The Lancet* 385 (9969): 663. **Link:**

[http://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(15\)60270-7/fulltext](http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(15)60270-7/fulltext)

Lane RJM. (2000) Chronic fatigue syndrome: is it physical? *Journal of Neurology, Neurosurgery & Psychiatry* 69(3): 289-289. **Link:**

<http://jnnp.bmj.com/content/69/3/289.1>

Lim E and Son C (2020) Review of case definitions for myalgic encephalomyelitis/chronic fatigue syndrome (ME/CFS). *Journal of Translational Medicine* 18 (1): 289. **Link:**

<https://pubmed.ncbi.nlm.nih.gov/32727489/>

Lubet S and Tuller D (2021) The concept of 'illness without disease' impedes understanding of chronic fatigue syndrome: a response to Sharpe and Greco. *Medical Humanities* 47 (1): e1. **Link:**

<https://pubmed.ncbi.nlm.nih.gov/32482748/>

Mahroum N and Shoenfeld Y (2022) Autoimmune Autonomic Dysfunction Syndromes: Potential Involvement and Pathophysiology Related to Complex Regional Pain Syndrome, Fibromyalgia, Chronic Fatigue Syndrome, Silicone Breast Implant-Related Symptoms and Post-COVID Syndrome. *Pathophysiology* 29 (3): 414-425. **Link:**

doi.org/10.3390/pathophysiology29030033 (*NEW) **Comment**

Mckay PG, et al. (2021) Exploratory study into the relationship between the symptoms of chronic fatigue syndrome (CFS)/myalgic encephalomyelitis (ME) and fibromyalgia (FM) using a quasiexperimental design. *BMJ Open* 11 (2): e041947. **Link:** <https://pubmed.ncbi.nlm.nih.gov/33526500/>

Murga I and Lafuente JV (2019) From neurasthenia to post-exertion disease: Evolution of the diagnostic criteria of chronic fatigue syndrome/myalgic encephalomyelitis. *Atencion Primaria* 51 (9):578-585. **Link:**

doi.org/10.1016/j.aprim.2019.04.004

Nacul L, et al. (2017) Differing case definitions point to the need for an accurate diagnosis of myalgic encephalomyelitis/chronic fatigue syndrome. *Fatigue* 5 (1): 1-4. **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/29250461>

O'Leary D (2019) Ethical classification of ME/CFS in the United Kingdom. *Bioethics* 33 (6): 716-722. **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/30734339>

Raijmakers RPH and van der Meer JWM (2020) Chronic fatigue syndrome: source of controversy. *Nederlands Tijdschrift voor Geneeskunde* 164: D5611. [Article in Dutch] **Link:** <https://pubmed.ncbi.nlm.nih.gov/33332043/>

Ramírez-Morales R, et al. (2022) Clinical overlap between fibromyalgia and myalgic encephalomyelitis. A systematic review and meta-analysis. *Autoimmunity Reviews* 21 (8): 103129. **Link:**

doi.org/10.1016/j.autrev.2022.103129 (*NEW)

- Scartozzi S et al.** (2019) Myalgic encephalomyelitis and chronic fatigue syndrome case definitions: effects of requiring a substantial reduction in functioning. *Fatigue: Biomedicine, Health and Behaviour*. **Link:** <https://www.tandfonline.com/doi/abs/10.1080/21641846.2019.1600825>
- Sharif K, et al.** (2018) On chronic fatigue syndrome and nosological categories. *Clinical Rheumatology*. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/29417255>
- Studd J and Panay N.** (1996) Chronic fatigue syndrome [Letter to the editor]. *The Lancet* 348(9038): 1384. **Link:** [http://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(05\)65448-7/fulltext](http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(05)65448-7/fulltext)
- Su J, et al.** (2022) Connectivity between Salience and Default Mode Networks and subcortical nodes distinguishes between two classes of ME/CFS. *Brain Connectivity* [Epub ahead of print]. **Link:** doi.org/10.1089/brain.2022.0049 (*NEW) **Comment**
- Sunnquist M, et al.** (2017) A Comparison of Case Definitions for Myalgic Encephalomyelitis and Chronic Fatigue Syndrome. *Journal of Chronic Disorders and Management* 2 (2). **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/29104961>
- Twisk F** (2018) Dutch Health Council Advisory Report on Myalgic Encephalomyelitis and Chronic Fatigue Syndrome: Taking the Wrong Turn. *Diagnostics* 8 (2). **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/29772739>
- Twisk F** (2018) Myalgic Encephalomyelitis (ME) or What? An Operational Definition. *Diagnostics* 8 (3). **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/30205585>
- Twisk F.** (2018) Myalgic Encephalomyelitis or What? The International Consensus Criteria. *Diagnostics* 9 (1): 1. **Link:** <https://www.mdpi.com/2075-4418/9/1/1>
- Twisk FNM** (2019) Myalgic Encephalomyelitis, Chronic Fatigue Syndrome, and Chronic Fatigue: Three Distinct Entities Requiring Completely Different Approaches. *Current Rheumatological Reports* 21 (6): 27. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/31073713>
- Twisk FNM (2020)** ME (Ramsay) and ME-International Case Criteria (ME-ICC): two distinct clinical entities. *Journal of Translational Medicine* 18 (1): 447. **Link:** <https://pubmed.ncbi.nlm.nih.gov/33239008/>
- Van Campen L, et al.** (2020) Validation of the Severity of Myalgic Encephalomyelitis/Chronic Fatigue Syndrome by Other Measures than History: Activity Bracelet, Cardiopulmonary Exercise Testing, and a Validated Activity Questionnaire: SF-36. *Healthcare* 8 (3). **Link:** <https://www.mdpi.com/2227-9032/8/3/273>
- Weir W & Speight N** (2021) ME/CFS: Past, Present and Future. *Healthcare* 9: 984. **Link:** <https://www.mdpi.com/2227-9032/9/8/984>

World Health Organisation (2020) International Classification of Diseases 11.

Link: <https://icd.who.int/browse11/l-m/en#/http://id.who.int/icd/entity/569175314>

World Health Organisation (2016) International Classification of Diseases 10.

Link: <https://icd.who.int/browse10/2016/en#/G93.3>

1.1. Prevalence

Abdollahi E, et al. (2021) The prevalence of chronic fatigue syndrome and depression in Guilan medical students in 2020. *Research and Development in Medical Education* 10 (1): 25. Link:

<https://rdme.tbzmed.ac.ir/Article/rdme-31965>

Chen C, et al. (2023) Presence of depression and anxiety with distinct patterns of pharmacological treatments before the diagnosis of chronic fatigue syndrome: a population-based study in Taiwan. *Journal of Translational Medicine* 21 (1): 98. Link: doi.org/10.1186/s12967-023-03886-1 (*NEW)

Lim E-J, et al. (2021) Nationwide epidemiological characteristics of chronic fatigue syndrome in South Korea. *Journal of Translational Medicine* 19 (1): 502. Link: <https://pubmed.ncbi.nlm.nih.gov/34876158/>

Luo L, et al. (2023) A description of the current status of chronic fatigue syndrome and associated factors among university students in Wuhan, China. *Frontiers in Psychiatry* 13: 1047014. Link: doi.org/10.3389/fpsyt.2022.1047014 (*NEW)

Nehme M, et al. (2022) The Prevalence, Severity, and Impact of Post-COVID Persistent Fatigue, Post-Exertional Malaise, and Chronic Fatigue Syndrome. *Journal of general internal medicine*. Link: doi.org/10.1007/s11606-022-07882-x (*NEW)

Orji N, et al. (2022) Prevalence of myalgic encephalomyelitis/chronic fatigue syndrome (ME/CFS) in Australian primary care patients: only part of the story?. *BMC Public Health* 22, 1516. Link: doi.org/10.1186/s12889-022-13929-9 (*NEW)

Salari N, et al. (2022) Global prevalence of chronic fatigue syndrome among long COVID-19 patients: A systematic review and meta-analysis. *BioPsychoSocial Medicine* 16: 21. Link: doi.org/10.1186/s13030-022-00250-5 (*NEW)

2. EPIDEMIOLOGY

Bhatia S, et al. (2019) A Cross-National Comparison of Myalgic Encephalomyelitis and Chronic Fatigue Syndrome at Tertiary Care Settings from the US and Spain. *American Journal of Social Sciences and Humanities* 5 (1):104-115. **Link:**

[http://onlinesciencepublishing.com/assets/journal/JOU0022/ART00450/1576732660_AJSSH-2020-5\(1\)-104-115.pdf](http://onlinesciencepublishing.com/assets/journal/JOU0022/ART00450/1576732660_AJSSH-2020-5(1)-104-115.pdf)

Chandan J, et al. (2019) Intimate Partner Violence and the Risk of Developing Fibromyalgia and Chronic Fatigue Syndrome. *Journal of Interpersonal Violence* 36 (21-22): NP12279-NP12298. **Link:**

doi.org/10.1177/0886260519888515

Chu L, et al. (2019) Onset patterns and course of myalgic encephalomyelitis/ chronic fatigue syndrome. *Frontiers in Paediatrics* 7: 12. **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/30805319>

Collin SM, et al. (2017) Trends in the incidence of chronic fatigue syndrome and fibromyalgia in the UK, 2001–2013: a Clinical Practice Research DataLink study. *Journal of the Royal Society of Medicine* 110 (6): 231-244. **Link:**

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5499564/>

Comerford B and Podell R (2019) Medically Documenting Disability in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS) Cases. *Frontiers in Paediatrics* 7: 231. **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/31334205>

Danilenko OV, et al. (2022) Chronic Fatigue Exhibits Heterogeneous Autoimmunity Characteristics Which Reflect Etiology. *Pathophysiology* 29: 187-199. **Link:**

doi.org/10.3390/pathophysiology29020016 (*NEW)

Evans M and Jason L (2018) Onset patterns of chronic fatigue syndrome and myalgic encephalomyelitis. *Research on Chronic Diseases* 2 (1): 001-0030. **Link:**

<http://www.openaccessjournals.com/articles/Onset%20patterns%20of%20chronic%20fatigue%20syndrome%20and%20myalgic%20encephalomyelitis.pdf>

Estevez-Lopez F, et al. (2018) Prevalence and incidence of myalgic encephalomyelitis/chronic fatigue syndrome in Europe-the Euro-epiME study from the European network EUROMENE: a protocol for a systematic review. *BMJ Open* 8 (9): e020817. **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/30181183>

Estevez-Lopez F, et al. (2020) Systematic Review of the Epidemiological Burden of Myalgic Encephalomyelitis/Chronic Fatigue Syndrome Across Europe: Current Evidence and EUROMENE Research Recommendations for Epidemiology. *Journal of Clinical Medicine* 9 (5). **Link:**

<https://www.mdpi.com/2077-0383/9/5/1557>

- Fatt S, et al.** (2019) The Invisible Burden of Chronic Fatigue Syndrome in the Community: a Narrative Review. *Current Rheumatology Reports* 21: 5. **Link:** <https://link.springer.com/article/10.1007/s11926-019-0804-2>
- Ghali A, et al.** (2020) Epidemiological and Clinical Factors Associated With Post-Exertional Malaise Severity in Patients With Myalgic encephalomyelitis/chronic Fatigue Syndrome. *Journal of Translational Medicine* 18 (1): 246. **Link:** <https://pubmed.ncbi.nlm.nih.gov/32571354/>
- Jason LA, et al.** (1999) A community-based study of chronic fatigue syndrome. *Archives of Internal Medicine* 159 (18): 2129-2137. **Link:** <https://jamanetwork.com/journals/jamainternalmedicine/fullarticle/415556>
- Lacerda E, et al.** (2019) A logistic regression analysis of risk factors in ME/CFS pathogenesis. *BMC Neurology* 19 (275). **Link:** <https://bmcneurol.biomedcentral.com/articles/10.1186/s12883-019-1468-2>
- Lewis I, et al.** (2013) Is chronic fatigue syndrome in older patients a different disease? – a clinical cohort study. *European Journal of Clinical Investigation* 43 (3): 302-308. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/23397955>
- Li M, et al.** (2020) Associations of occupational stress, workplace violence and organizational support on chronic fatigue symptoms among nurses. *Journal of Advanced Nursing* 76 (5):1151-1161. **Link:** doi.org/10.1111/jan.14312
- Lim EJ, et al.** (2020) Systematic review and meta-analysis of the prevalence of chronic fatigue syndrome/myalgic encephalomyelitis (CFS/ME). *Journal of Translational Medicine* 28 (1): 100. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/32093722>
- Monden R, et al.** (2020) Predictors of New Onsets of Irritable Bowel Syndrome, Chronic Fatigue Syndrome and Fibromyalgia: The Lifelines Study. *Psychological Medicine* 52 (1): 1-9. **Link:** doi.org/10.1017/S0033291720001774
- Nacul LC, et al.** (2011) Prevalence of myalgic encephalomyelitis/ chronic fatigue syndrome (ME/CFS) in three regions of England: a repeated cross-sectional study in primary care. *BMC Medicine* 9: 91. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/21794183>
- Njoku MGC, et al.** (2007) The Prevalence of Chronic Fatigue Syndrome in Nigeria. *Journal of Health Psychology* 12 (3): 461-474. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/17439996>
- Orlova S, et al.** (2021) Detection of herpes viruses in patients with myalgic encephalomyelitis /chronic fatigue syndrome in Belarus. *Polish Journal of Applied Sciences* 6 (2): 50-53. **Link:** <https://pjas.pwsp.edu.pl/index.php/pjas/article/view/176>
- Palacios N, et al.** (2023) Different risk factors distinguish myalgic encephalomyelitis/chronic fatigue syndrome from severe fatigue. *Scientific Reports* 13 (1): 2469. **Link:** doi.org/10.1038/s41598-023-29329-x (*NEW)

- Petersen MW, et al.** (2020) Irritable bowel, chronic widespread pain, chronic fatigue and related syndromes are prevalent and highly overlapping in the general population: DanFunD. *Scientific Reports* 10 (1): 3273. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/32094442>
- Slomko J, et al.** (2019) Prevalence and characteristics of chronic fatigue syndrome/myalgic encephalomyelitis(CFS/ME) in Poland: a cross-sectional study. *BMJ Open* 9 (3). **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/30850404>
- Strassheim VJ, et al.** (2018) Defining the prevalence and symptom burden of those with self-reported severe chronic fatigue syndrome/myalgic encephalomyelitis (CFS/ME): a two-phase community pilot study in the North East of England. *BMJ Open* 8 (9). **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/30232103>
- Underhill R and Baillod R.** (2020) Myalgic Encephalomyelitis/Chronic Fatigue Syndrome: Organic Disease or Psychosomatic Illness? A Re-Examination of the Royal Free Epidemic of 1955. *Medicina (Kaunas)* 57 (1): 12. **Link:** <https://pubmed.ncbi.nlm.nih.gov/33375343/>
- Walsh CM, et al.** (2001) A family history study of chronic fatigue syndrome. *Psychiatric Genetics* 11 (3): 123-128. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/11702053>
- Valdez AR, et al.** (2019) Estimating Prevalence, Demographics, and Costs of ME/CFS Using Large Scale Medical Claims Data and Machine Learning. *Frontiers in Pediatrics* 6: 412. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/30671425>
- Vincent A, et al.** (2012) Prevalence, Incidence, and Classification of Chronic Fatigue Syndrome in Olmsted County, Minnesota, as estimated using the Rochester Epidemiology Project. *Mayo Clinic Proceedings* 87 (12): 1145-1152. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/23140977>

3. CO-MORBIDITY

Ankert J, et al. (2021) Incidence of chronic Q fever and chronic fatigue syndrome: a six year follow-up of a large Q fever outbreak. *Transboundary and Emerging Diseases*. Link: doi.org/10.1111/tbed.14224

Boneva RS, et al. (2011) Gynecological History in chronic fatigue syndrome: a population-based case-control study. *Journal of Women's Health* 20(1): 21-28. Link: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3017420/>

Boneva RS, et al. (2019) Endometriosis as a Comorbid Condition in Chronic Fatigue Syndrome (CFS): Secondary Analysis of Data From a CFS Case-Control Study. *Frontiers in Pediatrics* 7: 195. Link: <https://www.frontiersin.org/articles/10.3389/fped.2019.00195/full>

Castro-Marrero J, et al. (2017) Comorbidity in Chronic Fatigue Syndrome/Myalgic Encephalomyelitis: A Nationwide Population-Based Cohort Study. *Psychosomatics* 58 (2): 533-543. Link: <https://www.ncbi.nlm.nih.gov/pubmed/28596045>

Chang CM, et al. (2012) Chronic fatigue syndrome and subsequent risk of cancer among elderly US adults. *Cancer* 118 (23): 5929-5936. Link: <https://www.ncbi.nlm.nih.gov/pubmed/22648858>

Clauw DJ, et al. (1997) The relationship between fibromyalgia and interstitial cystitis. *Journal of Psychiatric Research* 31(1): 125-131. Link: <https://www.ncbi.nlm.nih.gov/pubmed/9201654>

Chen CS, et al. (2014) Chronic fatigue syndrome is associated with the risk of fracture: a nationwide cohort study. *Quarterly Journal of Medicine* (8): 635 – 641. Link: <https://www.ncbi.nlm.nih.gov/pubmed/24619129>

Daniels J, et al. (2017) Anxiety and depression in chronic fatigue syndrome/myalgic encephalomyelitis (CFS/ME): Examining the incidence of health anxiety in CFS/ME. *Psychology and Psychotherapy* 90 (3): 502-509. Link: <https://www.ncbi.nlm.nih.gov/pubmed/28244209>

Deale A and Wessely S. (2000) Diagnosis of psychiatric disorder in clinical evaluation of chronic fatigue syndrome. *Journal of the Royal Society of Medicine* 93(6): 310-312. Link: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1298034/>

Van Deuren S, et al. (2021) Fatigue-Related Cognitive-Behavioral Factors in Survivors of Childhood Cancer: Comparison with Chronic Fatigue Syndrome and Survivors of Adult-Onset Cancer. *Journal of Adolescent and Young Adult Oncology* 10 (1): 92-99. Link: <https://pubmed.ncbi.nlm.nih.gov/32857640/>

Eccles JA, et al. (2021) Beyond bones: The relevance of variants of connective tissue (hypermobility) to fibromyalgia, ME/CFS and controversies surrounding diagnostic classification: an observational study. *Clinical Medicine (London, England)* 21 (1): 53-58. Link: <https://pubmed.ncbi.nlm.nih.gov/33479068/>

Hanevik K, et al. (2014) Irritable Bowel Syndrome and Chronic Fatigue 6 years after Giardia infection: A controlled prospective cohort study. *Clinical Infectious Diseases* 59 (10): 1394-1400. **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/25115874>

He J, et al. (2013) Cerebral vascular control is associated with skeletal muscle pH in chronic fatigue syndrome patients both at rest and during dynamic stimulation. *NeuroImage: Clinical* 2: 168-173. **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/24179772>

Hinchado MD, et al. (2022) Influence of Codiagnosis of Chronic Fatigue Syndrome and Habitual Physical Exercise on the Psychological Status and Quality of Life of Patients with Fibromyalgia. *Journal of Clinical Medicine* 11 (19): 5735. **Link:** doi.org/10.3390/jcm11195735 (*NEW)

Hulens M et al. (2023) The Link Between Empty Sella Syndrome, Fibromyalgia, and Chronic Fatigue Syndrome: The Role of Increased Cerebrospinal Fluid Pressure. *Journal of Pain Research* 16: 205-219. **Link:**

doi.org/10.2147/JPR.S394321 (*NEW)

Krumina A, et al. (2021) Clinical Profile and Aspects of Differential Diagnosis in Patients with ME/CFS from Latvia. *Medicina* 57: 958. **Link:**

<https://www.mdpi.com/1648-9144/57/9/958>

Liao Y, et al. (2021) Comorbidity of chronic fatigue syndrome, postural tachycardia syndrome, and narcolepsy with 5,10-methylenetetrahydrofolate reductase (MTHFR) mutation in an adolescent: a case report. *Chinese Medical Journal (England)* 134 (12): 1495-1497. **Link:**

<https://pubmed.ncbi.nlm.nih.gov/33788782/>

Litleskare S, et al. (2018) Prevalence of Irritable Bowel Syndrome and Chronic Fatigue 10 Years After Giardia Infection. *Clinical Gastroenterology and Hepatology* 16 (7): 1064-1072. **Link:**

<http://doi.org/10.1016/j.cgh.2018.01.022>

Loades ME, et al. (2017) The presence of co-morbid mental health problems in a cohort of adolescents with chronic fatigue syndrome. *Clinical Childhood Psychology and Psychiatry* 1: 1359104517736357. **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/29096528>

Lumpkin ST, et al. (2022) Chronic Fatigue After Thyroidectomy: A Patient-Centered Survey. *The American Surgeon* 88 (2): 260-266. **Link:**

<https://pubmed.ncbi.nlm.nih.gov/33517685/>

Maes M, et al. (2022) In Schizophrenia, Chronic Fatigue Syndrome- and Fibromyalgia-Like Symptoms are Driven by Breakdown of the Paracellular Pathway with Increased Zonulin and Immune Activation-Associated Neurotoxicity. *CNS & Neurological Disorders - Drug Targets* 21.

Link: doi.org/10.2174/1871527321666220806100600 (*NEW)

- McKay PG, et al.** (2021) Chronic fatigue syndrome (CFS)/Myalgic Encephalomyelitis (ME) and Fibromyalgia (FM): the foundation of a relationship. *British Journal of Pain* 15 (1): 26-39. **Link:** <https://pubmed.ncbi.nlm.nih.gov/33633851/>
- McManimen SL and Jason LA.** (2017) Post-Exertional Malaise in Patients with ME and CFS with Comorbid Fibromyalgia. *SRL Neurology and Neurosurgery* 3 (1): 22-27. **Link:** <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5464757/>
- Mengshoel AM, et al.** (2014) Primary Sjögren's Syndrome: Fatigue Is an Ever-Present, Fluctuating, and Uncontrollable Lack of Energy. *Arthritis Care & Research* 66(8): 1227-1232. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/24339344>
- Natelson BH** (2019) Myalgic Encephalomyelitis/Chronic Fatigue Syndrome and Fibromyalgia: Definitions, Similarities, and Differences. *Clinical Therapeutics* 41 (4):612-618. **Link:** doi.org/10.1016/j.clinthera.2018.12.016
- Natelson BH, et al.** (2019) The Effect of Comorbid Medical and Psychiatric Diagnoses on Chronic Fatigue Syndrome. *Annals in Medicine* 51 (7-8):371-378. **Link:** doi.org/10.1080/07853890.2019.1683601
- Nepotchatykh E et al.** (2023) Circulating microRNA expression signatures accurately discriminate myalgic encephalomyelitis from fibromyalgia and comorbid conditions. *Scientific Reports* 13 (1): 1896. **Link:** doi.org/10.1038/s41598-023-28955-9 (*NEW) **Comment**
- Nijs J, et al.** (2006) Generalized Joint Hypermobility is more common in chronic fatigue syndrome than in healthy control subjects. *Journal of Manipulative Physiology Therapeutics* 29 (1): 32-39. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/16396727>
- Ojha A & Kumar D** (2022) Relationship of Body Image Concerns with some Gynecological Diseases and Chronic Fatigue Syndrome: A Review. *Mind and Society* 11 (02): 129-137. **Link:** <https://www.mindandsociety.in/index.php/MAS/article/view/475> (*NEW)
- Polli A, et al.** (2022) Genetic and epigenetic regulation of Catechol-O-methyltransferase in relation to inflammation in chronic fatigue syndrome and Fibromyalgia. *Journal of Translational Medicine* 20: 487. **Link:** doi.org/10.1186/s12967-022-03662-7 (*NEW) **Comment**
- Ramírez-Morales R, et al.** (2022) Clinical overlap between fibromyalgia and myalgic encephalomyelitis. A systematic review and meta-analysis. *Autoimmunity Reviews* 21 (8): 103129. **Link:** doi.org/10.1016/j.autrev.2022.103129 (*NEW)
- Ravindran MK, et al.** (2011) Migraine headaches in Chronic Fatigue Syndrome (CFS): Comparison of two prospective cross-sectional studies. *BMC Neurology* 11 (1): 1-9. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/21375763>

Schutzer SE, et al. (2022) Myalgic Encephalomyelitis/Chronic Fatigue Syndrome and fibromyalgia are indistinguishable by their cerebrospinal fluid proteomes. *bioRxiv* [Preprint]. Link: doi.org/10.1101/2022.09.14.506792
(*NEW) Comment

Sinaii N, et al. (2002) High rates of autoimmune and endocrine disorders, fibromyalgia, chronic fatigue syndrome and atopic diseases among women with endometriosis: a survey analysis. *Human Reproduction* 17 (10): 2715-2724. Link: <https://www.ncbi.nlm.nih.gov/pubmed/12351553>

Skowera A, et al. (2001) High prevalence of serum markers of coeliac disease in patients with chronic fatigue syndrome [Correspondence]. *Journal of Clinical Pathology* 54(4): 335-336. Link: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1731400/>

Smesam HN, et al. (2022) Pathway Phenotypes Underpinning Depression, Anxiety, and Chronic Fatigue Symptoms Due to Acute Rheumatoid Arthritis: A Precision Nomothetic Psychiatry Analysis. *Journal of Personalized Medicine* 12 (3): 476. Link: doi.org/10.3390/jpm12030476

Tsai SY, et al. (2019) Increased risk of chronic fatigue syndrome in patients with inflammatory bowel disease: a population-based retrospective cohort study. *Journal of Translational Medicine* 17 (1): 55. Link: <https://www.ncbi.nlm.nih.gov/pubmed/30795765>

Van Oudenhove L, et al. (2011) Factors associated with co-morbid irritable bowel syndrome and chronic fatigue-like symptoms in functional dyspepsia. *Neurogastroenterology & Motility* 23(6): 524. Link: <https://www.ncbi.nlm.nih.gov/pubmed/21255194>

Vogel SE, et al. (2021) The Presentation of Myalgic Encephalomyelitis/Chronic Fatigue Syndrome Is Not Influenced by the Presence or Absence of Joint Hypermobility. *Journal of Pediatrics* 240: 186-191. Link: doi.org/10.1016/j.jpeds.2021.09.014

Zambolin F, et al. (2022) Fibromyalgia and Chronic Fatigue Syndromes: A systematic review and meta-analysis of cardiorespiratory fitness and neuromuscular function compared with healthy individuals. *PLoS One* 17 (10): e0276009. Link: doi.org/10.1371/journal.pone.0276009 **(*NEW)**

4. BIOMEDICAL RESEARCH

4.1. Autoimmune/ Autoantibodies

Freitag H, et al. (2021) Autoantibodies to Vasoregulative G-Protein-Coupled Receptors Correlate with Symptom Severity, Autonomic Dysfunction and Disability in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Journal of Clinical Medicine* 10 (16): 3675. **Link:** doi.org/10.3390/jcm10163675

Ryabkova VA, et al. (2022) Autoantibody Correlation Signatures in Fibromyalgia and Myalgic Encephalomyelitis/Chronic Fatigue Syndrome: Association with Symptom Severity. *Preprints* 2022: 2022120224. **Link:** doi.org/10.20944/preprints202212.0224.v1 (*NEW) **Comment**

4.2. Biobank UK ME/CFS

Das S, et al. (2022) Genetic Risk Factors for ME/CFS Identified using Combinatorial Analysis. medRxiv [preprint]. **Link:** doi.org/10.1101/2022.09.09.22279773 (*NEW)

Domingues TD, et al. (2021) Herpesviruses Serology Distinguishes Different Subgroups of Patients From the United Kingdom Myalgic Encephalomyelitis/Chronic Fatigue Syndrome Biobank. *Frontiers in Medicine (Lausanne)* 8: 686736. **Link:** <https://pubmed.ncbi.nlm.nih.gov/34291062/>

Lacerda EM, et al. (2017) The UK ME/CFS Biobank for biomedical research on Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS) and Multiple Sclerosis. *Open Journal of Bioresources* 4: 4. **Link:** <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5482226/>

Lacerda EM, et al. (2018) The UK ME/CFS Biobank: a disease-specific biobank for advancing clinical research into myalgic encephalomyelitis/chronic fatigue syndrome, *Frontiers in Neurology* 9: 1026. **Link:** doi.org/10.3389/fneur.2018.01026

4.3. Biomarker identification

Castro-Marrero J, et al. (2021) Complement Component C1q as a Potential Diagnostic Tool for Myalgic Encephalomyelitis/Chronic Fatigue Syndrome Subtyping. *Journal of Clinical Medicine* 10 (18) :4171. **Link:**

<https://pubmed.ncbi.nlm.nih.gov/34575280/>

González-Cebrián A, et al. (2022) Diagnosis of Myalgic Encephalomyelitis/Chronic Fatigue Syndrome With Partial Least Squares Discriminant Analysis: Relevance of Blood Extracellular Vesicles. *Frontiers in Medicine* 9:842991. **Link:** doi.org/10.3389/fmed.2022.842991

Gravelsina S, et al. (2021) Potential of Activin B as a Clinical Biomarker in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS). *Biomolecules* 11: 1189. **Link:** <https://www.mdpi.com/2218-273X/11/8/1189>

Gravelsina S, et al. (2022) Biomarkers in the diagnostic algorithm of myalgic encephalomyelitis/chronic fatigue syndrome. *Frontiers in Immunology* 13: 928945. **Link:** doi.org/10.3389/fimmu.2022.928945 (*NEW)

Hanevik K, et al. (2022) No difference in serum levels of B-cell activating receptor and antibodies against cytolethal distending toxin B and flagellin in post-infectious irritable bowel syndrome and chronic fatigue syndrome after *Giardia* infection. *JGH Open* (2022):1-4. **Link:**

doi.org/10.1002/jgh3.12724

Jason LA, et al. (2021) Saliva fatigue biomarker index as a marker for severe myalgic encephalomyelitis/chronic fatigue syndrome in a community based sample. *Fatigue: Biomedicine, Health & Behavior*. **Link:**

doi.org/10.1080/21641846.2021.1994222

Kedor C, et al. (2022) A prospective observational study of post-COVID-19 chronic fatigue syndrome following the first pandemic wave in Germany and biomarkers associated with symptom severity. *Nature Communications* 13: 5104. **Link:** doi.org/10.1038/s41467-022-32507-6 (*NEW)

Mathur R, et al. (2021) mapMECFS: a portal to enhance data discovery across biological disciplines and collaborative sites. *Journal of Translational Medicine* 19 (1): 461. **Link:** <https://pubmed.ncbi.nlm.nih.gov/34749736/>

Monzón-Nomdedeu MB, et al. (2021) Induced pluripotent stem cells as suitable sensors for fibromyalgia and myalgic encephalomyelitis/chronic fatigue syndrome. *World Journal of Stem Cells* 13 (8): 1134-1150. **Link:** <https://pubmed.ncbi.nlm.nih.gov/34567431/>

Murga I, et al. (2021) The maintained attention assessment in patients affected by Myalgic encephalomyelitis/chronic fatigue syndrome: a reliable biomarker? *Journal of Translational Medicine* 19 (1): 494. **Link:**

<https://pubmed.ncbi.nlm.nih.gov/34863209/>

- Nunes M, et al.** (2022) The occurrence of hyperactivated platelets and fibrinoid microclots in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS). *ResearchSquare* [Preprint]. **Link:** doi.org/10.21203/rs.3.rs-1727226/v1 (*NEW)
- Patterson BK, et al.** (2022) Cytokine Hub Classification of PASC, ME-CFS and other PASC-like Conditions. *ResearchSquare* [Preprint]. **Link:** doi.org/10.21203/rs.3.rs-1598634/v1 (*NEW)
- Pifarré F, et al.** (2022) The use of oxygen as a possible screening biomarker for the diagnosis of chronic fatigue. *Apunts Sports Medicine* 57 (214): 100379. **Link:** doi.org/10.1016/j.apunsm.2022.100379 (*NEW)
- Rayhan RU and Baraniuk JN** (2021) Submaximal Exercise Provokes Increased Activation of the Anterior Default Mode Network During the Resting State as a Biomarker of Postexertional Malaise in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Frontiers in Neuroscience* 15: 748426. **Link:** <https://pubmed.ncbi.nlm.nih.gov/34975370/>
- Shah RJ.** (2021) Chronic fatigue syndrome and epigenetics: The case for hyperbaric oxygen therapy in biomarker identification. *Journal of Pulmonology and Respiratory Research* 5: 027-030. **Link:** <https://www.heighpubs.org/jpr/jpr-aid1020.php>
- Sepúlveda N, et al.** (2022) Revisiting IgG antibody reactivity to Epstein-Barr virus in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome and its potential application to disease diagnosis. *medRxiv* [Preprint]. **Link:** <https://www.medrxiv.org/content/10.1101/2022.04.20.22273990v1>

4.3.1. Biomarker Landscape Project

- Estevez-Lopez F, et al.** (2020) Systematic Review of the Epidemiological Burden of Myalgic Encephalomyelitis/Chronic Fatigue Syndrome Across Europe: Current Evidence and EUROMENE Research Recommendations for Epidemiology. *Journal of Clinical Medicine* 9 (5). **Link:** <https://www.mdpi.com/2077-0383/9/5/1557>
- Scheibenbogen C, et al.** (2017) The European ME/CFS Biomarker Landscape project: an initiative of the European network EUROMENE. *Journal of Translational Medicine* 15: 162. **Link:** <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5530475/>
- Pheby D, et al.** (2020) The Development of a Consistent Europe-Wide Approach to Investigating the Economic Impact of Myalgic Encephalomyelitis (ME/CFS): A Report from the European Network on ME/CFS (EUROMENE). *Healthcare* 8 (2). **Link:** <https://www.mdpi.com/2227-9032/8/2/88>

4.4. Cardiac Function

Bertinat R, et al. (2022) Decreased NO production in endothelial cells exposed to plasma from ME/CFS patients. *Vascular Pharmacology*: 106953. [Epub ahead of print] **Link:**

<https://www.sciencedirect.com/science/article/pii/S1537189122000027#bb0030>

Boissoneault J, et al. (2018) Cerebral blood flow and heart rate variability predict fatigue severity in patients with chronic fatigue syndrome. *Brain Imaging and Behaviour* 13 (3): 789-797. **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/29855991>

Bond J, et al. (2021) Effects of Post-Exertional Malaise on Markers of Arterial Stiffness in Individuals with Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *International Journal of Environmental Research and Public Health* 18 (5): 2366. **Link:** <https://pubmed.ncbi.nlm.nih.gov/33671082/>

Bozzini S, et al. (2018) Cardiovascular characteristics of chronic fatigue syndrome. *Biomedical Reports* 8 (1): 26-30. **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/29399336>

Campen CM, et al. (2018) Blood volume status in CFS/ME correlates with the presence or absence of orthostatic symptoms. *Frontiers in Paediatrics* [Epub ahead of print]. **Link:**

<https://www.frontiersin.org/articles/10.3389/fped.2018.00352/full>

Campen CM and Visser FC (2018) The Abnormal Cardiac Index and Stroke Volume Index Changes During a Normal Tilt Table Test in ME/CFS Patients Compared to Healthy Volunteers, are Not Related to Deconditioning, *Journal of Thrombosis and Circulation* 107. **Link:** <https://tinyurl.com/y5nb9dyr>

van Campen CM and Visser FC (2022) Comparison of the Degree of Deconditioning in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS) Patients with and without Orthostatic Intolerance. *Medical Research Archives* 10 (6). **Link:** doi.org/10.18103/mra.v10i6.2858 (*NEW)

van Campen CM and Visser FC (2022) The higher resting heart rate in myalgic encephalomyelitis/chronic fatigue syndrome (ME/CFS) patients compared to healthy controls: relation with stroke volumes. *Medical Research Archives* 10 (6). **Link:** doi.org/10.18103/mra.v10i6.2891 (*NEW)

Campen CM, et al. (2020) Cerebral blood flow is reduced in ME/CFS during head-up tilt testing even in the absence of hypotension or tachycardia: a quantitative, controlled study using Doppler echography. *Clinical Neurophysiology Practise* 5: 50-58. **Link:** doi.org/10.1016/j.cnp.2020.01.003

Campen CM, et al. (2020) Cerebral Blood Flow Is Reduced in Severe Myalgic Encephalomyelitis/Chronic Fatigue Syndrome Patients During Mild Orthostatic Stress Testing: An Exploratory Study at 20 Degrees of Head-Up Tilt Testing. *Healthcare* 8 (2): 169. **Link:** <https://www.mdpi.com/2227-9032/8/2/169>

Campen CM, et al. (2020) Cognitive Function Declines Following Orthostatic Stress in Adults With Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS). *Frontiers in Neuroscience* 14: 688. **Link:** doi.org/10.3389/fnins.2020.00688

Van Campen CM, et al. (2020) Orthostatic stress testing in myalgic encephalomyelitis/chronic fatigue syndrome patients with or without concomitant fibromyalgia: effects on pressure pain thresholds and temporal summation. *Clinical and Experimental Rheumatology* 39 (3): S39-S47. **Link:** doi.org/10.55563/clinexprheumatol/1qj9zu

Van Campen CM, et al. (2021) Numeric Rating Scales Show Prolonged Post-exertional Symptoms After Orthostatic Testing of Adults With Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Frontiers in Medicine (Lausanne)* 7: 602894. **Link:** <https://pubmed.ncbi.nlm.nih.gov/33585505/>

Van Campen CM, et al. (2021) Deconditioning does not explain orthostatic intolerance in ME/CFS (myalgic encephalomyelitis/chronic fatigue syndrome). *Journal of Translational Medicine* 19: 193. **Link:** <https://translational-medicine.biomedcentral.com/articles/10.1186/s12967-021-02819-0>

Van Campen C, et al. (2021) The Myalgic Encephalomyelitis/Chronic Fatigue Syndrome Patients with Joint Hypermobility Show Larger Cerebral Blood Flow Reductions during Orthostatic Stress Testing Than Patients without Hypermobility: A Case Control Study. *Medical Research Archives*, [S.l.], v. 9, n. 6, june 2021. **Link:** <https://esmed.org/MRA/mra/article/view/2494>

Van Campen C, et al. (2021) Cerebral blood flow remains reduced after tilt testing in myalgic encephalomyelitis/chronic fatigue syndrome patients. *Clinical Neurophysiology Practice* [In press, Journal pre-proof] **Link:** <https://www.sciencedirect.com/science/article/pii/S2467981X21000408>

Van Campen C, et al. (2021) Orthostatic Symptoms and Reductions in Cerebral Blood Flow in Long-Haul COVID-19 Patients: Similarities with Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Medicina* 58: 28. **Link:** <https://www.mdpi.com/1648-9144/58/1/28>

Van Campen C, et al. (2021) Compression Stockings Improve Cardiac Output and Cerebral Blood Flow during Tilt Testing in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS) Patients: A Randomized Crossover Trial. *Medicina* 58: 51. **Link:** <https://www.mdpi.com/1648-9144/58/1/51/html>

Van Campen C, et al. (2022) Psychogenic Pseudosyncope: Real or Imaginary? Results from a Case-Control Study in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS) Patients. *Medicina* 58: 98. **Link:** <https://www.mdpi.com/1648-9144/58/1/98>

van Campen CMC and Visser FC (2022) Orthostatic Intolerance in Long-Haul COVID after SARS-CoV-2: A Case-Control Comparison with Post-EBV and Insidious-Onset Myalgic Encephalomyelitis/Chronic Fatigue Syndrome Patients. *Healthcare* 10 (10): 2058. Link: doi.org/10.3390/healthcare10102058
(*NEW) Comment

Capdevila L, et al. (2021) Analysis of Gender Differences in HRV of Patients with Myalgic Encephalomyelitis/Chronic Fatigue Syndrome Using Mobile-Health Technology. *Sensors (Basel Switzerland)* 21 (11): 3746. Link: <https://pubmed.ncbi.nlm.nih.gov/34071326/>

Cook DB, et al. (2022) Cardiopulmonary, metabolic, and perceptual responses during exercise in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS): A Multi-site Clinical Assessment of ME/CFS (MCAM) sub-study. *PLoS ONE* 17(3): e0265315. Link: doi.org/10.1371/journal.pone.0265315

Davenport T, et al. (2019) Chronotropic Intolerance: An Overlooked Determinant of Symptoms and Activity Limitation in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome? *Frontiers in paediatrics* 7: 82. Link: <https://www.frontiersin.org/articles/10.3389/fped.2019.00082/full>

Davenport T, et al. (2020) Cardiopulmonary responses to exercise in an individual with Myalgic Encephalomyelitis/Chronic Fatigue Syndrome during long-term treatment with intravenous saline: A case study. *Work* 66 (2): 353-359. Link: <https://content.iospress.com/articles/work/wor203214?fbclid=IwAR1cFTpQx7hm-0TqXrl9YG6f6ox30nU1AwOj-oyEA3RjJp-pZjjQbeCJ6wc>

Domingo JC, et al. (2021) Are Circulating Fibroblast Growth Factor 21 and N-Terminal Prohormone of Brain Natriuretic Peptide Promising Novel Biomarkers in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome? *Antioxidants & Redox Signal* 34 (18): 1420-1427. Link: <https://pubmed.ncbi.nlm.nih.gov/33353469/>

Escorihuela RM, et al. (2020) Reduced heart rate variability predicts fatigue severity in individuals with chronic fatigue syndrome/myalgic encephalomyelitis. *Journal of Translational Medicine* 18: 4. Link: <https://translational-medicine.biomedcentral.com/articles/10.1186/s12967-019-02184-z#Tab1>

Haffke M, et al. (2022) Endothelial dysfunction and altered endothelial biomarkers in patients with post-COVID-19 syndrome and chronic fatigue syndrome (ME/CFS). *Journal of Translational Medicine* 20: 138. Link: doi.org/10.1186/s12967-022-03346-2

Hollingsworth KG, et al. (2010) Impaired cardiovascular response to standing in Chronic Fatigue Syndrome. *European Journal of Clinical Investigation* 40(7): 608-615. Link: <http://europemc.org/abstract/med/20497461>

Hodges LD, et al. (2017) Physiological measures in participants with chronic fatigue syndrome, multiple sclerosis and healthy controls following repeated exercise: a pilot study. *Clinical Physiology and Functional Imaging*. Link: <https://www.ncbi.nlm.nih.gov/pubmed/28782878>

Hollingsworth KG, et al. (2012) Impaired cardiac function in chronic fatigue syndrome measured using magnetic resonance cardiac tagging. *Journal of Internal Medicine* 271 (3): 264-270. **Link:**

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3627316/>

Iverson PO, et al. (2020) Cardiac Dimensions and Function Are Not Altered among Females with the Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Healthcare (Basel)*. **Link:** <https://pubmed.ncbi.nlm.nih.gov/33081294/>

Joseph P, et al. (2021) Insights From Invasive Cardiopulmonary Exercise Testing of Patients With Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Chest* S0012-3692 (21) 00256-7. **Link:**

<https://pubmed.ncbi.nlm.nih.gov/33577778/>

Kujawski S, et al. (2021) Post-Exertional Malaise May Be Related to Central Blood Pressure, Sympathetic Activity and Mental Fatigue in Chronic Fatigue Syndrome Patients. *Journal of Clinical Medicine* 10 (11): 2327. **Link:**

<https://pubmed.ncbi.nlm.nih.gov/34073494/>

Larson B, et al. (2019) Reproducibility of Measurements Obtained During Cardiopulmonary Exercise Testing in Individuals With Fatiguing Health Conditions: A Case Series. *Cardiopulmonary Physical Therapy Journal* [Epub ahead of print]. **Link:**

https://journals.lww.com/cptj/Abstract/publishahead/Reproducibility_of_Measurements_Obtained_During.99960.aspx

Lee J, et al. (2020) Hemodynamics during the 10-minute NASA Lean Test: evidence of circulatory decompensation in a subset of ME/CFS patients. *Journal of Translational Medicine* 18 (1): 314. **Link:**

<https://pubmed.ncbi.nlm.nih.gov/32799889/>

Li K, et al. (2021) Angina Simultaneously Diagnosed with the Recurrence of Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Diagnostics (Basel, Switzerland)* 11 (3): 460. **Link:** <https://pubmed.ncbi.nlm.nih.gov/33800953/>

Lubell J (2022) Letter: Could endothelial dysfunction and vascular damage contribute to pain, inflammation and post-exertional malaise in individuals with myalgic encephalomyelitis/chronic fatigue syndrome (ME/CFS)? *Journal of Translational Medicine* 20: 40. **Link:**

<https://Link.springer.com/article/10.1186/s12967-022-03244-7>

Malfliet A, et al. (2018) Cerebral Blood Flow and Heart Rate Variability in Chronic Fatigue Syndrome: A Randomized Cross-Over Study. *Pain Physician* 21 (1): E13-E24. **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/29357332>

Matsui, T et al. (2021) Possible involvement of the autonomic nervous system in cervical muscles of patients with myalgic encephalomyelitis / chronic fatigue syndrome (ME/CFS). *BMC Musculoskeletal Disorders* 22 (1): 419. **Link:**

<https://pubmed.ncbi.nlm.nih.gov/33952227/>

McCarthy MJ (2022) Circadian rhythm disruption in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome: Implications for the post-acute sequelae of COVID-19. *Brain, Behavior, & Immunity – Health* 20: 100412. **Link:**

<https://www.sciencedirect.com/science/article/pii/S2666354622000023>

Miwa K (2023) Orthostatic Intolerance and Chronotropic Incompetence in Patients With Myalgic Encephalomyelitis or Chronic Fatigue Syndrome. *Circulation Reports* 5 (2): 55-61. **Link:** doi.org/10.1253/circrep.CR-22-0114 (*NEW)

Miwa K and Fujita M. (2011) Small Heart with Low Cardiac Output for Orthostatic Intolerance in Patients With Chronic Fatigue Syndrome. *Clinical Cardiology* 34(12): 782-786. **Link:**

<http://onlinelibrary.wiley.com/doi/10.1002/clc.20962/full>

Miwa K and Inoue Y (2020) Paradigm shift to disequilibrium in the genesis of orthostatic intolerance in patients with myalgic encephalomyelitis and chronic fatigue syndrome. *International Journal of Cardiology. Hypertension* 5:100032. **Link:** <https://pubmed.ncbi.nlm.nih.gov/33447761/>

Natelson BH, et al. (2021) Chronic Fatigue Syndrome and Cardiovascular Disease: JACC State-of-the-Art Review. *Journal of American College of Cardiology* 78 (10): 1056-1067. **Link:**

<https://www.jacc.org/doi/abs/10.1016/j.jacc.2021.06.045>

Nelson MJ, et al. (2019) Evidence of altered cardiac autonomic regulation in myalgic encephalomyelitis/chronic fatigue syndrome: A systematic review and meta-analysis. *Medicine (Baltimore)* 98 (43). **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/31651868>

Peckerman A, et al. (2003) Abnormal Impedance Cardiography Predicts Symptom Severity in Chronic Fatigue Syndrome. *The American Journal of the Medical Sciences* 326(2): 55-60. **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/12920435>

Scherbakov N, et al. (2020) Peripheral endothelial dysfunction in myalgic encephalomyelitis/chronic fatigue syndrome. *ESC Heart Failure* 7 (3): 1064-1071. **Link:** <https://onlinelibrary.wiley.com/doi/full/10.1002/ehf2.12633>

Tomas C, et al. (2017) Elevated brain natriuretic peptide levels in chronic fatigue syndrome associate with cardiac dysfunction: a case control study. *Open Heart* 4 (2): e000697. **Link:**

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5761285/>

Vermeulen RCW and Vermeulen van Eck IWG. (2014) Decreased oxygen extraction during cardiopulmonary exercise test in patients with chronic fatigue syndrome. *Journal of Translational Medicine* 12: 20. **Link:**

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3903040/>

Vernon SD, et al. (2022) Orthostatic Challenge Causes Distinctive Symptomatic, Hemodynamic and Cognitive Responses in Long COVID and Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Frontiers in Medicine* 9: 917019. **Link:** doi.org/10.3389/fmed.2022.917019 (*NEW)

Vreijling SR, et al. (2020) Reduced Heart Rate Variability in Patients with Medically Unexplained Physical Symptoms: A Meta-Analysis of HF-HRV and RMSSD. *Psychosomatic Medicine*. **Link:** <https://pubmed.ncbi.nlm.nih.gov/33065584/>

Ying-Chih C, et al. (2020) Heart rate variability in patients with somatic symptom disorders and functional somatic syndromes: A systematic review and meta-analysis. *Neuroscience and Biobehavioural Reviews* [Epub ahead of print]. **Link:** <https://www.sciencedirect.com/science/article/abs/pii/S0149763419309868>

Zambolin F, et al. (2022) Fibromyalgia and Chronic Fatigue Syndromes: A systematic review and meta-analysis of cardiorespiratory fitness and neuromuscular function compared with healthy individuals. *PLoS One* 17 (10): e0276009. **Link:** doi.org/10.1371/journal.pone.0276009 (*NEW)

4.5. Endothelial Cells

Blauensteiner J, et al. (2021) Altered endothelial dysfunction-related miRs in plasma from ME/CFS patients. *Scientific Reports* 11: 10604. **Link:** <https://www.nature.com/articles/s41598-021-89834-9#citeas>

Bertinat R, et al. (2022) Decreased NO production in endothelial cells exposed to plasma from ME/CFS patients. *Vascular Pharmacology* 143: 106953. **Link:** <https://www.sciencedirect.com/science/article/pii/S1537189122000027#bb0030>

Cambras T, et al. (2022) Circadian skin temperature rhythm and dysautonomia in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome: the role of endothelin-1 in the vascular dysregulation. *ResearchSquare* [preprint]. **Link:** doi.org/10.21203/rs.3.rs-2044838/v1 (*NEW)
Comment

Flaskamp L, et al. (2022) Serum of Post-COVID-19 Syndrome Patients with or without ME/CFS Differentially Affects Endothelial Cell Function In Vitro. *Cells* 11 (15): 2376. **Link:** doi.org/10.3390/cells11152376 (*NEW)

Haffke M, et al. (2022) Endothelial dysfunction and altered endothelial biomarkers in patients with post-COVID-19 syndrome and chronic fatigue syndrome (ME/CFS). *Journal of Translational Medicine* 20: 138. **Link:** doi.org/10.1186/s12967-022-03346-2

Lubell J (2022) Letter: Could endothelial dysfunction and vascular damage contribute to pain, inflammation and post-exertional malaise in individuals with myalgic encephalomyelitis/chronic fatigue syndrome (ME/CFS)? *Journal of Translational Medicine* 20: 40. **Link:**

<https://Link.springer.com/article/10.1186/s12967-022-03244-7>

Sandvik MK et al. (2023) Endothelial dysfunction in ME/CFS patients. *PLoS One* 18 (2): e0280942. **Link:** doi.org/10.1371/journal.pone.0280942

Scherbakov N, et al. (2020) Peripheral endothelial dysfunction in myalgic encephalomyelitis/chronic fatigue syndrome. *ESC Heart Failure* 7 (3): 1064-1071. **Link:** <https://onlinelibrary.wiley.com/doi/full/10.1002/ehf2.12633>

4.6. Exercise physiology/ testing

Baraniuk JN, et al. (2021) Differential Effects of Exercise on fMRI of the Midbrain Ascending Arousal Network Nuclei in Myalgic Encephalomyelitis / Chronic Fatigue Syndrome (ME/CFS) and Gulf War Illness (GWI) in a Model of Postexertional Malaise (PEM). *Preprints*: 2021110420. **Link:** <https://www.preprints.org/manuscript/202111.0420/v1>

Bouquet J, et al. (2019) Whole blood human transcriptome and virome analysis of ME/CFS patients experiencing post-exertional malaise following cardiopulmonary exercise testing. *PLoS One* 14 (3). **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/30897114>

Brand R, et al. (2017) Activity patterns in response to symptoms in patients being treated for chronic fatigue syndrome: An experience sampling methodology study. *Health Psychology* 36 (3): 264-269. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/27819461>

van Campen CL, et al. (2020) Heart Rate Thresholds to Limit Activity in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome Patients (Pacing): Comparison of Heart Rate Formulae and Measurements of the Heart Rate at the Lactic Acidosis Threshold during Cardiopulmonary Exercise Testing. *Advances in Physical Education* 10 (2). **Link:** <https://www.scirp.org/journal/paperinformation.aspx?paperid=100333>

van Campen CL, et al. (2020) Two-Day Cardiopulmonary Exercise Testing in Females with a Severe Grade of Myalgic Encephalomyelitis/Chronic Fatigue Syndrome: Comparison with Patients with Mild and Moderate Disease. *Healthcare* 8 (3): 192. **Link:** <https://www.mdpi.com/2227-9032/8/3/192>

van Campen CM et al. (2020) Physical Activity Measures in Patients With Myalgic Encephalomyelitis/Chronic Fatigue Syndrome: Correlations Between Peak Oxygen Consumption, the Physical Functioning Scale of the SF-36 Questionnaire, and the Number of Steps From an Activity Meter. *Journal of Translational Medicine* 18 (1): 228. **Link:** <https://tinyurl.com/ybywkd2h>

van Campen CMC and Visser FC. (2021) Female Patients with Myalgic Encephalomyelitis/Chronic Fatigue Syndrome or Idiopathic Chronic Fatigue: Comparison of Responses to a Two-Day Cardiopulmonary Exercise Testing Protocol. *Healthcare* 9 (6): 682. **Link:** <https://www.mdpi.com/2227-9032/9/6/682>

van Campen CM and Visser FC. (2021) Comparing Idiopathic Chronic Fatigue and Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS) in Males: Response to Two-Day Cardiopulmonary Exercise Testing Protocol. *Healthcare* 9 (6): 683. **Link:** <https://www.mdpi.com/2227-9032/9/6/683/htm>

- Cook DB, et al.** (2022) Cardiopulmonary, metabolic, and perceptual responses during exercise in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS): A Multi-site Clinical Assessment of ME/CFS (MCAM) sub-study. *PLoS ONE* 17(3): e0265315. **Link:** doi.org/10.1371/journal.pone.0265315
- Davenport T, et al.** (2020) Properties of measurements obtained during cardiopulmonary exercise testing in individuals with myalgic encephalomyelitis/chronic fatigue syndrome. *Work* 66 (2): 247-256. **Link:** doi.org/10.3233/WOR-203170
- Franklin JD, et al.** (2018) Peak Oxygen Uptake in Chronic Fatigue Syndrome/Myalgic Encephalomyelitis: A Meta-Analysis. *International Journal of Sports Medicine* 40 (2): 77-87. **Link:** doi.org/10.1055/a-0802-9175
- Franklin JD and Graham M** (2022) Repeated maximal exercise tests of peak oxygen consumption in people with myalgic encephalomyelitis/chronic fatigue syndrome: a systematic review and meta-analysis. *Fatigue: Biomedicine, Health & Behavior* 10 (3): 119-135. **Link:** doi.org/10.1080/21641846.2022.2108628 (*NEW)
- Lien K, et al.** (2019) Abnormal blood lactate accumulation during repeated exercise testing in myalgic encephalomyelitis/chronic fatigue syndrome. *Physiological Reports* 7 (11). **Link:** <https://physoc.onlinelibrary.wiley.com/doi/10.14814/phy2.14138>
- Lindheimer J, et al.** (2020) An analysis of 2-day cardiopulmonary exercise testing to assess unexplained fatigue. *Physiological Reports* 8 (17). **Link:** <https://physoc.onlinelibrary.wiley.com/doi/full/10.14814/phy2.14564>
- McManimen SL and Jason LA.** (2017) Differences in ME and CFS Symptomology in Patients with Normal and Abnormal Exercise Test Results. *International Journal of Neurology and Neurotherapy* 4 (1): 066. **Link:** <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5510614/>
- Melamed K, et al.** (2019) Unexplained exertional intolerance associated with impaired systemic oxygen extraction. *European Journal of Applied Physiology* 119 (10): 2375-2389. **Link:** <https://link.springer.com/article/10.1007/s00421-019-04222-6>
- Nelson MJ, et al.** (2019) Diagnostic sensitivity of 2-day cardiopulmonary exercise testing in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Journal of Translational Medicine* 17 (1): 80. **Link:** <https://translational-medicine.biomedcentral.com/articles/10.1186/s12967-019-1836-0>
- Petter, E et al.** (2022) Muscle sodium content in patients with Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Journal of Translational Medicine* 20: 580. **Link:** doi.org/10.1186/s12967-022-03616-z (*NEW)
- Polli A,, et al.** (2019) Relationship Between Exercise-induced Oxidative Stress Changes and Parasympathetic Activity in Chronic Fatigue Syndrome: An Observational Study and in Patients and Healthy Subjects. *Clinical Therapy* 41 (4): 641-655. **Link:** doi.org/10.1016/j.clinthera.2018.12.012

Stevens S, et al. (2018) Cardiopulmonary Exercise Test Methodology for Assessing Exertion Intolerance in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Frontiers in Pediatrics* 6:242. **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/30234078>

Van Ness JM, et al. (2003) Subclassifying Chronic Fatigue Syndrome through Exercise Testing. *Medicine & Science in Sports & Exercise* 35(6): 908-913. **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/12783037>

4.7. Extracellular vesicles

Almenar-Perez E, et al. (2020) Assessing diagnostic value of microRNAs from peripheral blood mononuclear cells and extracellular vesicles in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Scientific Reports* 10 (1): 2064. **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/32034172>

Bonilla H, et al. (2022) Comparative Analysis of Extracellular Vesicles in Patients with Severe and Mild Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Frontiers in Immunology* 13: 841910. **Link:**

doi.org/10.3389/fimmu.2022.841910

González-Cebrián A, et al. (2022) Diagnosis of Myalgic Encephalomyelitis/Chronic Fatigue Syndrome With Partial Least Squares Discriminant Analysis: Relevance of Blood Extracellular Vesicles. *Frontiers in Medicine* 9:842991. **Link:** doi.org/10.3389/fmed.2022.842991

4.8. Gastrointestinal and microbiome

Berstad A, et al. (2020) From IBS to ME – The dysbiotic march hypothesis. *Medical Hypothesis* 140, 109648. **Link:**

<https://www.sciencedirect.com/science/article/pii/S0306987720301559>

Corbitt M, et al. (2018) A Systematic Review of Probiotic Interventions for Gastrointestinal Symptoms and Irritable Bowel Syndrome in Chronic Fatigue Syndrome/Myalgic Encephalomyelitis (CFS/ME). *Probiotics and Antimicrobial Proteins*. **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/29464501>

Du Preez S, et al. (2018) A systematic review of enteric dysbiosis in chronic fatigue syndrome/myalgic encephalomyelitis. *Systematic Reviews* 7 (1): 241. **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/30572962>

Giloteaux L, et al. (2016) Reduced diversity and altered composition of the gut microbiome in individuals with myalgic encephalomyelitis/chronic fatigue syndrome. *Microbiome* Jun 23; 4(1):30. doi: 10.1186/s40168-016-0171-4. **Link:**

<https://microbiomejournal.biomedcentral.com/articles/10.1186/s40168-016-0171-4>

Substantial media coverage of the studies by Guo *et al.* and Xiong *et al.* at the time of publication, see [here](#).

Guo C *et al.* (2023) Deficient butyrate-producing capacity in the gut microbiome is associated with bacterial network disturbances and fatigue symptoms in ME/CFS. *Cell Host & Microbe* 31 (2):288-304. **Link:** doi.org/10.1016/j.chom.2023.01.004

Hanevik K, *et al.* (2022) No difference in serum levels of B-cell activating receptor and antibodies against cytolethal distending toxin B and flagellin in post-infectious irritable bowel syndrome and chronic fatigue syndrome after *Giardia* infection. *JGH Open* (2022):1-4. **Link:** doi.org/10.1002/jgh3.12724

Kenyon J, *et al.* (2019) A Retrospective Outcome Study of 42 Patients with Chronic Fatigue Syndrome, 30 of Whom had Irritable Bowel Syndrome. Half were treated with oral approaches, and half were treated with Faecal Microbiome Transplantation. *Human Microbiome Journal* 13. **Link:** <https://tinyurl.com/y2cqxyzg>

König RS, *et al.* (2022) The Gut Microbiome in Myalgic Encephalomyelitis (ME)/Chronic Fatigue Syndrome (CFS). *Frontiers in Immunology* 12: 628741. **Link:** doi.org/10.3389/fimmu.2021.628741

Lupo GFD, *et al.* (2021) Potential role of microbiome in Chronic Fatigue Syndrome/Myalgic Encephalomyelitis (CFS/ME). *Scientific Reports* 11 (1): 7043. **Link:** doi.org/10.1038/s41598-021-86425-6

Mandarano AH, *et al.* (2018) Eukaryotes in the gut microbiota in myalgic encephalomyelitis/chronic fatigue syndrome. *Peer Journal* 6: e4282. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/29375937>

Nagy-Szakal D, *et al.* (2017) Fecal metagenomic profiles in subgroups of patients with myalgic encephalomyelitis/chronic fatigue syndrome. *Microbiome* 5: 44. **Link:** <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5405467/>

Navaneetharaja N, *et al.* (2016) A role for the Intestinal Microbiota and Virome in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS)? *Journal of Clinical Medicine* 5 (6), 55 doi: 10.3390/jcm5060055. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/27275835>

Newberry F, *et al.* (2018) Does the microbiome and virome contribute to myalgic encephalomyelitis/chronic fatigue syndrome? *Clinical Science (London)* 132 (5): 523-542 **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/29523751>

Ostojic SM (2021) Diagnostic and Pharmacological Potency of Creatine in Post-Viral Fatigue Syndrome. *Nutrients* 13 (2): 503. **Link:** <https://pubmed.ncbi.nlm.nih.gov/33557013/>

Proal AD and Marshall T (2018) Myalgic Encephalomyelitis/Chronic Fatigue Syndrome in the era of the human microbiome: persistent pathogens drive chronic symptoms by interfering with host metabolism, gene expression and immunity, *Frontiers in Pediatrics* 6:374. **Link:** doi.org/10.3389/fped.2018.00373

Roman P, et al. (2018) Are probiotic treatments useful on fibromyalgia syndrome or chronic fatigue syndrome patients? A systematic review. *Beneficial Microbes* 9 (4): 603-611. **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/29695180>

Seaton K (2022) Investigating Immune Reactivity to the Intestinal Microbiome in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. [Doctoral dissertation, University of East Anglia]. **Link:**

<https://ueaeprints.uea.ac.uk/id/eprint/90862/> (*NEW)

Sharma A, et al. (2022) Role of Gut Microbiota and Probiotic in Chronic Fatigue Syndrome. In: Kaur I.P., Deol P.K., Sandhu S.K. (eds) *Probiotic Research in Therapeutics*. Springer, Singapore. **Link:**

https://link.springer.com/chapter/10.1007/978-981-16-6760-2_9

Simeonova D, et al. (2018) Recognizing the leaky gut as a trans-diagnostic target for neuro-immune disorders using clinical chemistry and molecular immunology assays, *Current Topics in Medicinal Chemistry* 18 (19): 1641-1655. **Link:** <https://tinyurl.com/yyc8ecag>

Steinsvik EK et al. (2023) Gastric dysmotility and gastrointestinal symptoms in myalgic encephalomyelitis/chronic fatigue syndrome. *Scandinavian Journal of Gastroenterology* [Epub ahead of print]. **Link:**

doi.org/10.1080/00365521.2023.2173533 (*NEW)

Varesi A, et al. (2021) The Emerging Role of Gut Microbiota in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS): Current Evidence and Potential Therapeutic Applications. *Journal of Clinical Medicine* 10 (21): 5077. **Link:** <https://pubmed.ncbi.nlm.nih.gov/34768601/>

Vogl T, et al. (2022) Systemic antibody responses against human microbiota flagellins are overrepresented in chronic fatigue syndrome patients. *Science Advances* 8 (38): eabq2422. **Link:** doi.org/10.1126/sciadv.abq2422 (*NEW)

Comment

Wallis A, et al. (2017) Examining clinical similarities between myalgic encephalomyelitis/chronic fatigue syndrome and d-lactic acidosis: a systematic review. *Journal of Translational Medicine* 15:129. **Link:**

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5463382/>

Wallis A, et al. (2018) Open-label pilot for treatment targeting gut dysbiosis in myalgic encephalomyelitis/chronic fatigue syndrome: neuropsychological symptoms and sex comparisons. *Journal of Translational Medicine* 16 (1): 24. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/29409505>
Also see corrected version:

<https://www.ncbi.nlm.nih.gov/pubmed/29475443>

Wang T, et al. (2018) Chronic fatigue syndrome patients have alterations in their oral microbiome composition and function. *PLoS One* 13 (9). **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/30204780>

Xiong R, et al. (2021) Multi-'omics of host-microbiome interactions in short- and long-term Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS). *Cell Host & Microbe* 31 (2): 273-287. **Link:** doi.org/10.1016/j.chom.2023.01.001

4.9. Gene Expression

Ahmed F, et al. (2022) Single-cell transcriptomics of the immune system in ME/CFS at baseline and following symptom provocation. *bioRxiv* [preprint]. **Link:** doi.org/10.1101/2022.10.13.512091 (*NEW) **Comment**

Asad HN, et al. (2022) A Causal-Pathway Phenotype of Chronic Fatigue Syndrome due to Hemodialysis in Patients with End-Stage Renal Disease. *CNS & Neurological Disorders Drug Targets*. [Epub ahead of print.] **Link:** doi.org/10.2174/1871527321666220401140747

Blauensteiner J, et al. (2021) Altered endothelial dysfunction-related miRs in plasma from ME/CFS patients. *Scientific Reports* 11: 10604. **Link:** <https://www.nature.com/articles/s41598-021-89834-9>

Van Booven DJ et al. (2023) Stress-Induced Transcriptomic Changes in Females with Myalgic Encephalomyelitis/Chronic Fatigue Syndrome Reveal Disrupted Immune Signatures. *International Journal of Molecular Sciences* 24(3): 2698. **Link:** doi.org/10.3390/ijms24032698 (*NEW) **Comment**

Bouquet J, et al. (2019) Whole blood human transcriptome and virome analysis of ME/CFS patients experiencing post-exertional malaise following cardiopulmonary exercise testing. *PLoS One* 14 (3). **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/30897114>

Cameron B, et al. (2007) Gene Expression Correlates of Postinfective Fatigue Syndrome after Infectious Mononucleosis. *Journal of Infectious Diseases* 196(1): 56-66. **Link:** <https://academic.oup.com/jid/article/196/1/56/843985>

Comella PH, et al. (2021) A Molecular network approach reveals shared cellular and molecular signatures between chronic fatigue syndrome and other fatiguing illnesses. *medRxiv* [Preprint] 01.29.21250755. **Link:** <https://pubmed.ncbi.nlm.nih.gov/33564792/>

Das S, et al. (2022) Genetic Risk Factors for ME/CFS Identified using Combinatorial Analysis. *medRxiv* [preprint]. **Link:** doi.org/10.1101/2022.09.09.22279773 (*NEW)

Devereux-Cooke A, et al. (2022) DecodeME: community recruitment for a large genetics study of myalgic encephalomyelitis / chronic fatigue syndrome. *BMC Neurology* 22: 269. **Link:** doi.org/10.1186/s12883-022-02763-6 (*NEW)

- Dibble J** (2022) Investigating the Genetic and Immunological Aetiology of Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. [Doctoral Dissertation, University of Edinburgh]. **Link:** https://era.ed.ac.uk/bitstream/handle/1842/39763/DibbleJJ_2022.pdf?sequence=1&isAllowed=y (*NEW)
- Dibble J, et al.** (2020) Genetic Risk Factors of ME/CFS: A Critical Review. *Human Molecular Genetics* [Epub ahead of print] **Link:** <https://pubmed.ncbi.nlm.nih.gov/32744306/>
- de Vega WC, et al.** (2014) DNA Methylation Modifications Associated with Chronic Fatigue Syndrome. *PLoS ONE* 9(8): e104757. **Link:** <http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0104757>
- de Vega WC, et al.** (2018) Integration of DNA methylation & health scores identifies subtypes in myalgic encephalomyelitis/chronic fatigue syndrome. *Epigenomics* [Epub ahead of print]. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/29692205>
- de Vega WC and McGowan PO.** (2017) The epigenetic landscape of myalgic encephalomyelitis/chronic fatigue syndrome: deciphering complex phenotypes. *Epigenomics* 9 (11): 1337-1340. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/29043854>
- Germain A, et al.** (2021) In-Depth Analysis of the Plasma Proteome in ME/CFS Exposes Disrupted Ephrin-Eph and Immune System Signaling. *Proteomes* 9 (1): 6. **Link:** <https://pubmed.ncbi.nlm.nih.gov/33572894/> **Comment** and **IACFS coverage**
- González-Cebrián A, et al.** (2022) Diagnosis of Myalgic Encephalomyelitis/Chronic Fatigue Syndrome With Partial Least Squares Discriminant Analysis: Relevance of Blood Extracellular Vesicles. *Frontiers in Medicine* 9:842991. **Link:** doi.org/10.3389/fmed.2022.842991
- Gottschalk G, et al.** (2022) Elevated ATG13 in serum of patients with ME/CFS stimulates oxidative stress response in microglial cells via activation of receptor for advanced glycation end products (RAGE). *Molecular and Cellular Neuroscience* 120: 103731. **Link:** doi.org/10.1016/j.mcn.2022.103731
- Gow JW, et al.** (2009) A gene signature for post-infectious chronic fatigue syndrome. *BMC Medical Genomics* 2: 38. **Link:** <https://bmcmmedgenomics.biomedcentral.com/articles/10.1186/1755-8794-2-38>
- Grabowska A, et al.** (2020) Review of the Quality Control Checks Performed by Current Genome-Wide and Targeted-Genome Association Studies on Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Frontiers in Pediatrics* 8: 293. **Link:** <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7304330/>
- Gräns H, et al.** (2005) Gene expression profiling in the chronic fatigue syndrome [Letter to the editor]. *Journal of Internal Medicine* 258(4): 388-390. **Link:** <http://onlinelibrary.wiley.com/doi/10.1111/j.1365-2796.2005.01548.x/full>

- Hajdarevic R, et al.** (2022) Genetic association study in myalgic encephalomyelitis/chronic fatigue syndrome (ME/CFS) identifies several potential risk loci. *Brain Behavior, and Immunity* 102: 362-369. **Link:** doi.org/10.1016/j.bbi.2022.03.010
- Helliwell AM, et al.** (2020) Changes in DNA methylation profiles of myalgic encephalomyelitis/chronic fatigue syndrome patients reflect systemic dysfunctions. *Clinical Epigenetics* 12 (1): 167. **Link:** <https://pubmed.ncbi.nlm.nih.gov/33148325/>
- Helliwell AM, et al.** (2022) Dynamic Epigenetic Changes during a Relapse and Recovery Cycle in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *medRxiv* [preprint]. **Link:** doi.org/10.1101/2022.02.24.22270912
- Herrera S, et al.** (2018) Genome-epigenome interactions associated with Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Epigenetics* 5: 1-17. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/30516085>
- Hoel F, et al.** (2021) A map of metabolic phenotypes in patients with myalgic encephalomyelitis/chronic fatigue syndrome. *JCI Insight* 6 (16): 149217. **Link:** <https://pubmed.ncbi.nlm.nih.gov/34423789/>
- Jacob E, et al.** (2016) Gene expression factor analysis to differentiate pathways **Linked** to fibromyalgia, chronic fatigue syndrome, and depression in a diverse patient sample. *Arthritis Care Research* 68 (1): 132 – 140. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/26097208>
- Kerr JR, et al.** (2008a) Seven genomic subtypes of chronic fatigue syndrome/myalgic encephalomyelitis: a detailed analysis of gene networks and clinical phenotypes. *Journal of Clinical Pathology* 61 (6): 730-739. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/18057078>
- Kerr JR, et al.** (2008b) Gene Expression Subtypes in Patients with Chronic Fatigue Syndrome/Myalgic Encephalomyelitis. *Journal of Infectious Diseases* 197(8): 1171-1184. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/18462164>
- Kerr JR.** (2019) Epstein-Barr virus induced gene-2 upregulation identifies a particular subtype of Chronic Fatigue Syndrome / Myalgic Encephalomyelitis. *Frontiers in Pediatrics* [Epub ahead of print]. **Link:** <https://www.frontiersin.org/articles/10.3389/fped.2019.00059/full>
- Light AR, et al.** (2012) Gene expression alterations at baseline and following moderate exercise in patients with Chronic Fatigue Syndrome and Fibromyalgia Syndrome. *Journal of Internal Medicine* 271 (1): 64-81. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/21615807>
- Metselaar PL, et al.** (2021) Recursive ensemble feature selection provides a robust mRNA expression signature for myalgic encephalomyelitis/chronic fatigue syndrome. *Scientific Reports* 11 (1): 4541. **Link:** <https://pubmed.ncbi.nlm.nih.gov/33633136/>

- Narita M, et al.** (2003) Association between serotonin transporter gene polymorphism and chronic fatigue syndrome. *Biochemical and Biophysical Research Communications* 311(2): 264-266. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/14592408>
- Pereira G, et al.** (2021) Acute Corticotropin-Releasing Factor Receptor Type 2 Agonism Results in Sustained Symptom Improvement in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Frontiers in Systems Neuroscience* (eCollection 2021)15: 698240. **Link:** <https://pubmed.ncbi.nlm.nih.gov/34539356/>
- Piraino B, et al.** (2012) Genetic associations of fatigue and other symptom domains of the acute sickness response to infection. *Brain, Behavior, and Immunity* 26(4): 552-558. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/22227623>
- Polli A, et al.** (2020) DNA Methylation and BDNF Expression Account for Symptoms and Widespread Hyperalgesia in Patients With Chronic Fatigue Syndrome and Fibromyalgia. *Arthritis Rheumatology* [Epub ahead of print]. **Link:** <https://pubmed.ncbi.nlm.nih.gov/32562379/>
- Polli A, et al.** (2022) Genetic and epigenetic regulation of Catechol-O-methyltransferase in relation to inflammation in chronic fatigue syndrome and Fibromyalgia. *Journal of Translational Medicine* 20: 487. **Link:** doi.org/10.1186/s12967-022-03662-7 (*NEW)
- Raijmakers RPH, et al.** (2019) A possible role for mitochondrial-derived peptides humanin and MOTS-c in patients with Q fever fatigue syndrome and chronic fatigue syndrome. *Journal of Translational Medicine* 17 (1): 157. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/31088495>
- Shah RJ.** (2021) Chronic fatigue syndrome and epigenetics: The case for hyperbaric oxygen therapy in biomarker identification. *Journal of Pulmonology and Respiratory Research* 5: 027-030. **Link:** <https://www.heighpubs.org/jpr/jpr-aid1020.php>
- Shimosako N and Kerr JR.** (2014) Use of single-nucleotide polymorphisms (SNPs) to distinguish gene expression subtypes of chronic fatigue syndrome/myalgic encephalomyelitis (CFS/ME). *Journal of Clinical Pathology* 67(12): 1078-1083. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/25240059>
- Shoeman EM, et al.** (2017) Clinically proven mtDNA mutations are not common in those with chronic fatigue syndrome. *BMC Medical Genetics* 18 (1): 29. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/28302057>
- Smesam HN, et al.** (2022) Pathway Phenotypes Underpinning Depression, Anxiety, and Chronic Fatigue Symptoms Due to Acute Rheumatoid Arthritis: A Precision Nomothetic Psychiatry Analysis. *Journal of Personalized Medicine* 12 (3): 476. **Link:** doi.org/10.3390/jpm12030476

- Smith AK, et al.** (2011) Convergent Genomic Studies Identify Association of GRIK2 and NPAS2 with Chronic Fatigue Syndrome. *Neuropsychobiology* 64(4): 183-194. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/21912186>
- Steiner S, et al.** (2020) Autoimmunity-Related Risk Variants in PTPN22 and CTLA4 Are Associated With ME/CFS With Infectious Onset. *Frontiers in Immunology* 11: 578. **Link:** <https://www.frontiersin.org/articles/10.3389/fimmu.2020.00578/full>
- Trivedi M, et al.** (2018) Identification of Myalgic Encephalomyelitis/Chronic Fatigue Syndrome-associated DNA methylation patterns. *PLoS One* 13 (7): e0201066. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/30036399>
- Tziastoudi M, et al.** (2022) Genetics of COVID-19 and myalgic encephalomyelitis/chronic fatigue syndrome: a systematic review. *Annals of Clinical and Translational Neurology*. **Link:** doi.org/10.1002/acn3.51631
- (*NEW) Comment
- Vernon SD, et al.** (2002) Utility of the Blood for Gene Expression Profiling and Biomarker Discovery in Chronic Fatigue Syndrome. *Disease Markers* 18(4): 193-199. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/12590173>
- Wang Z, et al.** (2022) Autoimmune Gene Expression Profiling of Fingerstick Whole Blood in Chronic Fatigue Syndrome. *ResearchSquare* [Preprint]. **Link:** doi.org/10.21203/rs.3.rs-1942047/v1
- Whistler T, et al.** (2003) Integration of gene expression, clinical, and epidemiologic data to characterize Chronic Fatigue Syndrome. *Journal of Translational Medicine* 1: 10. **Link:** <https://translational-medicine.biomedcentral.com/articles/10.1186/1479-5876-1-10>
- Whistler T, et al.** (2006) Gene expression correlates of unexplained fatigue. *Pharmacogenomics* 7(3): 395-405. **Link:** <https://tinyurl.com/y47fmvrf>
- White AT, et al.** (2012) Differences in Metabolite-Detecting, Adrenergic, and Immune Gene Expression After Moderate Exercise in Patients with Chronic Fatigue Syndrome, Patients with Multiple Sclerosis, and Healthy Controls. *Psychosomatic Medicine* 74(1): 46-54. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/22210239>
- Williams MV, et al.** (2019) Epstein-Barr Virus dUTPase Induces Neuroinflammatory Mediators: Implications for Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Clinical Therapeutics* 41 (5): 848;863. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/31040055>
- Yang CA, et al.** (2018) The expression signature of very long non-coding RNA in myalgic encephalomyelitis/chronic fatigue syndrome. *Journal of Translational Medicine* 16 (1): 231. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/30119681>
- Yang X, et al.** (2021) Study on the Relationship between the miRNA-centered ceRNA Regulatory Network and Fatigue. *Journal of Molecular Neuroscience* [Epub ahead of print]. **Link:** <https://pubmed.ncbi.nlm.nih.gov/33993410/>

4.9.1. Epigenetics

Almenar-Perez E, et al. (2019) miRNA profiling of circulating EVs in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS). *Journal of Extracellular Vesicles*, 7: 139. Link: <https://tinyurl.com/y4b8durc>

Almenar-Perez E, et al. (2019) Epigenetic Components of Myalgic Encephalomyelitis/Chronic Fatigue Syndrome Uncover Potential Transposable Element Activation. *Clinical Therapeutics* 41 (4): 675-698. Link: [https://www.clinicaltherapeutics.com/article/S0149-2918\(19\)30072-4/abstract](https://www.clinicaltherapeutics.com/article/S0149-2918(19)30072-4/abstract)

Almenar-Perez E, et al. (2020) Assessing diagnostic value of microRNAs from peripheral blood mononuclear cells and extracellular vesicles in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Scientific Reports* 10 (1): 2064. Link: <https://www.ncbi.nlm.nih.gov/pubmed/32034172>

Bonilla H, et al. (2022) Comparative Analysis of Extracellular Vesicles in Patients with Severe and Mild Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Frontiers in Immunology* 13: 841910. Link: doi.org/10.3389/fimmu.2022.841910

Cheema AK, et al. (2020) Unravelling myalgic encephalomyelitis/chronic fatigue syndrome (ME/CFS): Gender-specific changes in the microRNA expression profiling in ME/CFS. *Journal of Cellular and Molecular Medicine* [Epub ahead of print]. Link: <https://onlinelibrary.wiley.com/doi/10.1111/jcmm.15260#XpbchH96IXqs>

Hajdarevic R (2022) Immunogenetic studies in myalgic encephalomyelitis/chronic fatigue syndrome (ME/CFS). [Doctoral dissertation, University of Oslo] Link: <https://www.duo.uio.no/bitstream/handle/10852/94321/3/Phd-Hajdarevic-DUO.pdf> (*NEW)

Helliwell AM, et al. (2022) Dynamic Epigenetic Changes during a Relapse and Recovery Cycle in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. medRxiv [preprint]. Link: doi.org/10.1101/2022.02.24.22270912

4.10. General reviews

Anderson G, and Maes M (2020) Mitochondria and Immunity in Chronic Fatigue Syndrome. *Progress in Neuropsychopharmacological and Biological Psychiatry* [Epub ahead of print]. Link: <https://tinyurl.com/yco9sufa>

Bansal RA et al. (2022) What Causes ME/CFS: The Role of the Dysfunctional Immune System and Viral Infections. *Journal of Immunology and Allergy* 3(2): 1-15. Link: [doi.org/10.37191/Mapsci-2582-6549-3\(2\)-033](https://doi.org/10.37191/Mapsci-2582-6549-3(2)-033) (*NEW)

- Bjørklund G, et al.** (2020) Environmental, Neuro-immune, and Neuro-oxidative Stress Interactions in Chronic Fatigue Syndrome. *Molecular Neurobiology* 57 (11): 4598-4607. **Link:**
<https://link.springer.com/article/10.1007/s12035-020-01939-w>
- Burke M** (2019) "It's All in Your Head"—Medicine's Silent Epidemic. *JAMA Network* [Epub ahead of print]. **Link:**
<https://jamanetwork.com/journals/jamaneurology/article-abstract/2751253>
- Choutka J, et al.** (2022) Unexplained post-acute infection syndromes. *Nature Medicine* 28 (5): 911-923. **Link:** doi.org/10.1038/s41591-022-01810-6 (*NEW)
- Comhaire F** (2022) The Role of Immunity and Inflammation in ME/ CFS and Post-COVID Syndrome: Implications for Treatment. *MedLife Clinics* Volume 4 (2): 1043. **Link:** <https://www.medtextpublications.com/open-access/the-role-of-immunity-and-inflammation-in-me-cfs-and-1254.pdf> (*NEW)
Comment
- Dehghani M, et al.** (2022). The Role of Kynurenine Pathway and NAD⁺ Metabolism in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Aging and disease* 13 (3): 698–711. **Link:**
doi.org/10.14336/AD.2021.0824 (*NEW)
- Deumer U-S, et al.** (2021) Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS): An Overview. *Journal of Clinical Medicine* 10 (20): 4786. **Link:** <https://pubmed.ncbi.nlm.nih.gov/34682909/>
- Do-Young K, et al.** (2020) Systematic review of randomized controlled trials for chronic fatigue syndrome/myalgic encephalomyelitis (CFS/ME) *Journal of Translational Medicine* 18: 7. **Link:** <https://translational-medicine.biomedcentral.com/articles/10.1186/s12967-019-02196-9>
- van Eeden C, et al.** (2022) Fatigue in ANCA-associated vasculitis (AAV) and systemic sclerosis (SSc): similarities with Myalgic encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS). A critical review of the literature. *Expert Review of Clinical Immunology*. **Link:** doi.org/10.1080/1744666X.2022.2116002 (*NEW)
- Fink P et al.** (2022) Facts and myths about chronic fatigue syndrome. *Ugeskr Laeger* 184 (21): V12210943. [Article in Danish] **Link:**
<https://pubmed.ncbi.nlm.nih.gov/35656619/> (*NEW)
- Friedberg F** (2020) Legitimizing myalgic encephalomyelitis/chronic fatigue syndrome: indications of change over a decade. *Fatigue: Biomedicine, Health and Behaviour* [Epub ahead of print]. **Link:**
<https://www.tandfonline.com/doi/abs/10.1080/21641846.2020.1718292>
- Friedman K, et al.** (2019) Editorial: Advances in ME/CFS Research and Clinical Care. *Frontiers in Pediatrics* [Epub ahead of print]. **Link:**
<https://www.frontiersin.org/articles/10.3389/fped.2019.00370/full>
- Gandasegui IM, et al.** (2021) Myalgic Encephalomyelitis/Chronic Fatigue Syndrome: A Neurological Entity? *Medicina* 57: 1030. **Link:**
<https://www.mdpi.com/1648-9144/57/10/1030>

- Gottschalk, CG et al.** (2023) Potential molecular mechanisms of chronic fatigue in long haul COVID and other viral diseases. *Infectious Agents and Cancer* 18: 7. Link: doi.org/10.1186/s13027-023-00485-z (*NEW)
- Holgate ST, et al.** (2011) Chronic fatigue syndrome: understanding a complex illness. *Nature Reviews Neuroscience* 12(9): 539-544. Link: <https://www.ncbi.nlm.nih.gov/pubmed/21792218>
- Komaroff A** (2019) Advances in Understanding the Pathophysiology of Chronic Fatigue Syndrome. *JAMA* [Epub ahead of print]. Link: <https://jamanetwork.com/journals/jama/fullarticle/2737854>
- Komaroff AL** (2021) Myalgic Encephalomyelitis/Chronic Fatigue Syndrome: When Suffering Is Multiplied. *Healthcare* 2021, 9: 919. Link: <https://www.mdpi.com/2227-9032/9/7/919/html>
- Kuvyani B, et al.** (2022) Could the kynurenine pathway be the key missing piece of Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS) complex puzzle? *Cellular and Molecular Life Science* 79 (8): 412. Link: doi.org/10.1007/s00018-022-04380-5 (*NEW)
- Larrimore C, et al.** (2019) Understanding Myalgic Encephalomyelitis/Chronic Fatigue Syndrome and the Emerging Osteopathic Approach: A Narrative Review. *Journal of American Osteopathic Association* 119 (7): 446-455. Link: <https://www.ncbi.nlm.nih.gov/pubmed/31233110>
- Lubet S and Tuller D** (2020) The Concept of 'Illness Without Disease' Impedes Understanding of Chronic Fatigue Syndrome: A Response to Sharpe and Greco. *Medical Humanities* [Epub ahead of print]. Link: <https://tinyurl.com/ybl998as>
- Ludwig B et al.** (2023) Myalgic encephalomyelitis/chronic fatigue syndrome: a review of the current evidence. *Neurologist*. [Article in German] Link: doi.org/10.1007/s00115-022-01431-x (*NEW)
- Mahroum N and Shoenfeld Y** (2022) Autoimmune Autonomic Dysfunction Syndromes: Potential Involvement and Pathophysiology Related to Complex Regional Pain Syndrome, Fibromyalgia, Chronic Fatigue Syndrome, Silicone Breast Implant-Related Symptoms and Post-COVID Syndrome. *Pathophysiology* 29 (3): 414-425. Link: doi.org/10.3390/pathophysiology29030033 (*NEW)
- Maksoud R, et al.** (2021) Systematic Review of Sleep Characteristics in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Healthcare* 9: 568. Link: <https://www.mdpi.com/2227-9032/9/5/568>
- Malkova AM and Shoenfeld Y** (2022) Autoimmune autonomic nervous system imbalance and conditions: Chronic fatigue syndrome, fibromyalgia, silicone breast implants, COVID and post-COVID syndrome, sick building syndrome, post-orthostatic tachycardia syndrome, autoimmune diseases and autoimmune/inflammatory syndrome induced by adjuvants. *Autoimmunity Reviews*: 103230. [In press, Journal Pre-proof] Link: doi.org/10.1016/j.autrev.2022.103230 (*NEW)

- Mathur R, et al.** (2021) mapMECFS: a portal to enhance data discovery across biological disciplines and collaborative sites. *Journal of Translational Medicine* 19 (1): 461. Link: <https://pubmed.ncbi.nlm.nih.gov/34749736/>
- Maxmen A** (2017) Biological underpinnings of chronic fatigue syndrome begin to emerge. *Nature* 543 (7647): 602. Link: <https://www.ncbi.nlm.nih.gov/pubmed/28358099>
- Maxmen A** (2018) A reboot for chronic fatigue syndrome research. *Nature* 553 (7686): 14-17. Link: <https://www.nature.com/articles/d41586-017-08965-0>
- Missailidis D, et al.** (2019) Pathological Mechanisms Underlying Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Diagnostics* 9 (3): 80. Link: <https://www.ncbi.nlm.nih.gov/pubmed/31330791>
- Morris G, et al.** (2019) Myalgic encephalomyelitis or chronic fatigue syndrome: how could the illness develop? *Metabolic Brain Disease* 1-31. Link: <https://link.springer.com/article/10.1007/s11011-019-0388-6>
- Muller AE, et al.** (2021) Potential causal factors of CFS/ME: a concise and systematic scoping review of factors researched. *Journal of Translational Medicine* 18 (1): 484. Link: <https://pubmed.ncbi.nlm.nih.gov/33317576/>
- Nacul L, et al.** (2020) How Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS) Progresses: The Natural History of ME/CFS. *Frontiers in Neurology* [Epub ahead of print]. Link: <https://www.frontiersin.org/articles/10.3389/fneur.2020.00826/full>
- Noor N, et al.** (2021) Comprehensive Update of the Current Understanding of Chronic Fatigue Syndrome. *Anaesthesiology and Pain Medicine* 11 (3): e113629. Link: <https://sites.kowsarpub.com/aapm/articles/113629.html>
- O'Leary D** (2020) A concerning display of medical indifference: reply to 'Chronic fatigue syndrome and an illness-focused approach to care: controversy, morality and paradox'. *Medicine Humanities* 46 (4): e4. Link: <https://pubmed.ncbi.nlm.nih.gov/32601171/>
- Pederson M** (2019) Chronic Fatigue Syndrome and chronic pain conditions - vitally protective systems gone wrong. *Scandinavian Journal of Pain* [Epub ahead of print]. Link: <https://www.ncbi.nlm.nih.gov/pubmed/31256069>
- Pheby DFH, et al.** (2021) Turning a Corner in ME/CFS Research. *Medicina* 57: 1012. Link: <https://www.mdpi.com/1648-9144/57/10/1012>
- Pilkington K, et al.** (2020) A relational analysis of an invisible illness: A meta-ethnography of people with chronic fatigue syndrome/myalgic encephalomyelitis (CFS/ME) and their support needs. *Social Science and Medicine* 265: 113369. Link: <https://pubmed.ncbi.nlm.nih.gov/33039734/>
- Preez SD, et al.** (2021) Potential Implications of Mammalian Transient Receptor Potential Melastatin 7 in the Pathophysiology of Myalgic Encephalomyelitis/Chronic Fatigue Syndrome: A Review. *International Journal of Environmental Resources and Public Health* 18 (20): 10708. Link: <https://pubmed.ncbi.nlm.nih.gov/34682454/>

- Prylińska-Jaśkowiak, Monika and Kożuchowski, Marcin** (2022) Current knowledge about Chronic fatigue syndrome / myalgic encephalomyelitis (CFS/ME) causes – summary. *Journal of Education, Health and Sport* 12 (9): 712–719. **Link:** doi.org/10.12775/JEHS.2022.12.09.084 (*NEW)
- Renz-Polster H et al.** (2022) The Pathobiology of Myalgic Encephalomyelitis/Chronic Fatigue Syndrome: The Case for Neuroglial Failure. *Frontiers in Cellular Neuroscience* 16: 888232. **Link:** doi.org/10.3389/fncel.2022.888232 (*NEW)
- Rivera C, et al.** (2019) Myalgic Encephalomyelitis/Chronic Fatigue Syndrome: A Comprehensive Review. *Diagnostics* 9 (3). **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/31394725>
- Sandler CX and Lloyd AR** (2020) Chronic fatigue syndrome: progress and possibilities. *The Medical Journal of Australia* [Epub ahead of print]. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/32248536>
- Saunders R** (2018) Chronic fatigue syndrome therapies grounded in science hold promise. *Correspondence Nature* 555(7696):311 **Link:** <https://www.nature.com/articles/d41586-018-03055-1>
- Sapra A and Bhandari P** (2021) Chronic Fatigue Syndrome. In: *StatPearls* [Internet]. Treasure Island (FL): StatPearls Publishing; 2021 Jan. **Link:** <https://pubmed.ncbi.nlm.nih.gov/32491608/>
- Sharpe M, et al.** (2018) Don't reject evidence from CFS therapies. *Nature* 554 (7690): 31. **Link:** <https://www.nature.com/articles/d41586-018-01285-x>
Correspondence to “A Reboot for Chronic Fatigue Syndrome Research”
- Simeoni RJ** (2022) Chronic Fatigue Syndrome: A Quantum Mechanical Perspective. *Journal of Science and Society* 2 (1): 20-40. **Link:** doi.org/10.52042/UNETJOSS020103
- Son C** (2019) Minireview for Chronic Fatigue Syndrome and its Medical Attention recently. *Journal of Korean Medicine* 40 (4): 84-90. **Link:** <https://www.jkom.org/upload/jkm-40-4-84.pdf>
- Sweetman E, et al.** (2019) Current Research Provides Insight into the Biological Basis and Diagnostic Potential for Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS). *Diagnostics* 9 (3). **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/31295930>
- Theoharides T** (2019) A Timely Multidisciplinary Update on Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Clinical Therapeutics* 41 (4): 610-611. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/30940402>
- Thomas N, et al.** (2022) The underlying sex differences in neuroendocrine adaptations relevant to Myalgic Encephalomyelitis Chronic Fatigue Syndrome. *Frontiers in Neuroendocrinology*: 100995. [Epub ahead of print] **Link:** doi.org/10.1016/j.yfrne.2022.100995

Trautmann A (2021) Mechanisms underlying chronic fatigue, a symptom too often overlooked II- From deregulated immunity to neuroinflammation and its consequences. *Medecine Sciences (Paris)* 37 (11): 1047-1054. [Article in French.] Link: <https://pubmed.ncbi.nlm.nih.gov/34851284/>

Walker MOM, et al. (2022) The significance of oxidative stress in the pathophysiology of Long COVID and Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS). *Medical Research Archives* 10 (9). Link: doi.org/10.18103/mra.v10i9.3050 (*NEW)

Watanabe Y and Kuratsune H. (2018) History of Researches on ME/CFS. *Brain and Nerves* 70 (1): 5-9. Link: <https://www.ncbi.nlm.nih.gov/pubmed/29348369> (Article in Japanese)

Weir W & Speight N (2021) ME/CFS: Past, Present and Future. *Healthcare* 9: 984. Link: <https://www.mdpi.com/2227-9032/9/8/984>

Wirth KL, et al. (2021) An attempt to explain the neurological symptoms of Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Journal of Transitional Medicine* 19: 471. Link: <https://translational-medicine.biomedcentral.com/articles/10.1186/s12967-021-03143-3>

Zielinski M, et al. (2019) Fatigue, Sleep, and Autoimmune and Related Disorders. *Frontiers of Immunology* 10: 1827. Link: <https://www.frontiersin.org/articles/10.3389/fimmu.2019.01827/full>

4.11. Genetic predisposition

Albright F, et al. (2011) Evidence for a heritable predisposition to Chronic Fatigue Syndrome. *BMC Neurology* 11: 62. **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/21619629>

Bedford FL and Tzovaras BG (2021) Re-analysis of Genetic Risks for Chronic Fatigue Syndrome From 23andMe Data Finds Few Remain. *Frontiers in Pediatrics* 9: 590040. **Link:** <https://pubmed.ncbi.nlm.nih.gov/33816394/>

Buchwald D, et al. (2001) A Twin Study of Chronic Fatigue. *Psychosomatic Medicine* 101 (2): 103-113 **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/11719632>

Crawley E and Davey Smith G. (2007) Is chronic fatigue syndrome (CFS/ME) heritable in children, and if so, why does it matter? *Archives of Disease in Childhood* 92 (12): 1058-1061. **Link:**

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2066085/>

Devereux-Cooke A, et al. (2022) DecodeME: community recruitment for a large genetics study of myalgic encephalomyelitis / chronic fatigue syndrome. *BMC Neurology* 22: 269. **Link:** doi.org/10.1186/s12883-022-02763-6 (*NEW)

Hajdarevic R, et al. (2022) Genetic association study in myalgic encephalomyelitis/chronic fatigue syndrome (ME/CFS) identifies several potential risk loci. *Brain Behavior, and Immunity* 102: 362-369. **Link:**

doi.org/10.1016/j.bbi.2022.03.010

Kendler K, et al. (2022). A distinctive profile of family genetic risk scores in a Swedish national sample of cases of fibromyalgia, irritable bowel syndrome, and chronic fatigue syndrome compared to rheumatoid arthritis and major depression. *Psychological Medicine*: 1-8. **Link:**

doi.org/10.1017/S0033291722000526

Perez M, et al. (2019) Genetic Predisposition for Immune System, Hormone, and Metabolic Dysfunction in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome: A Pilot Study. *Frontiers in Pediatrics* 7: 206. **Link:**

<https://www.frontiersin.org/articles/10.3389/fped.2019.00206/full>

4.12. Immunology

Abou-Donia M et al. (2020) Using Plasma Autoantibodies of Central Nervous System Proteins to Distinguish Veterans with Gulf War Illness from Healthy and Symptomatic Controls. *Brain Sciences* 10 (9). **Link:**

<https://www.mdpi.com/2076-3425/10/9/610/html>

Ahmed F et al. (2022) Single-cell transcriptomics of the immune system in ME/CFS at baseline and following symptom provocation. *bioRxiv* [preprint].

Link: doi.org/10.1101/2022.10.13.512091 (*NEW)

Anderson G and Maes M (2021) Mitochondria and immunity in chronic fatigue syndrome. *Progress in Neuro-psychopharmacology & Biological Psychiatry* 103: 109976. **Link:** <https://pubmed.ncbi.nlm.nih.gov/32470498/>

Apostolou E, et al. (2022) Saliva antibody-fingerprint of reactivated latent viruses after mild/asymptomatic COVID-19 is unique in patients with myalgic-encephalomyelitis/chronic fatigue syndrome. *Frontier in Immunology* 13: 949787. **Link:** doi.org/10.3389/fimmu.2022.949787 (*NEW) **Comment**

Balinas C et al. (2017) Investigation of mast cell toll-like receptor 3 in Chronic Fatigue Syndrome/Myalgic Encephalomyelitis and Systemic Mastocytosis participants using the novel application of autoMACS magnetic separation and flow cytometry. *Asian Pacific Journal of allergy and Immunology*. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/29223146>

Balinas C et al. (2019) Transient receptor potential melastatin 2 channels are overexpressed in myalgic encephalomyelitis/chronic fatigue syndrome patients. *Journal of Translational Medicine* 17 (401). **Link:** <https://translational-medicine.biomedcentral.com/articles/10.1186/s12967-019-02155-4>

Bansal RA et al. (2020) The presence of overlapping quality of life symptoms in primary antibody deficiency (PAD) and chronic fatigue syndrome (CFS). *Allergy, Asthma & Clinical Immunology* 16 (21). **Link:** <https://link.springer.com/article/10.1186/s13223-020-0417-3>

Bansal RA et al. (2022) What Causes ME/CFS: The Role of the Dysfunctional Immune System and Viral Infections. *Journal of Immunology and Allergy* 3(2): 1-15. **Link:** [doi.org/10.37191/Mapsci-2582-6549-3\(2\)-033](https://doi.org/10.37191/Mapsci-2582-6549-3(2)-033) (*NEW)

Bates DW et al. (1995) Clinical laboratory test findings in patients with chronic fatigue syndrome. *Archives of Internal Medicine* 155(1): 97-103. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/7632202>

Bested AC, et al. (2001) Chronic fatigue syndrome: neurological findings may be related to blood-brain barrier permeability. *Medical Hypotheses* 57(2): 231-237. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/11461179>

Blomberg J et al. (2019) Antibodies to Human Herpesviruses in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome Patients. *Frontiers in Immunology* 10: 1946. **Link:** <https://www.frontiersin.org/articles/10.3389/fimmu.2019.01946/full>

- Bornstein SR et al.** (2021) Chronic post-COVID-19 syndrome and chronic fatigue syndrome: Is there a role for extracorporeal apheresis? *Molecular Psychiatry* 27 (1): 34-37. **Link:** doi.org/10.1038/s41380-021-01148-4
- Bradley AS et al.** (2013) Altered functional B cell subset populations in patients with chronic fatigue syndrome compared to healthy controls. *Clinical & Experimental Immunology* 172(1): 73-80. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/23480187>
- Brenu EW, et al.** (2012a) Cytotoxic lymphocyte microRNAs as prospective biomarkers for chronic fatigue syndrome/ myalgic encephalomyelitis. *Journal of Affective Disorders* 141 (2): 261-269. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/22572093>
- Brenu EW et al.** (2012c) Longitudinal investigation of natural killer cells and cytokines in chronic fatigue syndrome/ myalgic encephalomyelitis. *Journal of Translational Medicine* 10: 88. **Link:** <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3464733/>
- Brenu EW et al.** (2014a) Role of adaptive and innate immune cells in chronic fatigue syndrome/myalgic encephalomyelitis. *International Immunology* 26(4): 233-242. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/24343819>
- Brenu EW et al.** (2014b) Methylation profile of CD4+ T cells in chronic fatigue syndrome/myalgic encephalomyelitis. *Journal of Clinical & Cellular Immunology* 5(3): 228. **Link:** <https://tinyurl.com/yy5bowq6>
- Broadbent S and Coufts R.** (2017) Intermittent and graded exercise effects on NK cell degranulation markers LAMP-1/LAMP-2 and CD8+CD38+ in chronic fatigue syndrome/myalgic encephalomyelitis. *Physiological Reports* 5 (5): e13091. **Link:** <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5350160/>
- Broderick G et al.** (2012) Cytokine expression profiles of immune imbalance in post-mononucleosis chronic fatigue. *Journal of Translational Medicine* 3(6): 544-551. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/22973830>
- Bonilla H et al.** (2022) Comparative Analysis of Extracellular Vesicles in Patients with Severe and Mild Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Frontiers in Immunology* 13: 841910. **Link:** doi.org/10.3389/fimmu.2022.841910
- Bynke A et al.** (2020) Autoantibodies to Beta-Adrenergic and Muscarinic cholinergic receptors in Myalgic Encephalomyelitis (ME) patients – a validation study in plasma and cerebrospinal fluid from two Swedish cohorts. *Brain, Behavior & Immunity – Health* 7:100107. **Link:** doi.org/10.1016/j.bbih.2020.100107
- Cabanas H et al.** (2019) Validation of impaired Transient Receptor Potential Melastatin 3 ion channel activity in natural killer cells from Chronic Fatigue Syndrome/ Myalgic Encephalomyelitis patients. *Molecular Medicine* 25 (1): 14. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/31014226>

- Cabanas H et al.** (2019) Naltrexone Restores Impaired Transient Receptor Potential Melastatin 3 Ion Channel Function in Natural Killer Cells From Myalgic Encephalomyelitis/Chronic Fatigue Syndrome Patients. *Frontiers in Immunology* [Epub ahead of print] **Link:** <https://tinyurl.com/yy92pwks>
- Cabanas H et al.** (2021) Potential Therapeutic Benefit of Low Dose Naltrexone in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome: Role of Transient Receptor Potential Melastatin 3 Ion Channels in Pathophysiology and Treatment. *Frontiers in Immunology* 12: 687806. **Link:** <https://pubmed.ncbi.nlm.nih.gov/34326841/>
- Carlo-Stella N et al.** (2009) Molecular Study of Receptor for Advanced Glycation Endproduct Gene Promoter and Identification of Specific HLA Haplotypes Possibly Involved in Chronic Fatigue Syndrome. *International Journal of Immunopathology and Pharmacology* 22(3): 745-754. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/19822091>
- Castro-Marrero J et al.** (2021) Complement Component C1q as a Potential Diagnostic Tool for Myalgic Encephalomyelitis/Chronic Fatigue Syndrome Subtyping. *Journal of Clinical Medicine* 10 (18): 4171. **Link:** <https://pubmed.ncbi.nlm.nih.gov/34575280/>
- Clark LV et al.** (2017) Cytokine responses to exercise and activity in patients with chronic fatigue syndrome: case-control study. *Clinical Experimental Immunology* 190 (3): 360-371. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/28779554>
- Cliff J et al.** (2019) Cellular Immune Function in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS) *Frontiers in Immunology* 10: 796. **Link:** <https://www.frontiersin.org/articles/10.3389/fimmu.2019.00796/full>
- Comhaire F** (2022) The Role of Immunity and Inflammation in ME/ CFS and Post-COVID Syndrome: Implications for Treatment. *MedLife Clinics* Volume 4 (2): 1043. **Link:** <https://www.medtextpublications.com/open-access/the-role-of-immunity-and-inflammation-in-me-cfs-and-1254.pdf> (*NEW)
- Comment**
- Corbitt M et al.** (2019) A systematic review of cytokines in chronic fatigue syndrome/myalgic encephalomyelitis/systemic exertion intolerance disease (CFS/ME/SEID). *BMC Neurology* 19 (207). **Link:** <https://bmcneurol.biomedcentral.com/articles/10.1186/s12883-019-1433-0>
- Dibble J** (2022) Investigating the Genetic and Immunological Aetiology of Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. [Doctoral Dissertation, University of Edinburgh]. **Link:** https://era.ed.ac.uk/bitstream/handle/1842/39763/DibbleJJ_2022.pdf?sequence=1&isAllowed=y (*NEW)

- Du Preez S et al.** (2021) Characterization of IL-2 Stimulation and TRPM7 Pharmacomodulation in NK Cell Cytotoxicity and Channel Co-Localization with PIP₂ in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome Patients. *International Journal of Environmental Research and Public Health* 18 (22): 11879. Link: <https://pubmed.ncbi.nlm.nih.gov/34831634/>
- Eaton N et al.** (2018) Rituximab impedes natural killer cell function in Chronic Fatigue Syndrome/Myalgic Encephalomyelitis patients: A pilot in vitro investigation. *BMC Pharmacology and Toxicology* 19 (1): 12. Link: <https://www.ncbi.nlm.nih.gov/pubmed/29587879>
- Eaton-Fitch N et al.** (2019) A systematic review of natural killer cells profile and cytotoxic function in myalgic encephalomyelitis/chronic fatigue syndrome. *Systematic Review* 8 (279). Link: <https://systematicreviewsjournal.biomedcentral.com/articles/10.1186/s13643-019-1202-6>
- Eaton-Fitch N et al.** (2021) The effect of IL-2 stimulation and treatment of TRPM3 on channel co-localisation with PIP₂ and NK cell function in myalgic encephalomyelitis/chronic fatigue syndrome patients. *Journal of Translational Medicine* 19 (1): 306. Link: <https://pubmed.ncbi.nlm.nih.gov/34266470/>
- Eaton-Fitch N et al.** (2022) Impaired TRPM3-dependent calcium influx and restoration using Naltrexone in natural killer cells of myalgic encephalomyelitis/chronic fatigue syndrome patients. *Journal of Translational Medicine* 20: 94. Link: doi.org/10.1186/s12967-022-03297-8
- Dibnah B et al.** (2019) Investigating the role of TGF-β and fatigue in Chronic Fatigue Syndrome. *Annals of the Rheumatic Diseases* 78 (2). Link: https://ard.bmj.com/content/78/Suppl_2/1495.2.abstract
- Espinosa P and Urra JM** (2019) Decreased Expression of the CD57 Molecule in T Lymphocytes of Patients with Chronic Fatigue Syndrome. *Molecular Neurobiology* 56 (9): 6581-6585. Link: <https://www.ncbi.nlm.nih.gov/pubmed/30895436>
- Freitag H et al.** (2021) Autoantibodies to Vasoregulative G-Protein-Coupled Receptors Correlate with Symptom Severity, Autonomic Dysfunction and Disability in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Journal of Clinical Medicine* 10 (16): 3675. Link: doi.org/10.3390/jcm10163675
- Fletcher MA et al.** (2009) Plasma cytokines in women with chronic fatigue syndrome. *Journal of Translational Medicine* 7:96. Link: <https://www.ncbi.nlm.nih.gov/pubmed/19909538>
- Fletcher MA et al.** (2010) Biomarkers in chronic fatigue syndrome: evaluation of natural killer cell function and dipeptidyl peptidase IV/CD26. *PLoS ONE* 5(5): e10817. Link: <https://www.ncbi.nlm.nih.gov/pubmed/20520837>
- Germain A et al.** (2021) In-Depth Analysis of the Plasma Proteome in ME/CFS Exposes Disrupted Ephrin-Eph and Immune System Signaling. *Proteomes* 9 (1): 6. Link: <https://pubmed.ncbi.nlm.nih.gov/33572894/>

- Giannoccaro MP et al.** (2019) Searching for Serum Antibodies to Neuronal Proteins in Patients With Myalgic Encephalopathy/Chronic Fatigue Syndrome. *Clinical Therapeutics* 41 (5): 836-847. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/31053295>
- Giloteaux L et al.** (2020) Cytokine profiling of extracellular vesicles isolated from plasma in myalgic encephalomyelitis/chronic fatigue syndrome: a pilot study. *Journal of Translational Medicine* 18(1): 387. **Link:** doi.org/10.1186/s12967-020-02560-0
- Gómez-Mora E et al.** (2020) Impact of Long-Term Cryopreservation on Blood Immune Cell Markers in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome: Implications for Biomarker Discovery. *Frontiers in Immunology* 11: 582330. **Link:** <https://pubmed.ncbi.nlm.nih.gov/33329554/>
- Groven N et al.** (2020) MCP-1 is Increased in Patients with CFS and FM, whilst several other immune markers are significantly lower than healthy controls. *Brain, Behaviour & Immunity- health* 4: 100067. **Link:** doi.org/10.1016/j.bbih.2020.100067
- Gunther OP et al.** (2018) Immunosignature Analysis of Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS). *Molecular Neurobiology* 56 (6): 4249-4257. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/30298340>
- Hajdarevic R et al.** (2021) Fine mapping of the major histocompatibility complex (MHC) in myalgic encephalomyelitis/chronic fatigue syndrome (ME/CFS) suggests involvement of both HLA class I and class II loci. *Brain, Behaviour and Immunity* 98: 101-109. **Link:** doi.org/10.1016/j.bbi.2021.08.219
- Hajdarevic R** (2022) Immunogenetic studies in myalgic encephalomyelitis/chronic fatigue syndrome (ME/CFS). [Doctoral dissertation, University of Oslo] **Link:** <https://www.duo.uio.no/bitstream/handle/10852/94321/3/Phd-Hajdarevic-DUO.pdf> (*NEW)
- Halpin P et al.** (2017) Myalgic encephalomyelitis/chronic fatigue syndrome and gulf war illness patients exhibit increased humoral responses to the herpesviruses-encoded dUTPase: Implications in disease pathophysiology. *Journal of Medical Virology* 89 (9): 1636-1645. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/28303641>
- Hartwig J et al.** (2020) IgG stimulated β 2 adrenergic receptor activation is attenuated in patients with ME/CFS. *Brain, Behaviour and Immunity – Health* 3:100047. **Link:** doi.org/10.1016/j.bbih.2020.100047
- Hohberger B et al.** (2021) Case Report: Neutralization of Autoantibodies Targeting G-Protein-Coupled Receptors Improves Capillary Impairment and Fatigue Symptoms After COVID-19 Infection. *Frontiers in Medicine* (Lausanne) 8: 754667. **Link:** <https://pubmed.ncbi.nlm.nih.gov/34869451/>
- Hornig M et al.** (2015) Distinct plasma immune signatures in ME/CFS are present early in the course of illness. *Science Advances* 1(1): e1400121. **Link:** <http://advances.sciencemag.org/content/1/1/e1400121>

- Hornig M et al.** (2016) Cytokines network analysis of cerebrospinal fluid in myalgic encephalomyelitis/ chronic fatigue syndrome. *Molecular Psychiatry* 21(2): 261:269. Link: <https://www.nature.com/articles/mp201529>
- Hornig M et al.** (2017) Immune network analysis of cerebrospinal fluid in myalgic encephalomyelitis/chronic fatigue syndrome with atypical and classical presentations. *Translational Psychiatry* 7(4): e1080. Link: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5416687/>
- Hornig M** (2020) Can the light of immunometabolism cut through “brain fog”? *Journal of Clinical Investigation* 130 (3): 1102-1105. Link: doi.org/10.1172/JCI134985
- Huth TK,, et al.** (2014) Characterization of natural killer cell phenotypes in chronic fatigue syndrome/myalgic encephalomyelitis. *Journal of Clinical & Cellular Immunology* 5: 223. Link: <https://tinyurl.com/y5xt8qfm>
- Jahanbani F et al.** (2022) Phenotypic characteristics of peripheral immune cells of Myalgic encephalomyelitis/chronic fatigue syndrome via transmission electron microscopy: A pilot study. *PLoS ONE* 17(8): e0272703. Link: doi.org/10.1371/journal.pone.0272703 (*NEW)
- Jason LA et al.** (2022) Cytokine network analysis in a community-based pediatric sample of patients with myalgic encephalomyelitis/chronic fatigue syndrome. *Chronic Illness* [Epub ahead of print]. Link: doi.org/10.1177/17423953221101606 (*NEW)
- Jonsjo MA et al.** (2019) Patients with ME/CFS (Myalgic Encephalomyelitis/Chronic Fatigue Syndrome) and chronic pain report similar level of sickness behavior as individuals injected with bacterial endotoxin at peak inflammation. *Brain, Behavior & Immunity - Health* 2:100028. Link: doi.org/10.1016/j.bbih.2019.100028
- Jonsjo MA et al.** (2020) The role of low-grade inflammation in ME/CFS (Myalgic Encephalomyelitis/Chronic Fatigue Syndrome) - associations with symptoms. *Psychoneuroendocrinology* 113. Link: <https://www.sciencedirect.com/science/article/pii/S0306453019313198>
- Kennedy G,, et al.** (2004) Increased neutrophil apoptosis in chronic fatigue syndrome. *Journal of Clinical Pathology* 57(8): 891-893. Link: <https://www.ncbi.nlm.nih.gov/pubmed/15280416>
- Kerr JR.** (2019) Epstein-Barr virus induced gene-2 upregulation identifies a particular subtype of Chronic Fatigue Syndrome / Myalgic Encephalomyelitis. *Frontiers in Pediatrics* [Epub ahead of print]. Link: <https://www.frontiersin.org/articles/10.3389/fped.2019.00059/full>
- Komaroff AL.** (2017) Inflammation correlates with symptoms in chronic fatigue syndrome. *Proceedings of the National Academy of Science USA* 114 (34): 8914-8916. Link: <https://www.ncbi.nlm.nih.gov/pubmed/28811366>
- Lande A et al.** (2020) Human Leukocyte Antigen alleles associated with Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS). *Scientific Reports* 10: 5267. Link: <https://www.nature.com/articles/s41598-020-62157-x>

- Lasselin J and Capuron L.** (2014) Chronic Low-Grade Inflammation in Metabolic Disorders: Relevance for Behavioral Symptoms. *NeuroImmuno Modulation* 21(2-3): 95-101. **Link:**
<https://www.ncbi.nlm.nih.gov/pubmed/24557041>
- Lidbury BA et al.** (2017) Activin B is a novel biomarker for chronic fatigue syndrome/myalgic encephalomyelitis (CFS/ME) diagnosis: a cross sectional study. *Journal of Translational Medicine* 15: 60. **Link:**
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5353946/>
- Loebel M et al.** (2014) Deficient EBV-Specific B- and T-Cell Response in Patients with Chronic Fatigue Syndrome. *PLoS ONE* 9(1): e85387. **Link:**
<http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0085387>
- Loebel M et al.** (2016) Antibodies to β adrenergic and muscarinic cholinergic receptors in patients with Chronic Fatigue Syndrome. *Brain, Behavior, and Immunity* 52: 32-39. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/26399744>
- Lorusso L et al.** (2009) Immunological aspects of chronic fatigue syndrome. *Autoimmunity Reviews* 8(4): 287-291. **Link:**
<https://www.ncbi.nlm.nih.gov/pubmed/18801465>
- Lunde S,, et al.** (2016) Serum BAFF and APRIL levels, T lymphocyte subsets, and immunoglobulins after B-cell depletion using the monoclonal anti-CD20 antibody rituximab in myalgic encephalopathy/chronic fatigue syndrome. (2016) *PLoS ONE* 11(8): e0161226. Doi: 10.1371/journal.pone.0161226. **Link:**
<http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0161226>
- Lutz L et al.** (2021) Evaluation of Immune Dysregulation in an Austrian Patient Cohort Suffering from Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Biomolecules* 11: 1359. **Link:** <https://www.mdpi.com/2218-273X/11/9/1359>
- Lyall M et al.** (2003) A systemic review and critical evaluation of the immunology of chronic fatigue syndrome. *Journal of Psychosomatic Research* 55(2): 79-90. **Link:**
<https://www.ncbi.nlm.nih.gov/pubmed/12932505>
- Mandarano AH et al.** (2019) Myalgic encephalomyelitis/chronic fatigue syndrome patients exhibit altered T cell metabolism and cytokine associations. *Journal of Clinical Investigation* 130 (3): 1491-1505. **Link:**
<https://www.jci.org/articles/view/132185>
- Marks DF** (2021) Myalgic encephalomyelitis/ chronic fatigue syndrome as a breakdown of homeostasis. *Qeios*. **Link:**
<https://www.qeios.com/read/FZ1Y68.2>
- Maya J et al.** (2023) Altered Fatty Acid Oxidation in Lymphocyte Populations of Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *International Journal of Molecular Sciences* 24 (3): 2010. **Link:**
doi.org/10.3390/ijms24032010 (*NEW) **Comment**

- Mensah FKF et al.** (2017) Chronic fatigue syndrome and the immune system: Where are we now? *Neurophysiology Clinic* 47 (2): 131-138. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/28410877>
- Mensah FKF et al.** (2018) CD24 Expression and B Cell Maturation Shows a Novel Link With Energy Metabolism: Potential Implications for Patients With Myalgic Encephalomyelitis/Chronic Fatigue Syndrome, *Frontiers in Immunology*, 9. **Link:** <https://www.frontiersin.org/articles/10.3389/fimmu.2018.02421/full>
- Milivojevic M et al.** (2020) Plasma proteomic profiling suggests an association between antigen driven clonal B cell expansion and ME/CFS. *PLoS One* 15 (7). **Link:** <https://pubmed.ncbi.nlm.nih.gov/32692761/>
- Montoya JG et al.** (2017) Cytokine signature associated with disease severity in chronic fatigue syndrome patients. *Proceedings of the National Academy of Science* 114 (34): E750-E7158. **Link:** <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5576836/>
- Morizot R et al.** (2021) Patients with Persistent Polyclonal B-Cell Lymphocytosis Share the Symptomatic Criteria of Systemic Exertion Intolerance Disease. *Journal of Clinical Medicine* 10 (15): 3374. **Link:** <https://pubmed.ncbi.nlm.nih.gov/34362156/>
- Morris G et al.** (2017) Nitrosative Stress, Hypernitrosylation, and Autoimmune Responses to Nitrosylated Proteins: New Pathways in Neuroprogressive Disorders Including Depression and Chronic Fatigue Syndrome. *Molecular Neurobiology* 54 (6): 4271-4291. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/27339878>
- Morris M et al.** (2019) Leveraging Prior Knowledge of Endocrine Immune Regulation in the Therapeutically Relevant Phenotyping of Women With Chronic Fatigue Syndrome. *Clinical Therapeutics* 41 (4): 656-674. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/30929860>
- Musker M et al.** (2021) Circulating leptin levels in patients with myalgic encephalomyelitis, chronic fatigue syndrome or fibromyalgia: a systematic review protocol. *JBI Evidence Syntheses* 19 (3): 695-701. **Link:** <https://pubmed.ncbi.nlm.nih.gov/33136710/>
- Magawa CT et al.** (2022) Identification of transient receptor potential elastatin 3 proteotypic peptides employing an efficient membrane protein extraction method for natural killer cells. *Frontiers in Physiology* 13:947723. **Link:** doi.org/10.3389/fphys.2022.947723 (*NEW)
- Nguyen CB et al.** (2017) Whole blood gene expression in adolescent chronic fatigue syndrome: an exploratory cross-sectional study suggesting altered B cell differentiation and survival. *Journal Translational Medicine* 15:102. **Link:** <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5426002/>

- Nguyen T et al.** (2017) Novel characterisation of mast cell phenotypes from peripheral blood mononuclear cells in chronic fatigue syndrome/myalgic encephalomyelitis patients. *Asian Pacific Journal of Allergy and Immunology* 35 (2): 75-81. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/27362406>
- Nijs J et al.** (2014) Altered immune response to exercise in patients with chronic fatigue syndrome/myalgic encephalomyelitis: a systematic literature review. *Exercise Immunology Review* 20: 94-116. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/24974723>
- Nishikai M.** (2007) Antinuclear antibodies in patients with chronic fatigue syndrome. *Nihon rinsho; Japanese journal of clinical medicine* 65(6): 1067-1070. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/17561698>
- O'Neal AJ et al.** (2022) Survey of Anti-Pathogen Antibody Levels in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Proteomes* 10 (2): 21. **Link:** doi.org/10.3390/proteomes10020021 (*NEW)
- Ovejero et al.** (2020) Activation of Transposable Elements in Immune Cells of Fibromyalgia Patients. *International Journal of Molecular Sciences* 21 (4). **Link:** <https://tinyurl.com/rw78hjwt>
- Patterson BK et al.** (2022) Cytokine Hub Classification of PASC, ME-CFS and other PASC-like Conditions. ResearchSquare [Preprint]. **Link:** doi.org/10.21203/rs.3.rs-1598634/v1 (*NEW)
- Polli A, et al.** (2018) Exercise-induce hyperalgesia, complement system and elastase activation in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome - a secondary analysis of experimental comparative studies, *Scandinavian Journal of Pain* 19 (1): 183-192. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/30325737>
- Raanes EFW and Stiles TC** (2021) Associations Between Psychological and Immunological Variables in Chronic Fatigue Syndrome/Myalgic Encephalomyelitis: A Systematic Review. *Frontiers in Psychiatry* 12: 716320. **Link:** <https://pubmed.ncbi.nlm.nih.gov/34887782/>
- Rajimakers RPH et al.** (2019) Cytokine profiles in patients with Q fever fatigue syndrome. *Journal of Infectious Medicine* [Epub ahead of print]. **Link:** <https://tinyurl.com/y3ox44gm>
- Rekeland IG et al.** (2019) Rituximab Serum Concentrations and Anti-Rituximab Antibodies During B-Cell Depletion Therapy for Myalgic Encephalopathy/Chronic Fatigue Syndrome. *Clinical Therapeutics* 41 (5): 806-814. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/30502905>
- Renz-Polster H et al.** (2022) The Pathobiology of Myalgic Encephalomyelitis/Chronic Fatigue Syndrome: The Case for Neuroglial Failure. *Frontiers in Cellular Neuroscience* 16: 888232. **Link:** doi.org/10.3389/fncel.2022.888232 (*NEW)
- Rivas JL et al.** (2018) Association of T and NK Cell Phenotype with the Diagnosis of Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS) **Link:** <https://www.frontiersin.org/articles/10.3389/fimmu.2018.01028/full>

- Roerink ME et al.** (2017) Cytokine signatures in chronic fatigue syndrome patients: a Case Control Study and the effect of anakinra treatment. *Journal of Translational Medicine* 15: 267. **Link:** <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5747240/>
- Roerink ME et al.** (2018) Pitfalls in cytokine measurements - Plasma TGF- β 1 in chronic fatigue syndrome. *Netherlands Journal of Medicine* 76 (7): 310-313. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/30220655>
- Rosenblum H et al.** (2011) The Common Immunogenic Etiology of Chronic Fatigue Syndrome: From Infections to Vaccines via Adjuvants to the ASIA Syndrome. *Infectious Disease Clinics of North America* 25(4): 851-863. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/22054760>
- Rusin A et al.** (2021) Radiation exposure and mitochondrial insufficiency in Chronic Fatigue and Immune Dysfunction Syndrome. *Medical Hypothesis* 154: 110647. **Link:** doi.org/10.1016/j.mehy.2021.110647
- Russell L et al.** (2016) Illness progression in chronic fatigue syndrome: a shifting immune baseline. *BMC Immunology* 17(1): 1-11. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/26965484>
- Russell A et al.** (2018) Persistent fatigue induced by interferon-alpha: a novel, inflammation-based, proxy model of chronic fatigue syndrome. *Psychoneuroendocrinology* [Epub ahead of print]. **Link:** <https://www.sciencedirect.com/science/article/pii/S0306453018301963>
- Ryabkova VA, et al.** (2022) Autoantibody Correlation Signatures in Fibromyalgia and Myalgic Encephalomyelitis/Chronic Fatigue Syndrome: Association with Symptom Severity. *Preprints* 2022: 2022120224. **Link:** doi.org/10.20944/preprints202212.0224.v1 (*NEW)
- Sasso EM et al.** (2022) Transient receptor potential melastatin 3 dysfunction in post COVID-19 condition and myalgic encephalomyelitis/chronic fatigue syndrome patients. *Molecular Medicine* 28: 98. **Link:** doi.org/10.1186/s10020-022-00528-y (*NEW)
- Sato W et al.** (2021) Skewing of the B cell receptor repertoire in myalgic encephalomyelitis/chronic fatigue syndrome. *Brain, Behaviour & Immunology* 95: 245-255. **Link:** <https://pubmed.ncbi.nlm.nih.gov/33794313/>
- Scheibenbogen C et al.** (2018) Immunoabsorption to remove β 2 adrenergic receptor antibodies in Chronic Fatigue Syndrome CFS/ME. *PLoS One* 13 (3): e0193672. **Link:** <https://pubmed.ncbi.nlm.nih.gov/29543914/>
- Scheibenbogen C et al.** (2021) Tolerability and Efficacy of s.c. IgG Self-Treatment in ME/CFS Patients with IgG/IgG Subclass Deficiency: A Proof-of-Concept Study. *Journal of Clinical Medicine* 10 (11): 2420. **Link:** <https://pubmed.ncbi.nlm.nih.gov/34072494/>
- Seaton K** (2022) Investigating Immune Reactivity to the Intestinal Microbiome in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. [Doctoral dissertation, University of East Anglia]. **Link:** <https://ueaeprints.uea.ac.uk/id/eprint/90862/> (*NEW)

- Sepulveda N et al.** (2019) Myalgic Encephalomyelitis/Chronic Fatigue Syndrome as a Hyper-Regulated Immune System Driven by an Interplay Between Regulatory T Cells and Chronic Human Herpesvirus Infections. *Frontiers in Immunology* 10:2684. **Link:** <https://www.frontiersin.org/articles/10.3389/fimmu.2019.02684/full>
- Sharma O.** (1999) Fatigue and sarcoidosis. *European Respiratory Journal* 13(4): 713-714. **Link:** <http://erj.ersjournals.com/content/13/4/713>
- Silvestre I et al.** (2019) Mitochondrial alterations in NK lymphocytes from ME/CFS patients. *The Journal of Immunology* 202 (1): 126.39. **Link:** https://www.jimmunol.org/content/202/1_Supplement/126.39
- Singh S et al.** (2018) Humoral Immunity Profiling of Subjects with Myalgic Encephalomyelitis Using a Random Peptide Microarray Differentiates Cases from Controls with High Specificity and Sensitivity. *Molecular Neurobiology* 55 (1): 633-641. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/27981498>
- Sotzny F et al.** (2018) Myalgic Encephalomyelitis/Chronic Fatigue Syndrome - Evidence for an autoimmune disease. *Autoimmune Reviews [Epub ahead of print]* **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/29635081>
- Straus SE et al.** (1988) Allergy and the chronic fatigue syndrome. *Journal of Allergy and Clinical Immunology* 81(5): 791-795. **Link:** [http://www.jacionline.org/article/0091-6749\(88\)90933-5/fulltext](http://www.jacionline.org/article/0091-6749(88)90933-5/fulltext)
- Strawbridge R et al.** (2019) Inflammatory proteins are altered in chronic fatigue syndrome - a systematic review and meta-analysis. *Neuroscience and Biobehavioural Reviews* 107:69-83. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/31465778>
- Stringer EA et al.** (2013) Daily cytokines fluctuations, driven by leptin, are associated with fatigue severity in chronic fatigue syndrome: evidence of inflammatory pathology. *Journal of Translational Medicine* 11:93. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/23570606>
- Sweetman E et al.** (2019) Changes in the transcriptome of circulating immune cells of a New Zealand cohort with myalgic encephalomyelitis/chronic fatigue syndrome. *International Journal of Immunopathology and Pharmacology*. **Link:** <https://tinyurl.com/y27hllmv>
- Szklarski M et al.** (2021) Delineating the Association Between Soluble CD26 and Autoantibodies Against G-Protein Coupled Receptors, Immunological and Cardiovascular Parameters Identifies Distinct Patterns in Post-Infectious vs. Non-Infection-Triggered Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Frontiers in Immunology* 12: 644548. **Link:** <https://pubmed.ncbi.nlm.nih.gov/33889154/>
- Theorell J et al.** (2017) Unperturbed Cytotoxic Lymphocyte Phenotype and Function in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome Patients. *Frontiers in Immunology* 8: 723. **Link:** <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5483846/>

- Tolle M et al.** (2020) Myalgic Encephalomyelitis/Chronic Fatigue Syndrome: Efficacy of Repeat Immunoadsorption. *Journal of Clinical Medicine* 9 (8). Link: <https://www.mdpi.com/2077-0383/9/8/2443>
- Ueland M et al.** (2022) No replication of previously reported association with genetic variants in the T cell receptor alpha (TRA) locus for myalgic encephalomyelitis/chronic fatigue syndrome (ME/CFS). *Translational Psychiatry* 12: 277. Link: doi.org/10.1038/s41398-022-02046-1 (*NEW)
- Uhde M et al.** (2018) C-Reactive Protein Response in Patients with Post-Treatment Lyme Disease Symptoms versus those with Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Clinical Infectious Diseases* 67 (18). Link: <https://tinyurl.com/yxg3rrgx>
- VanElzakker MB et al.** (2018) Neuroinflammation and cytokines in myalgic encephalomyelitis/ chronic fatigue syndrome (ME/CFS): A critical review of research methods, *Frontiers in Neurology* 9:1033. Link: <https://www.frontiersin.org/articles/10.3389/fneur.2018.01033/abstract>
- Vogl T et al.** (2022) Systemic antibody responses against human microbiota flagellins are overrepresented in chronic fatigue syndrome patients. *Science Advances* 8 (38): eabq2422. Link: doi.org/10.1126/sciadv.abq2422 (*NEW)
Comment
- Vollmer-Conna U et al.** (2007) Postinfective Fatigue Syndrome Is Not Associated with Altered Cytokine Production. *Clinical Infectious Diseases* 45(6): 732-735. Link: <https://www.ncbi.nlm.nih.gov/pubmed/17712757>
- Wang T et al.** (2017) A systematic review of the association between fatigue and genetic polymorphisms. *Brain Behaviour Immunology* doi: 10.1016/j.bbi.2017.01.007. Link: <https://www.ncbi.nlm.nih.gov/pubmed/28089639>
- Wirth K and Scheibenbogen C** (2020) A Unifying Hypothesis of the Pathophysiology of Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS): Recognitions from the finding of autoantibodies against β 2-adrenergic receptors. *Autoimmune Reviews* 19 (6). Link: <https://www.ncbi.nlm.nih.gov/pubmed/32247028>
- Wyller VB et al.** (2017) Transforming growth factor beta (TGF- β) in adolescent chronic fatigue syndrome. *Journal of Translational Medicine* 15: 245. Link: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5716371/>
- Yamamura T et al.** (2018) Immunopathogenesis of Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS). *Brain and Nerves* 70 (1): 35-40. Link: <https://www.ncbi.nlm.nih.gov/pubmed/29348373>
- Yang T et al.** (2019) The clinical value of cytokines in chronic fatigue syndrome. *Journal of Translational Medicine* 17 (1): 213. Link: <https://www.ncbi.nlm.nih.gov/pubmed/31253154>

4.13. Infection

Alharbi S (2020) Isolation of ultrasmall (filterable) bacteria from patients suffering from ME, and patients and staff of a paediatric hospital. *Saudi Journal of Biological Sciences* 27 (6):1566-1568. **Link:**

doi.org/10.1016/j.sjbs.2020.03.012

Angel TE, et al. (2012) Cerebrospinal Fluid Proteome of Patients with Acute Lyme Disease. *Journal of Proteome Research* 11(10): 4814-4822. **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/22900834>

Ariza ME (2021) Myalgic Encephalomyelitis/Chronic Fatigue Syndrome: The Human Herpesviruses Are Back! *Biomolecules* 11 (2): 185. **Link:**

<https://pubmed.ncbi.nlm.nih.gov/33572802/>

Apostolou E, et al. (2022) Saliva antibody-fingerprint of reactivated latent viruses after mild/asymptomatic COVID-19 is unique in patients with myalgic-encephalomyelitis/chronic fatigue syndrome. *Frontier in Immunology* 13: 949787. **Link:**

doi.org/10.3389/fimmu.2022.949787 (*NEW) **Comment**

Asprusten T, et al. (2019) EBV-requisitioning physicians' guess on fatigue state 6 months after acute EBV infection. *BMJ Paediatrics Open* 3 (1). **Link:**

<https://tinyurl.com/y39pwy8r>

Ayres JG, et al. (1998) Post-infection fatigue syndrome following Q fever.

QJM 91(2): 105-123. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/9578893>

Barah F, et al. (2014) Neurological aspects of human parvovirus B19 infection: a systematic review. *Reviews in Medical Virology* 24(3): 154-168.

Link: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4238837/>

Baraniuk JN, et al. (1998) Rhinitis Symptoms in Chronic Fatigue Syndrome. *Annals of Allergy, Asthma & Immunology* 81(4): 359-365. **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/9809501>

Bigley TM, et al. (2022) Disruption of thymic central tolerance by infection with murine roseolovirus induces autoimmune gastritis. *Journal of Experimental Medicine* 219 (3): e20211403.

Link: doi.org/10.1084/jem.20211403

Bornstein SR, et al. (2021) Chronic post-COVID-19 syndrome and chronic fatigue syndrome: Is there a role for extracorporeal apheresis? *Molecular Psychiatry* 27(1): 34-37. **Link:**

doi.org/10.1038/s41380-021-01148-4

Bruno RL, et al. (1995) Pathophysiology of a Central Cause of a Post-Polio Fatigue Syndrome. *Annals of the New York Academy of Sciences* 753: 257-275. **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/7611635>

Buchwald D, et al. (1992) A Chronic Illness Characterized by Fatigue, Neurologic and Immunologic Disorders, and Active Human Herpesvirus Type 6 Infection. *Annals of Internal Medicine* 116(2): 103-113. **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/1309285>

- Burbelo PD, et al.** (2012) No serological evidence for a role of HHV-6 infection in chronic fatigue syndrome. *American Journal of Translational Research* 4(4): 443-451. **Link:**
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3493030/>
- Cameron B, et al.** (2006) Prolonged Illness after Infectious Mononucleosis Is Associated with Altered Immunity but Not with Increased Viral Load. *Journal of Infectious Diseases* 193(5): 664-671. **Link:**
<https://www.ncbi.nlm.nih.gov/pubmed/16453261>
- Cameron B, et al.** (2007) Gene Expression Correlates of Postinfective Fatigue Syndrome after Infectious Mononucleosis. *Journal of Infectious Diseases* 196(1): 56-66. **Link:** <https://academic.oup.com/jid/article/196/1/56/843985>
- Cameron B, et al.** (2010) Serological and virological investigation of the role of the herpesviruses EBV, CMV, HHV-6 in post-infective fatigue syndrome. *Journal of Medical Virology* 82(10): 1684-1688. **Link:**
<https://www.ncbi.nlm.nih.gov/pubmed/20827765>
- Carod-Artal FJ.** (2015) Post-Ebolavirus disease syndrome: what do we know? *Expert Review of Anti-Infective Therapy* 13(10): 1185-1187. **Link:**
<https://www.ncbi.nlm.nih.gov/pubmed/26293407>
- Chang GA and Figueredo ANT** (2023) Decolonization of staphylococcus aureus and therapeutic test to assist the diagnosis in me/cfs, long covid, post-vaccine covid syndrome and other diseases with fatigue and/or chronic pain. *ResearchGate [Preprint]*. **Link:**
https://www.researchgate.net/publication/368646387_DECOLONIZATION_OF_STAPHYLOCOCCUS_AUREUS_AND_THERAPEUTIC_TEST_TO_ASSIST_THE_DIAGNOSIS_IN_MECFS_LONG_COVID_POST-VACCINE_COVID_SYNDROME_AND_OTHER_DISEASES_WITH_FATIGUE_ANDOR_CHRONIC_PAIN (*NEW)
- Chia JK** (2005) The role of enterovirus in chronic fatigue syndrome. *Journal of Clinical Pathology* 58 (11): 1126-1132. **Link:**
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1770761/>
- Chia JK and Chia AY** (2008) Chronic fatigue syndrome is associated with chronic enterovirus infection of the stomach. *Journal of Clinical Pathology* 61(1): 43-48. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/17872383>
- Chia JK, et al.** (2010) Acute enterovirus infection followed by myalgic encephalomyelitis/ chronic fatigue syndrome (ME/CFS) and viral persistence. *Journal of Clinical Pathology* 63(2): 165-168. **Link:**
<https://www.ncbi.nlm.nih.gov/pubmed/19828908>
- Choutka J, et al.** (2022) Unexplained post-acute infection syndromes. *Nature Medicine* 28 (5): 911-923. **Link:** doi.org/10.1038/s41591-022-01810-6 (*NEW)
- Coffin JM and Stoye JP.** (2009) A New Virus for Old Diseases? *Science* 326(5952): 530. **Link:** <http://science.sciencemag.org/content/326/5952/530>

- Cox BS, et al.** (2022) EBV/HHV-6A dUTPases contribute to Myalgic Encephalomyelitis/Chronic-Fatigue-Syndrome pathophysiology by enhancing TFH cell differentiation and extrafollicular activities. *JCI Insight*: e158193. [Epub ahead of print.] Link: doi.org/10.1172/jci.insight.158193
- Danilenko OV, et al.** (2022) Chronic Fatigue Exhibits Heterogeneous Autoimmunity Characteristics Which Reflect Etiology. *Pathophysiology* 29: 187-199. Link: doi.org/10.3390/pathophysiology29020016 (*NEW)
- Domingues TD, et al.** (2021) Herpesviruses Serology Distinguishes Different Subgroups of Patients From the United Kingdom Myalgic Encephalomyelitis/Chronic Fatigue Syndrome Biobank. *Frontiers in Medicine (Lausanne)* 8: 686736. Link: <https://pubmed.ncbi.nlm.nih.gov/34291062/>
- Feder HM and Wormser GP.** (2021) Studying College Students for the Development of Infectious Mononucleosis and ME/CFS. *Clinical Infectious Diseases: an official publication of the Infectious Diseases Society of America* 73(11):e3747. Link: doi.org/10.1093/cid/ciab075
- Fevang B, et al.** (2022) Lasting Immunological Imprint of Primary Epstein-Barr Virus Infection With Associations to Chronic Low-Grade Inflammation and Fatigue. *Frontiers in Immunology* 12: 715102. Link: doi.org/10.3389/fimmu.2021.715102
- Fluge Ø, et al.** (2021) Pathomechanisms and possible interventions in myalgic encephalomyelitis/chronic fatigue syndrome (ME/CFS). *The Journal of Clinical Investigations* 131 (14): e150377. Link: <https://pubmed.ncbi.nlm.nih.gov/34263741/>
- Gravelsina S, et al.** (2022) Biomarkers in the diagnostic algorithm of myalgic encephalomyelitis/chronic fatigue syndrome. *Frontiers in Immunology* 13: 928945. Link: doi.org/10.3389/fimmu.2022.928945 (*NEW)
- Grinde B** (2021) Viruses belonging to Anelloviridae or Circoviridae as a possible cause of chronic fatigue. *Journal of Translational Medicine* 18 (1): 485. Link: <https://pubmed.ncbi.nlm.nih.gov/33317538/>
- Gow JW, et al.** (2001) Antiviral Pathway Activation in Patients with Chronic Fatigue Syndrome and Acute Infection. *Clinical Infectious Diseases* 33(12): 2080-2081. Link: <https://academic.oup.com/cid/article/33/12/2080/366051>
- Hanevik K, et al.** (2012) Immunophenotyping in post-giardiasis functional gastrointestinal disease and chronic fatigue syndrome. *BMJ Infectious Diseases* 12:258. Link: <https://www.ncbi.nlm.nih.gov/pubmed/23061432>
- Hanevik K, et al.** (2017) Giardia-specific cellular immune responses in post-giardiasis chronic fatigue syndrome. *BMC Immunology* doi: 10.1186/s12865-017-0190-3. Link: <https://bmccimmunol.biomedcentral.com/articles/10.1186/s12865-017-0190-3>

Hanevik K, et al. (2022) No difference in serum levels of B-cell activating receptor and antibodies against cytolethal distending toxin B and flagellin in post-infectious irritable bowel syndrome and chronic fatigue syndrome after *Giardia* infection. *JGH Open* (2022):1-4. **Link:** doi.org/10.1002/jgh3.12724

Hickie I e, et al. (2006) post-Infective and chronic fatigue syndromes precipitated by viral and non-viral pathogens: prospective cohort study. *British Medical Journal* 333: 575. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/16950834>

Holmes D. (2012) XMRV controversy laid to rest. *The Lancet Infectious Diseases* 12(11): 834. **Link:** [http://www.thelancet.com/journals/laninf/article/PIIS1473-3099\(12\)70254-2/fulltext](http://www.thelancet.com/journals/laninf/article/PIIS1473-3099(12)70254-2/fulltext)

Hunskar GS, et al. (2012) The impact of atopic disease on the risk of post-infectious fatigue and irritable bowel syndrome 3 years after *Giardia* infection. A historic cohort study. *Scandinavian Journal of Gastroenterology* 47(8-9): 956-961. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/22746290>

Islam M, et al. (2020) Post-viral fatigue and COVID-19: lessons from past epidemics. *Fatigue: Biomedicine, Health and behavior* 8:2, 61-69. **Link:** doi.org/10.1080/21641846.2020.1778227

James LM and Georgopoulos AP (2022) At the Root of 3 “Long” Diseases: Persistent Antigens Inflicting Chronic Damage on the Brain and Other Organs in Gulf War Illness, Long-COVID-19, and Chronic Fatigue Syndrome. *Neuroscience Insights*. **Link:** doi.org/10.1177/26331055221114817 (*NEW)

Jason LA, et al. (2020) Risks for Developing ME/CFS in College Students Following Infectious Mononucleosis: A Prospective Cohort Study. *Clinical Infectious Diseases* 73 (11): e3740-e3746. **Link:** doi.org/10.1093/cid/ciaa1886

Jason A, et al. (2021) Patient perceptions of infectious illnesses preceding Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Chronic Illness*:17423953211043106. **Link:** doi.org/10.1177/17423953211043106

Jason LA, et al. (2022) Predictors for Developing Severe Myalgic Encephalomyelitis/ Chronic Fatigue Syndrome Following Infectious Mononucleosis. *Journal of Rehabilitation Therapy* 4(1): 1-5. **Link:** doi.org/10.29245/2767-5122/2021/1.1129

Jason LA, et al. (2022) Pre-illness data reveals differences in multiple metabolites and metabolic pathways in those who do and do not recover from infectious mononucleosis. *Molecular Omics* [Epub ahead of print]. **Link:** doi.org/10.1039/d2mo00124a (*NEW)

Kasimir F, et al. (2022), Tissue specific signature of HHV-6 infection in ME/CFS. *Frontiers in Molecular Biosciences* 9: 1044964. **Link:** doi.org/10.3389/fmolb.2022.1044964 (*NEW)

- Katz BZ, et al.** (2009) Chronic fatigue syndrome after infectious mononucleosis in adolescents. *Pediatrics* 124(1): 189-193. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/19564299>
- Katz BZ, et al.** (2019) A Validated Scale for Assessing the Severity of Acute Infectious Mononucleosis. *The Journal of Pediatrics* [Epub ahead of print]. **Link:** [https://www.jpeds.com/article/S0022-3476\(19\)30123-4/fulltext](https://www.jpeds.com/article/S0022-3476(19)30123-4/fulltext)
- Kerr JR, et al.** (1996) Follow-up study of clinical and immunological findings in patients presenting with acute parvovirus B19 infection. *Journal of General Virology* 82(12): 3011-3019. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/8825713>
- Kerr JR, et al.** (2001) Circulating tumor necrosis factor- α and interferon- γ are detectable during acute and convalescent parvovirus B19 infection and are associated with prolonged and chronic fatigue. *Journal of General Virology* 82(12): 3011:3019. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/11714978>
- Kerr JR, et al.** (2003) Successful Intravenous Immunoglobulin Therapy in 3 Cases of Parvovirus B19-Associated Chronic Fatigue Syndrome. *Clinical Infectious Diseases* 36(9): e100-e106. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/12715326>
- Klebek L, et al.** (2019) Differentiating post-polio syndrome from myalgic encephalomyelitis and chronic fatigue syndrome. *Fatigue: Biomedicine, Health and Behaviour*. **Link:** <https://www.tandfonline.com/doi/abs/10.1080/21641846.2019.1687117>
- Komaroff AL and Cho TA.** (2011) Role of infection and neurologic dysfunction in chronic fatigue syndrome. *Seminars in Neurology* 31(3): 325-337. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/21964849>
- Kristiansen MS, et al.** (2019) Clinical symptoms and markers of disease mechanisms in adolescent chronic fatigue following Epstein-Barr virus infection: An exploratory cross-sectional study. *Brain, Behaviour and Immunity* [Epub ahead of print]. **Link:** <https://www.sciencedirect.com/science/article/pii/S0889159119301333>
- Lee JS, et al.** (2021) Salivary DNA Loads for Human Herpesviruses 6 and 7 Are Correlated With Disease Phenotype in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Frontiers in Medicine (Lausanne)* 8: 656692. **Link:** <https://pubmed.ncbi.nlm.nih.gov/34422848/>
- Lo SC, et al.** (2010) Detection of MLV-related virus gene sequences in blood of patients with chronic fatigue syndrome and healthy blood donors. *Proceedings of the National Academy of Sciences* 107(36): 15874-15879. Article subsequently retracted: see *Proceedings of the National Academy of Sciences*, 2012 109(1): 346. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/20798047>

- Loebel M, et al.** (2017) Serological profiling of the EBV immune response in Chronic Fatigue Syndrome using a peptide microarray. *PLoS One* 12 (6): e0179124. **Link:** <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5467847/>
- Lombardi VC, et al.** (2009) Detection of an Infectious Retrovirus, XMRV, in Blood Cells of Patients with Chronic Fatigue Syndrome. *Science* 326(5952): 585-589. Article subsequently retracted: see *Science*, Alberts B (2011) 334: 1636-1636. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/19815723>
- Malato J, et al.** (2021) The SARS-CoV-2 receptor angiotensin-converting enzyme 2 (ACE2) in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome: analysis of high-throughput genetic, epigenetic, and gene expression studies. *medRxiv* [Preprint] 2021.03.23.21254175. **Link:** <https://pubmed.ncbi.nlm.nih.gov/33791744/>
- Marmion BP, et al.** (2009) Q fever: persistence of antigenic non-viable cell residues of *Coxiella burnetii* in the host-implications for post Q fever infection fatigue syndrome and other chronic sequelae. *QJM* 102 (10): 673-684. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/19556396>
- Melenotte C, et al.** (2019) Post-bacterial infection chronic fatigue syndrome is not a latent infection. *Medecine et Maladies Infectieuses* 49 (2): 140-149. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/30722945>
- Mfrch K, et al.** (2013) Chronic fatigue syndrome 5 years after giardiasis: differential diagnoses, characteristics and natural courses. *BMC Gastroenterology* 13:28. **Link:** <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3598369/>
- Mozhgani S-H, et al.** (2021) Human herpesvirus 6 infection and risk of Chronic fatigue syndrome: a systematic review and meta-analysis. *Intervirolgy* 65 (1): 49-57. **Link:** doi.org/10.1159/000517930
- Naess H, et al.** (2010) Postinfectious and chronic fatigue syndromes: clinical experience from a tertiary-referral centre in Norway. *In Vivo* 24 (2): 185-188. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/20363992>
- Naess H, et al.** (2012) Chronic fatigue syndrome after *Giardia* enteritis: clinical characteristics, disability and long-term sickness absence. *BMC Gastroenterology* 12: 13. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/22316329>
- Nunes M, et al.** (2022) The occurrence of hyperactivated platelets and fibrinolytic microclots in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS). *Pharmaceuticals* 15: 931. **Link:** doi.org/10.3390/ph15080931 (*NEW)
- Oakes B, et al.** (2013) Human Endogenous Retrovirus- K18 Superantigen Expression and Human Herpesvirus-6 and Human Herpesvirus-7 Viral Loads in Chronic Fatigue Patients. *Clinical Infectious Diseases* 56(10): 1394-1400. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/23408682>

Øie MG, et al. (2022) Subjective and objective cognitive function in adolescent with chronic fatigue following Epstein-Barr virus infection. *Journal of Psychosomatic Research* 163:111063. **Link:** doi.org/10.1016/j.jpsychores.2022.111063 (*NEW)

Oldstone MBA (1989) Viruses Can Cause Disease in the Absence of Morphological Evidence of Cell Injury: Implication for Uncovering New Diseases in the Future. *Journal of Infectious Diseases* 159(3): 384-389. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/2644376>

O'Neal AJ (2022) Investigating The Enterovirus Theory Of Disease Etiology In Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. [Doctoral dissertation, Cornell University]. **Link:** doi.org/10.7298/j3mn-zp26 (*NEW)

O'Neal AJ and Hanson MR (2021) The Enterovirus Theory of Disease Etiology in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome: A Critical Review. *Frontiers in Medicine (Lausanne)* 8: 688486. **Link:** <https://pubmed.ncbi.nlm.nih.gov/34222292/>

O'Neal AJ, et al. (2022) Survey of Anti-Pathogen Antibody Levels in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Proteomes* 10: 21. **Link:** doi.org/10.3390/proteomes10020021 (*NEW)

Orlova S, et al. (2021) Detection of herpes viruses in patients with myalgic encephalomyelitis /chronic fatigue syndrome in Belarus. *Polish Journal of Applied Sciences* 6 (2): 50-53, **Link:** <https://pjas.pwsip.edu.pl/index.php/pjas/article/view/176>

Panelli S, et al. (2017) XMRV and Public Health: The Retroviral Genome Is Not a Suitable Template for Diagnostic PCR, and Its Association with Myalgic Encephalomyelitis/Chronic Fatigue Syndrome Appears Unreliable. *Frontiers in Public Health* 5: 108. **Link:** <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5439170/>

Paul BD, et al. (2021) Redox imbalance Links COVID-19 and myalgic encephalomyelitis/chronic fatigue syndrome. *Proceedings of the National Academy of Sciences of the United States of America* 118 (34): e2024358118. **Link:** <https://pubmed.ncbi.nlm.nih.gov/34400495/>

Pederson M, et al. (2019) Fatigue in Epstein-Barr virus infected adolescents and healthy controls: A prospective multifactorial association study. *Journal of Psychosomatic Research* [Epub ahead of print]. **Link:** <https://www.sciencedirect.com/science/article/pii/S0022399918309462>

Rahman MM, et al. (2022) Exploring the management approaches of cytokines including viral infection and neuroinflammation for neurological disorders. *Cytokine* 157: 155962. **Link:** doi.org/10.1016/j.cyto.2022.155962 (*NEW)

- Raijmakers R, et al.** (2022) No Signs of Neuroinflammation in Women With Chronic Fatigue Syndrome or Q Fever Fatigue Syndrome Using the TSPO Ligand [¹¹C]-PK11195. *Neurology® Neuroimmunology and Neuroinflammation* 9 (1): e1113. **Link:** doi.org/10.1212/NXI.0000000000001113
- Rasa S, et al.** (2018) Chronic viral infections in myalgic encephalomyelitis/chronic fatigue syndrome (ME/CFS), *Journal of Translational Medicine* 16 (1): 268. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/30285773>
- Rasa-Dzelzkaleja S, et al.** (2023) The persistent viral infections in the development and severity of myalgic encephalomyelitis/chronic fatigue syndrome. *Journal of Translational Medicine* 21: 33. **Link:** doi.org/10.1186/s12967-023-03887-0 (*NEW)
- Ruiz-Pablos M, et al.** (2021) Epstein-Barr Virus and the Origin of Myalgic Encephalomyelitis or Chronic Fatigue Syndrome. *Frontiers in Immunology* 12: 4637. **Link:** <https://www.frontiersin.org/article/10.3389/fimmu.2021.656797>
- Sato W, et al.** (2021) Skewing of the B cell receptor repertoire in myalgic encephalomyelitis/chronic fatigue syndrome. *Brain, Behaviour & Immunology* 95: 245-255. **Link:** <https://pubmed.ncbi.nlm.nih.gov/33794313/>
- Sandler CX, et al.** (2022) Predictors of Chronic Fatigue Syndrome and Mood Disturbance After Acute Infection. *Frontiers in Neurology* 13: 935442. **Link:** doi.org/10.3389/fneur.2022.935442 (*NEW)
- Sepúlveda N, et al.** (2022) Revisiting IgG antibody reactivity to Epstein-Barr virus in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome and its potential application to disease diagnosis. *Frontiers in Medicine* 9 :921101. **Link:** doi.org/10.3389/fmed.2022.921101
- Schnall J, et al.** (2021) Characterising DSCATT: A case series of Australian patients with debilitating symptom complexes attributed to ticks. *The Australian and New Zealand journal of psychiatry*: 48674211043788. **Link:** doi.org/10.1177/00048674211043788
- Schreiner P, et al.** (2020) Human Herpesvirus-6 Reactivation, Mitochondrial Fragmentation, and the Coordination of Antiviral and Metabolic Phenotypes in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *ImmunoHorizons* 4 (4): 201-215. **Link:** <https://www.immunohorizons.org/content/4/4/201>
- Seet RCS, et al.** (2007) Post-infectious fatigue syndrome in dengue infection. *Journal of Clinical Virology*, 38(1): 1-6/ **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/17137834>
- Shikova E ,et al.** (2020) Cytomegalovirus, Epstein-Barr Virus and Human Herpesvirus 6 Infections in Patients with Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Journal of Medical Virology* 92 (12): 3682–8. **Link:** doi.org/10.1002/jmv.25744

- Simonato M, et al.** (2021) Tryptophan Metabolites, Cytokines, and Fatty Acid Binding Protein 2 in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Biomedicines* 9: 1724. **Link:** <https://www.mdpi.com/2227-9059/9/11/1724>
- Smith AP and Thomas M** (2021) Polio Vaccination and Chronic Fatigue Syndrome. *Asian Journal of Research in Infectious Diseases* 8(4): 43-49. **Link:** <https://orca.cardiff.ac.uk/146095/1/poliocfs.pdf>
- Suhadolnik RJ, et al.** (1997) Biochemical Evidence for a novel low molecular weight 2-5A-Dependent RNase L in Chronic Fatigue Syndrome. *Journal of Interferon & Cytokines Research* 17(7): 377: 385. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/9243369>
- Sun Y, et al.** (2022) Inflammation From Peripheral Organs to the Brain: How Does Systemic Inflammation Cause Neuroinflammation? *Frontiers in Aging Neuroscience* 14: 903455. **Link:** doi.org/10.3389/fnagi.2022.903455 (*NEW)
- van Kuppeveld FJM and van der Meer JWM.** (2012) XMRV and CFS - the sad end of a story. *The Lancet* 379(9814): e27-e28. **Link:** [http://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(11\)60899-4/fulltext](http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(11)60899-4/fulltext)
- van Loenhout JAF, et al.** (2012) Assessing the long-term health impact of Q-fever in the Netherlands: a prospective cohort study started in 2007 on the largest documented Q-fever outbreak to date. *BMC Infectious Diseases* 12: 280. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/23110336>
- van Loenhout JAF, et al.** (2014) Serious long-term health consequences of Q-fever and Legionnaires' disease. *Journal of Infection* 68(6): 527-533. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/24468188>
- Vernon SD, et al.** (2006) Preliminary evidence of mitochondrial dysfunction associated with post-infective fatigue after acute infection with Epstein Barr Virus. *BMC Infectious Diseases* 6:15. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/16448567>
- Waters FG, et al.** (2020) Myalgic Encephalomyelitis (ME) outbreaks can be modelled as an infectious disease: a mathematical reconsideration of the Royal Free Epidemic of 1955. *Fatigue: Biomedicine, Health and Behaviour* 8 (2): 70-83. **Link:** doi.org/10.1080/21641846.2020.1793058
- Wensaas KA, et al.** (2012) Irritable bowel syndrome and chronic fatigue 3 years after acute giardiasis: historic cohort study. *Gut* 61(2): 214-219. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/21911849>
- Westemeier F, et al.** (2022) Editorial: Current Insights Into Complex Post-infection Fatigue Syndromes With Unknown Aetiology: The Case of Myalgic Encephalomyelitis/Chronic Fatigue Syndrome and Beyond. *Frontiers in Medicine*. **Link:** doi.org/10.3389/fmed.2022.862953
- White PD, et al.** (2004) The nosology of sub-acute and chronic fatigue syndromes that follow infectious mononucleosis. *Psychological Medicine* 34(3): 499: 507. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/15259835>

White PD, et al. (2007) What Causes Prolonged Fatigue after Infectious Mononucleosis-and Does It Tell Us Anything about Chronic Fatigue Syndrome? *Journal of Infectious Diseases* 196(1): 4-5. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/17538875>

Williams MV, et al. (2019) Epstein-Barr Virus dUTPase Induces Neuroinflammatory Mediators: Implications for Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Clinical Therapeutics* 41 (5): 848;863. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/31040055>

Yamato M and Kataoka Y. (2015) Fatigue sensation following peripheral viral infection is triggered by neuroinflammation: who will answer these questions? *Neural Regeneration Research* 10(2): 203-204. **Link:** <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4392663/>

Yang TY, et al. (2022) How mycobacterium tuberculosis infection could lead to the increasing risks of chronic fatigue syndrome and the potential immunological effects: a population-based retrospective cohort study. *Journal of Translational Medicine* 20: 99. **Link:** doi.org/10.1186/s12967-022-03301-1

Zafir Y, et al. (2012) Autoimmunity following Hepatitis B vaccine as part of the spectrum of 'Autoimmune (Auto-inflammatory) Syndrome induced by Adjuvants' (ASIA): analysis of 93 cases. *Lupus* 21(2): 146-152. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/22235045>

4.13.1. Human Herpesvirus (HHV) inc. EBV

Also see **Research Review:** Reactivation Of Human Herpesviruses And Their Role In ME/CFS And Long Covid.

Ariza ME (2021) Myalgic Encephalomyelitis/Chronic Fatigue Syndrome: The Human Herpesviruses Are Back! *Biomolecules* 11 (2): 185. **Link:** doi.org/10.3390/biom11020185

Apostolou E,, et al. (2022) Saliva antibody-fingerprint of reactivated latent viruses after mild/asymptomatic COVID-19 is unique in patients with myalgic-encephalomyelitis/chronic fatigue syndrome. *Frontier in Immunology* 13: 949787. **Link:** doi.org/10.3389/fimmu.2022.949787

Burbelo PD et al. (2012) No serological evidence for a role of HHV-6 infection in chronic fatigue syndrome. *American Journal of Translational Research* 4(4): 443-451. **Link:** <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3493030/>

Cameron B et al. (2010) Serological and virological investigation of the role of the herpesviruses EBV, CMV, HHV-6 in post-infective fatigue syndrome. *Journal of Medical Virology* 82(10): 1684-1688. **Link:** doi.org/10.1002/jmv.21873

Chapenko S et al. (2012) Association of active human herpesvirus-6, -7 and parvovirus b19 infection with clinical outcomes in patients with myalgic encephalomyelitis/chronic fatigue syndrome. *Advances in Virology* 2012: 205085. **Link:** doi.org/10.1155/2012/205085

- Cox BS et al.** (2022) EBV/HHV-6A dUTPases contribute to Myalgic Encephalomyelitis/Chronic-Fatigue-Syndrome pathophysiology by enhancing TFH cell differentiation and extrafollicular activities. *JCI Insight* 7 (11): e158193. **Link:** doi.org/10.1172/jci.insight.158193
- Domingues TD et al.** (2021) Herpesviruses Serology Distinguishes Different Subgroups of Patients From the United Kingdom Myalgic Encephalomyelitis/Chronic Fatigue Syndrome Biobank. *Frontiers in Medicine (Lausanne)* 8: 686736. **Link:** doi.org/10.3389/fmed.2021.686736
- Fevang B et al.** (2021) Lasting Immunological Imprint of Primary Epstein-Barr Virus Infection With Associations to Chronic Low-Grade Inflammation and Fatigue. *Frontier in Immunology* 12: 715102. **Link:** doi.org/10.3389/fimmu.2021.715102
- Gravelsina S et al.** (2022) Biomarkers in the diagnostic algorithm of myalgic encephalomyelitis/chronic fatigue syndrome. *Frontiers in Immunology* 13: 928945. **Link:** doi.org/10.3389/fimmu.2022.928945
- Kasimir F, et al.** (2022), Tissue specific signature of HHV-6 infection in ME/CFS. *Frontiers in Molecular Biosciences* 9: 1044964. **Link:** doi.org/10.3389/fmolb.2022.1044964
- Kogelnik AM et al.** (2006) Use of valganciclovir in patients with elevated antibody titers against Human Herpesvirus-6 (HHV-6) and Epstein-Barr Virus (EBV) who were experiencing central nervous system dysfunction including long-standing fatigue. *Journal of Clinical Virology* 37(Supplement 1): S33-S38. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/17276366>
- Lee JS et al.** (2021) Salivary DNA Loads for Human Herpesviruses 6 and 7 Are Correlated With Disease Phenotype in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Frontiers in Medicine (Lausanne)* 8: 656692. **Link:** doi.org/10.3389/fmed.2021.656692
- Loebel M et al.** (2014) Deficient EBV-Specific B- and T-Cell Response in Patients with Chronic Fatigue Syndrome. *PLoS ONE* 9(1): e85387. **Link:** doi.org/10.1371/journal.pone.0085387
- Maltsev D** (2022) A comparative study of valaciclovir, valganciclovir, and artesunate efficacy in reactivated HHV-6 and HHV-7 infections associated with chronic fatigue syndrome/myalgic encephalomyelitis. *Microbiology and Immunology* 66 (4): 193-199. **Link:** doi.org/10.1111/1348-0421.12966
- Montoya JG et al.** (2013) Randomized clinical trial to evaluate the efficacy and safety of valganciclovir in a subset of patients with chronic fatigue syndrome. *Journal of Medical Virology* 85(12): 2101-2109. **Link:** doi.org/10.1002/jmv.23713
- Peluso MJ et al.** (2022) Impact of pre-existing chronic viral infection and reactivation on the development of long COVID. *Journal of Clinical Investigation*: e163669. [Epub ahead of print] **Link:** doi.org/10.1172/JCI163669

Rasa-Dzelzkaleja S et al. (2023) The persistent viral infections in the development and severity of myalgic encephalomyelitis/chronic fatigue syndrome. *Journal of Translational Medicine* 21: 33. **Link:** doi.org/10.1186/s12967-023-03887-0 (*NEW)

Sepúlveda N et al. (2022) Revisiting IgG antibody reactivity to Epstein-Barr virus in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome and its potential application to disease diagnosis. *Frontiers in Medicine* 9 :921101. **Link:** doi.org/10.3389/fmed.2022.921101

Schreiner P et al. (2020) Human Herpesvirus-6 Reactivation, Mitochondrial Fragmentation, and the Coordination of Antiviral and Metabolic Phenotypes in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Immunohorizons* 4 (4): 201-215. **Link:** doi.org/10.4049/immunohorizons.2000006

Soto NE and Straus SE (2000) Chronic fatigue syndrome and herpesviruses: The fading evidence. *Herpes*. 7, 46–50. **Link:** <https://pubmed.ncbi.nlm.nih.gov/11867001/>

Williams MV et al. (2019) Epstein-Barr Virus dUTPase Induces Neuroinflammatory Mediators: Implications for Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Clinical Therapeutics* 41 (5): 848-863. **Link:** doi.org/10.1016/j.clinthera.2019.04.009

Zhang N et al. (2021). Epstein-barr virus and neurological diseases. *Frontiers in Molecular Bioscience* 8: 816098. **Link:** doi.org/10.3389/fmolb.2021.816098

4.14. Ion Channels

Cabanas H et al. (2019) Validation of impaired Transient Receptor Potential Melastatin 3 ion channel activity in natural killer cells from Chronic Fatigue Syndrome/ Myalgic Encephalomyelitis patients. *Molecular Medicine* 25 (1): 14. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/31014226>

van Campen CMC and Visser FC (2022) Orthostatic Intolerance in Long-Haul COVID after SARS-CoV-2: A Case-Control Comparison with Post-EBV and Insidious-Onset Myalgic Encephalomyelitis/Chronic Fatigue Syndrome Patients. *Healthcare* 10 (10): 2058. **Link:** doi.org/10.3390/healthcare10102058 (*NEW) **Comment**

Chaudhuri A et al. (2000) The symptoms of chronic fatigue syndrome are related to abnormal ion channel function. *Medical Hypotheses* 54(1): 59-63. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/10790725>

Eaton-Fitch N et al. (2022) Impaired TRPM3-dependent calcium influx and restoration using Naltrexone in natural killer cells of myalgic encephalomyelitis/chronic fatigue syndrome patients. *Journal of Translational Medicine* 20: 94. **Link:** doi.org/10.1186/s12967-022-03297-8

Nguyen T et al. (2016) Impaired calcium mobilization in natural killer cells from chronic fatigue syndrome/myalgic encephalomyelitis patients is associated with transient receptor potential melastatin 3 ion channels. *Clinical and Experimental Immunology* 187 (2): 284-293. **Link:**

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5217865/>

Sasso EM et al. (2022) Transient receptor potential melastatin 3 dysfunction in post COVID-19 condition and myalgic encephalomyelitis/chronic fatigue syndrome patients. *Molecular Medicine* 28: 98. **Link:** doi.org/10.1186/s10020-022-00528-y (*NEW)

4.15. Microclots

Ahmed F et al. (2022) Single-cell transcriptomics of the immune system in ME/CFS at baseline and following symptom provocation. *bioRxiv* [preprint]. **Link:** doi.org/10.1101/2022.10.13.512091 (*NEW)

Kell DB and Pretorius E (2022) The potential role of ischaemia-reperfusion injury in chronic, relapsing diseases such as rheumatoid arthritis, Long COVID, and ME/CFS: evidence, mechanisms, and therapeutic implications. *The Biochemical Journal* 479 (16): 1653-1708. **Link:** doi.org/10.1042/BCJ20220154 (*NEW)

Kennedy G et al. 2004 Increased neutrophil apoptosis in chronic fatigue syndrome. *Journal of Clinical Pathology* 57 (8): 891–893. **Link:** doi.org/10.1136/jcp.2003.015511

Nunes M et al. (2022) The occurrence of hyperactivated platelets and fibrinoid microclots in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS). *ResearchSquare* [Preprint]. **Link:** doi.org/10.21203/rs.3.rs-1727226/v1 (*NEW)

4.16. Metabolomics

Balinas C et al. (2021) Impact of Life Stressors on Myalgic Encephalomyelitis/Chronic Fatigue Syndrome Symptoms: An Australian Longitudinal Study. *International Journal of Environmental Resources and Public Health* 18 (20): 10614. **Link:** <https://pubmed.ncbi.nlm.nih.gov/34682360/>

Baraniuk JN et al. (2021) Exercise modifies glutamate and other metabolic biomarkers in cerebrospinal fluid from Gulf War Illness and Myalgic encephalomyelitis / Chronic Fatigue Syndrome. *PLoS One* 16 (1): e0244116. **Link:** <https://pubmed.ncbi.nlm.nih.gov/33440400/>

Bliksrud YT. (2017) Tenuous **Link** between chronic fatigue syndrome and pyruvate dehydrogenase deficiency. *Tidsskr Nor Laegeforen* 137 (23-24). **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/29231630> (Article in Norwegian)

Che X et al. (2022) Evidence for Peroxisomal Dysfunction and Dysregulation of the CDP-Choline Pathway in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *medRxiv* [Preprint]:2021.06.14.21258895. **Link:** doi.org/10.1101/2021.06.14.21258895

Che X et al. (2022) Metabolomic Evidence for Peroxisomal Dysfunction in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *International Journal of Molecular Sciences* 23 (14): 7906. **Link:** doi.org/10.3390/ijms23147906 (*NEW)

Dehghani M et al. (2022). The Role of Kynurenine Pathway and NAD⁺ Metabolism in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Aging and disease* 13 (3): 698–711. **Link:** doi.org/10.14336/AD.2021.0824 (*NEW)

Fluge O et al. (2016) Metabolic profiling indicates impaired pyruvate dehydrogenase function in myalgic encephalopathy/chronic fatigue syndrome. *Journal of Clinical Immunology Insight* doi: 10.1172/jci.insight.89376. **Link:** <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5161229/>

Germain A et al. (2018) Metabolic profiling of a myalgic encephalomyelitis/chronic fatigue syndrome discovery cohort reveals disturbances in fatty acid and lipid metabolism. *Molecular BioSystems* 13 (2): 371-379. **Link:** <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5365380/>

Germain A et al. (2018) Prospective Biomarkers from Plasma Metabolomics of Myalgic Encephalomyelitis/Chronic Fatigue Syndrome Implicate Redox Imbalance in Disease Symptomatology. *Metabolites* 8 (4). **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/30563204>

Germain A et al. (2020) Comprehensive Circulatory Metabolomics in ME/CFS Reveals Disrupted Metabolism of Acyl Lipids and Steroids. *Metabolites* 10 (1): 34. **Link:** <https://www.mdpi.com/2218-1989/10/1/34>

Germain A et al. (2022) Plasma metabolomics reveals disrupted response and recovery following maximal exercise in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *JCI Insight* 7(9): e157621. **Link:** doi.org/10.1172/jci.insight.157621

Hoel F., et al. (2021) A map of metabolic phenotypes in patients with myalgic encephalomyelitis/chronic fatigue syndrome. *JCI Insight* 6 (16): 149217. **Link:** <https://pubmed.ncbi.nlm.nih.gov/34423789/>

Huth TK et al. (2020) A systematic review of metabolomic dysregulation in Chronic Fatigue Syndrome/Myalgic Encephalomyelitis/Systemic Exertion Intolerance Disease (CFS/ME/SEID). *Journal of Translational Medicine* 18: 198. **Link:** <https://translational-medicine.biomedcentral.com/articles/10.1186/s12967-020-02356-2>

- Jason LA et al.** (2022) Pre-illness data reveals differences in multiple metabolites and metabolic pathways in those who do and do not recover from infectious mononucleosis. *Molecular Omics* [Epub ahead of print]. **Link:** doi.org/10.1039/d2mo00124a (*NEW)
- Kashi A et al.** (2019) The IDO Metabolic Trap Hypothesis for the Etiology of ME/CFS. *Diagnostics* 9 (3): 82. **Link:** <https://www.mdpi.com/2075-4418/9/3/82>
- Lemle MD.** (2009) Hypothesis: Chronic fatigue syndrome is caused by dysregulation of hydrogen sulfide metabolism. *Medical Hypotheses* 72(1): 108-109. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/18799269>
- Maes M et al.** (2022) Aberrations in the Cross-Talks Among Redox, Nuclear Factor-κB and Wnt/Catenin Pathway Signaling Underpin Myalgic Encephalomyelitis and Chronic Fatigue Syndrome: A Review and New Hypothesis Based on Results of Network, Enrichment and Annotation Analyses. *Frontiers in Psychiatry* 13: 822382. **Link:** doi.org/10.3389/fpsy.2022.822382 (*NEW)
- Miao X et al.** (2022) Metabolomics study of the effect of Danggui Buxue Tang on rats with chronic fatigue syndrome. *Biomedical Chromatography*: e5379. **Link:** doi.org/10.1002/bmc.5379
- Miller J et al.** (2020) Metabolomics in Central Sensitivity Syndromes. *Metabolites* 10 (4): 164. **Link:** <https://www.mdpi.com/2218-1989/10/4/164/html>
- Nagy-Szaki D et al.** (2018) Insights into myalgic encephalomyelitis/chronic fatigue syndrome phenotypes through comprehensive metabolomics. *Scientific Reports* 8 (1): 10056. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/29968805>
- Naviaux RK et al.** (2016) Metabolic features of chronic fatigue syndrome. *Proceedings of the National Academy of Sciences* doi:10.1073/pnas.1607571113. **Link:** <http://www.pnas.org/content/113/37/E5472.full>
- Nikiliza A et al.** (2021) Sex-specific plasma lipid profiles of ME/CFS patients and their association with pain, fatigue, and cognitive symptoms. *Journal of Translational Medicine* 19 (1): 370. **Link:** <https://pubmed.ncbi.nlm.nih.gov/34454515/>
- Simonato M et al.** (2021) Tryptophan Metabolites, Cytokines, and Fatty Acid Binding Protein 2 in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Biomedicines* 9: 1724. **Link:** <https://www.mdpi.com/2227-9059/9/11/1724>
- Shao C et al.** (2017) Detection of Urine Metabolites in a Rat Model of Chronic Fatigue Syndrome before and after Exercise. *Biomedical Research International* 2017: 8182020. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/28421200>

- Tomas C et al.** (2017) Cellular Bioenergetics is Impaired in patients with Chronic Fatigue Syndrome. *PLoS ONE* 12(10). **Link:**
<https://doi.org/10.1371/journal.pone.0186802>
- Tomas C and Newton J.** (2018) Metabolic abnormalities in chronic fatigue syndrome/myalgic encephalomyelitis: a mini review. *Biochemical Society Transactions* 46 (3): 547-553. **Link:**
<https://www.ncbi.nlm.nih.gov/pubmed/29666214>
- Preez SD et al.** (2021) Potential Implications of Mammalian Transient Receptor Potential Melastatin 7 in the Pathophysiology of Myalgic Encephalomyelitis/Chronic Fatigue Syndrome: A Review. *International Journal of Environmental Resources and Public Health* 18 (20): 10708. **Link:**
<https://pubmed.ncbi.nlm.nih.gov/34682454/>
- Xiong R et al.** (2021) Multi-'omics of host-microbiome interactions in short- and long-term Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS). *bioRxiv*. [Epub ahead of print.] **Link:**
<https://www.biorxiv.org/content/10.1101/2021.10.27.466150v1>
- Yamano E et al.** (2016) Index markers of chronic fatigue syndrome with dysfunction of TCA and urea cycles. *Science Reports* doi: 10.1038/srep34990. **Link:** <https://www.nature.com/articles/srep34990>
- Yamano E et al.** (2021) Insights into Metabolite Diagnostic Biomarkers for Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *International Journal of Molecular Science* 22 (7): 3423. **Link:**
<https://pubmed.ncbi.nlm.nih.gov/33810365/>
- Zhao S et al.** (2022) Differential Metabolites and Metabolic Pathways Involved in Aerobic Exercise Improvement of Chronic Fatigue Symptoms in Adolescents Based on Gas Chromatography–Mass Spectrometry. *International Journal of Environmental Research and Public Health* 19: 2377. **Link:** doi.org/10.3390/ijerph19042377

4.17. Miscellaneous

- Adi NP et al.** (2022) Relation of Urinary Mercury Level to Chronic Fatigue Syndrome among Workers of Artisanal and Small-scale Gold Mining: A Study of 3 Districts in West Nusa Tenggara Province and Lebak District of Banten Province, Indonesia. *Acta Medica Philippina* 56 (19): 34-38. **Link:**
doi.org/10.47895/amp.v56i19.3832 (*NEW)
- Assil RA and Younger JW** (2022) The Role of Leptin and Inflammatory Related Biomarkers in Individuals with Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Proceedings from 16th Annual Cardiometabolic Health Congress in National Harbor, USA, 14–17 October 2021* 80 (1): 6. **Link:**
doi.org/10.3390/proceedings2022080006 (*NEW)

- Bileviciute-Ljungar I and Friberg D** (2020) Emotional Awareness Correlated With Number of Awakenings From Polysomnography in Patients With Myalgic Encephalomyelitis/Chronic Fatigue Syndrome—A Pilot Study. *Frontiers in Psychiatry* 11: 222. **Link:**
<https://www.frontiersin.org/articles/10.3389/fpsy.2020.00222/full>
- Hock A.** (2020) A Proposal for Explaining Progression from Light/Moderate to Severe Chronic Fatigue. *ES Journal of Nutritional Health* 1 (2). **Link:**
<https://escientificlibrary.com/nutritional-health/Article/ESJNH-V1-1008.pdf>
- Gravelsina S et al.** (2021) Potential of Activin B as a Clinical Biomarker in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS). *Biomolecules* 11: 1189. **Link:** <https://www.mdpi.com/2218-273X/11/8/1189>
- Hataya Y, et al.** (2022) Clinical characteristics of patients with unexplainable hypothalamic disorder diagnosed by the corticotropin-releasing hormone challenge test: a retrospective study. *BMC Endocrine Disorders* 22: 312. **doi.org/10.1186/s12902-022-01237-7 (*NEW)**
- Kroll C** (2021) Questioning Biomedicine's Privileging of Disease and Measurability. *AMA Journal of Ethics* 23 (7): E537-541. **Link:**
<https://pubmed.ncbi.nlm.nih.gov/34351263/>
- Krumina A et al.** (2021) Clinical Profile and Aspects of Differential Diagnosis in Patients with ME/CFS from Latvia. *Medicina* 57: 958. **Link:**
<https://www.mdpi.com/1648-9144/57/9/958>
- Kujawski S et al.** (2021) Network Analysis of Symptoms Co-Occurrence in Chronic Fatigue Syndrome. *International Journal of Environmental Research and Public Health* 18 (20): 10736. **Link:**
<https://pubmed.ncbi.nlm.nih.gov/34682478/>
- Janowski A et al.** (2022) Development of a Mouse Model for Chronic Fatigue Syndrome. *The Journal of Pain* 23 (5): 12. **Link:**
doi.org/10.1016/j.jpain.2022.03.045 (*NEW)
- Jones A et al.** (2021) 'Illness-related cognition, distress and adjustment in functional stroke symptoms, vascular stroke, and chronic fatigue syndrome'. *European Journal of Health Psychology*. **Link:**
doi.org/10.1027/2512-8442/a000093
- Khoo T, Proudman S and Limaye V** (2019) Silicone breast implants and depression, fibromyalgia and chronic fatigue syndrome in a rheumatology clinic population. *Clinical Rheumatology* 38 (5): 1271-1276. **Link:**
<https://tinyurl.com/yxsla9t8>
- Kuo CF et al.** (2021) How peptic ulcer disease could potentially lead to the lifelong, debilitating effects of chronic fatigue syndrome: an insight. *Scientific Reports* 11 (1): 7520. **Link:**
<https://pubmed.ncbi.nlm.nih.gov/33824394/>

- Lacerda EM et al.** (2019) Hope, disappointment, and perseverance: Reflections of people with Myalgic encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS) and Multiple Sclerosis participating in biomedical research. A qualitative focus group study. *Health Expectations* 22 (3): 373-384. Link: <https://www.ncbi.nlm.nih.gov/pubmed/30632248>
- Lechner J et al.** (2017) Impact of Rantes from jawbone on Chronic Fatigue Syndrome. *Journal of Biological Regulators and Homeostatic Agents* 31 (2): 321-327. Link: <https://www.ncbi.nlm.nih.gov/pubmed/28685531>
- Lee JS et al.** (2020) An Adrenalectomy Mouse Model Reflecting Clinical Features for Chronic Fatigue Syndrome. *Biomolecules* 10 (1). Link: <https://www.ncbi.nlm.nih.gov/pubmed/31906307>
- Lim EJ et al.** (2021) Nationwide Epidemiological Characteristics of Chronic Fatigue Syndrome in South Korea. *Journal of Translational Medicine BMC*, 19 (1): 502. Link: doi.org/10.1186/s12967-021-03170-0
- Lim EJ and Son CG** (2022) Comparison of assessment scores for fatigue between multidimensional fatigue inventory (MFI-K) and modified chalder fatigue scale (mKCFQ). *Journal of Translational Medicine* 20 (1): 8. Link: <https://pubmed.ncbi.nlm.nih.gov/34980164/>
- López-Amador N** (2022) Systemic exertion intolerance disease associated to neuroendocrine dysfunction and cortical atrophy: a case report. *Family Practice: cmac060* [Epub ahead of print]. Link: doi.org/10.1093/fampra/cmac060 (*NEW)
- Maes M et al.** (2022) In Schizophrenia, Chronic Fatigue Syndrome- and Fibromyalgia-Like Symptoms are Driven by Breakdown of the Paracellular Pathway with Increased Zonulin and Immune Activation-Associated Neurotoxicity. *CNS & Neurological Disorders - Drug Targets* 21. Link: doi.org/10.2174/1871527321666220806100600 (*NEW)
- Mahroum N and Shoenfeld Y** (2022) Autoimmune Autonomic Dysfunction Syndromes: Potential Involvement and Pathophysiology Related to Complex Regional Pain Syndrome, Fibromyalgia, Chronic Fatigue Syndrome, Silicone Breast Implant-Related Symptoms and Post-COVID Syndrome. *Pathophysiology* 29 (3): 414-425. Link: doi.org/10.3390/pathophysiology29030033 (*NEW)
- Malkova AM and Shoenfeld Y** (2022) Autoimmune autonomic nervous system imbalance and conditions: Chronic fatigue syndrome, fibromyalgia, silicone breast implants, COVID and post-COVID syndrome, sick building syndrome, post-orthostatic tachycardia syndrome, autoimmune diseases and autoimmune/inflammatory syndrome induced by adjuvants. *Autoimmunity Reviews*: 103230. [In press, Journal Pre-proof] Link: doi.org/10.1016/j.autrev.2022.103230 (*NEW)
- Melvin A et al.** (2019) Circulating levels of GDF15 in patients with Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Journal of Translational Medicine* 17 (409). Link: <https://www.repository.cam.ac.uk/handle/1810/299333>

- Monzón-Nomdedeu MB et al.** (2021) Induced pluripotent stem cells as suitable sensors for fibromyalgia and myalgic encephalomyelitis/chronic fatigue syndrome. *World Journal of Stem Cells* 13 (8): 1134-1150. **Link:** <https://pubmed.ncbi.nlm.nih.gov/34567431/>
- Ostojski SM** (2021) Diagnostic and Pharmacological Potency of Creatine in Post-Viral Fatigue Syndrome. *Nutrients* 13 (2): 503. **Link:** <https://pubmed.ncbi.nlm.nih.gov/33557013/>
- Park HY** (2019) Multidimensional Comparison of Cancer-Related Fatigue and Chronic Fatigue Syndrome: The Role of Psychophysiological Markers. *Psychiatry Investigations* 16 (1): 71-79, **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/30605994>
- Pederson M** (2019) Chronic Fatigue Syndrome and chronic pain conditions - vitally protective systems gone wrong. *Scandinavian Journal of Pain* [Epub ahead of print]. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/31256069>
- Priou S et al.** (2020) Clinical History Segment Extraction From Chronic Fatigue Syndrome Assessments to Model Disease Trajectories. *Studies in Health Technology and Information* 270: 98-102. **Link:** <https://pubmed.ncbi.nlm.nih.gov/32570354/>
- Raijmakers et al.** (2020) Multi-omics examination of Q fever fatigue syndrome identifies similarities with chronic fatigue syndrome. *Journal of Translational Medicine* 18 (1): 448. **Link:** <https://pubmed.ncbi.nlm.nih.gov/33243243/>
- Rowe PC et al.** (2018) Improvement of severe myalgic encephalomyelitis/chronic fatigue syndrome symptoms following surgical treatment of cervical spinal stenosis. *Journal of Translational Medicine* 16 (1): 21. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/29391028>
- Rusin A et al.** (2022) Commonalities in the Features of Cancer and Chronic Fatigue Syndrome (CFS): Evidence for Stress-Induced Phenotype Instability? *International Journal of Molecular Sciences* 23: 691. **Link:** <https://www.mdpi.com/1422-0067/23/2/691>
- Saha AK et al.** (2018) Erythrocyte Deformability as a Potential Biomarker for Chronic Fatigue Syndrome, *Blood* 132: 4874. **Link:** <https://tinyurl.com/yxkhdab2>
- Shoenfeld Y et al.** (2020) Complex syndromes of chronic pain, fatigue and cognitive impairment **Linked** to autoimmune dysautonomia and small fiber neuropathy. *Clinical Immunology* 214: 108384. **Link:** doi.org/10.1016/j.clim.2020.108384
- Świątczak M et al.** (2022). Chronic Fatigue Syndrome in Patients with Deteriorated Iron Metabolism. *Diagnostics* 12 (9): 2057. **Link:** doi.org/10.3390/diagnostics12092057 (*NEW)
- Thakur V et al.** (2020) Protective Effect of Hemin Against Experimental Chronic Fatigue Syndrome in Mice: Possible Role of Neurotransmitters. *Neurotoxic Research* 38: 359–369. **Link:** doi.org/10.1007/s12640-020-00231-y

- Thomas N et al.** (2022) The underlying sex differences in neuroendocrine adaptations relevant to Myalgic Encephalomyelitis Chronic Fatigue Syndrome. *Frontiers in Neuroendocrinology*: 100995. [Epub ahead of print] **Link:** doi.org/10.1016/j.yfrne.2022.100995
- Tjell C et al.** (2018) Can a Chronic BPPV With a History of Trauma be the Trigger of Symptoms in Vestibular Migraine, Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS), and Whiplash Associated Disorders (WAD)? A Retrospective Cohort Study, *Otology and Neurotology* 40 (1): 96-102. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/30303941>
- Tsai SY et al.** (2018) Increased risk of chronic fatigue syndrome following burn injuries. *Journal of Translational Medicine* 16 (1): 342. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/30518392>
- Tsai SY et al.** (2019) Increased risk of chronic fatigue syndrome following psoriasis: a nationwide population-based cohort study. *Journal of Translational Medicine* 17 (1): 154. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/31088562>
- Tuuminen T et al.** (2018) Dampness and mold hypersensitivity syndrome and vaccination as risk factors for chronic fatigue syndrome, *Autoimmune Reviews* 18 (1): 107-108 **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/30408578>
- Ullah H et al.** (2022) Polyphenols as possible alternative agents in chronic fatigue: a review. *Phytochemistry Reviews*. **Link:** doi.org/10.1007/s11101-022-09838-9 (*NEW)
- Vroegindeweij A et al.** (2022) Identifying disrupted biological factors and patient-tailored interventions for chronic fatigue in adolescents and young adults with Q-Fever Fatigue Syndrome, Chronic Fatigue Syndrome and Juvenile Idiopathic Arthritis (QFS-study): study protocol for a randomized controlled trial with single-subject experimental case series design. *Trials* 23: 683. **Link:** doi.org/10.1186/s13063-022-06620-2 (*NEW)
- Weir W & Speight N** (2021) ME/CFS: Past, Present and Future. *Healthcare* 9: 984. **Link:** <https://www.mdpi.com/2227-9032/9/8/984>
- Wu TY et al.** (2022) Prevalence of Aspergillus-Derived Mycotoxins (Ochratoxin, Aflatoxin, and Gliotoxin) and Their Distribution in the Urinalysis of ME/CFS Patients. *International Journal of Environmental Research and Public Health* 19: 2052. **Link:** doi.org/10.3390/ijerph19042052
- Zhao H et al.** (2020) Oxidative stress caused by a dysregulated Wnt/beta-catenin signalling pathway is involved in abnormal placenta formation in pregnant mice with chronic fatigue syndrome. *Zygote*. **Link:** <https://pubmed.ncbi.nlm.nih.gov/33054899/>

4.18. Mitochondria and energy production

Abdullah M et al. (2012) Mitochondrial myopathy presenting as fibromyalgia: a case report. *Journal of Medical Case Reports* 6(1): 55. **Link:** <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3293012/>

Anderson G and Maes M (2021) Mitochondria and immunity in chronic fatigue syndrome. *Progress in Neuro-psychopharmacology & Biological Psychiatry* 103: 109976. **Link:** <https://pubmed.ncbi.nlm.nih.gov/32470498/>

Annesley SJ and Fisher PR (2021) Lymphoblastoid Cell Lines as Models to Study Mitochondrial Function in Neurological Disorders. *International Journal of Molecular Science* 22 (9): 4536. **Link:** <https://pubmed.ncbi.nlm.nih.gov/33926115/>

Arnold B (2022) A View Into the Mechanisms Underlying TORC1, AMPK, and Complex V Activity in Myalgic Encephalomyelitis Using the Dictyostelium discoideum Model. [Master dissertation, La Trobe University] **Link:** doi.org/10.26181/21085051.v1 (*NEW)

Behan WMH et al. (1991) Mitochondrial abnormalities in the post-viral fatigue syndrome. *Acta Neuropathologica* 83(1): 61-65. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/1792865>

Booth NE, et al. (2012) Mitochondrial dysfunction and the pathophysiology of Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS). *International Journal of Clinical and Experimental Medicine* 5(3): 208-220. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/22837795>

Bohne V and Bohne O (2019) Suggested Pathology of Systemic Exertion Intolerance Disease: Impairment of the E3 Subunit or Crossover of Swinging Arms of the E2 Subunit of the Pyruvate Dehydrogenase Complex Decreases Regeneration of Cofactor Dihydrolipoic Acid of the E2 Subunit. *Medical Hypothesis* [Epub ahead of print] **Link:** <https://tinyurl.com/y6fbud4a>

Brown AE et al. (2015) Abnormalities of AMPK activation and glucose uptake in cultured skeletal muscle cells from individuals with chronic fatigue syndrome. *PLoS ONE* 10(4): e0122982. **Link:** <http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0122982>

Brown AE et al. (2018) Pharmacological activation of AMPK and glucose uptake in cultured human skeletal muscle cells from patients with ME/CFS. *Bioscience Reports* 38 (3): BSR20180242. **Link:** doi.org/10.1042/BSR20180242

Che X et al. (2022) Metabolomic Evidence for Peroxisomal Dysfunction in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *International Journal of Molecular Sciences* 23 (14): 7906. **Link:** doi.org/10.3390/ijms23147906 (*NEW)

oCiregia F et al. (2016) Bottom-up proteomics suggests an association between differential expression of mitochondrial proteins and chronic fatigue syndrome. *Translational Psychiatry* doi: 10.1038/to/2016.184. **Link:** <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5048217/>

Fernandez-Guerra P et al. (2021) Bioenergetic and Proteomic Profiling of Immune Cells in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome Patients: An Exploratory Study. *Biomolecules* 11: 961. **Link:**
<https://www.mdpi.com/2218-273X/11/7/961>

Holden S et al. (2020) A systematic review of mitochondrial abnormalities in myalgic encephalomyelitis/chronic fatigue syndrome/systemic exertion intolerance disease. *Journal of Translational Medicine* 18 (1): 290. **Link:**
<https://pubmed.ncbi.nlm.nih.gov/32727475/>

Kuvyani B et al. (2022) Could the kynurenine pathway be the key missing piece of Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS) complex puzzle? *Cellular and Molecular Life Science* 79 (8): 412. **Link:**
doi.org/10.1007/s00018-022-04380-5 (*NEW)

Kujawki S et al. (2021) Relationship between Cardiopulmonary, Mitochondrial and Autonomic Nervous System Function Improvement after an Individualised Activity Programme upon Chronic Fatigue Syndrome Patients. (On Behalf Of The European Network On Me/Cfs Euromene.) *Journal of Clinical Medicine* 10 (7): 1542. **Link:**
<https://pubmed.ncbi.nlm.nih.gov/33917586/>

Lawson N et al. (2016) Elevated energy production in chronic fatigue syndrome patients. *Journal of Nature and Science* 2 (10) e221. **Link:**
<https://www.ncbi.nlm.nih.gov/pubmed/27747291>

Maksoud R et al. (2021) A systematic review of nutraceutical interventions for mitochondrial dysfunctions in myalgic encephalomyelitis/chronic fatigue syndrome. *Journal of Translational Medicine* 19 (1): 81. **Link:**
<https://pubmed.ncbi.nlm.nih.gov/33596913/>

Missailidis D et al. (2020) An Isolated Complex V Inefficiency and Dysregulated Mitochondrial Function in Immortalized Lymphocytes from ME/CFS Patients. *International Journal of Molecular Science* 21 (3) 1074. **Link:**
<https://www.mdpi.com/1422-0067/21/3/1074>

Missailidis D et al. (2021) Dysregulated Provision of Oxidisable Substrates to the Mitochondria in ME/CFS Lymphoblasts. *International Journal of Molecular Sciences* 22 (4): 2046. **Link:**
<https://pubmed.ncbi.nlm.nih.gov/33669532/>

Myhill S et al. (2009) Chronic fatigue syndrome and mitochondrial dysfunction. *International Journal of Clinical and Experimental Medicine* 2: 1-16. **Link:** <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2680051/>

Naviaux RK (2019) Perspective: Cell Danger Response Biology—The New Science that Connects Environmental Health with Mitochondria and the Rising Tide of Chronic Illness. *Mitochondrion* [Epub ahead of print]. **Link:**
<https://www.sciencedirect.com/science/article/pii/S1567724919302922>

- Nguyen T et al.** (2018) Reduced glycolytic reserve in isolated natural killer cells from Myalgic encephalomyelitis/chronic fatigue syndrome patients: A preliminary investigation. *Asian Pacific Journal of Allergy and Immunology* [Epub ahead of print] Link: <https://www.ncbi.nlm.nih.gov/pubmed/29981562>
- O'Conner K et al.** (2017) Energy envelope maintenance among patients with myalgic encephalomyelitis and chronic fatigue syndrome: Implications of limited energy reserves. *Chronic Illness* 15 (1): 51-60. Link: <https://www.ncbi.nlm.nih.gov/pubmed/29231037>
- Ohba T et al.** (2019) Myalgic Encephalomyelitis/Chronic Fatigue Syndrome Induced by Repeated Forced Swimming in Mice. *Biological and Pharmaceutical Bulletin* 42 (7). Link: https://www.jstage.jst.go.jp/article/bpb/42/7/42_b19-00009/_html/-char/en
- Pandley AA** (2022) Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS) and mitochondria: A review. [Masters Thesis, Cornell University] Link: doi.org/10.7298/bkje-4a52 (*NEW)
- Raijmakers RPH et al.** (2019) A possible role for mitochondrial-derived peptides humanin and MOTS-c in patients with Q fever fatigue syndrome and chronic fatigue syndrome. *Journal of Translational Medicine* 17 (1): 157. Link: <https://www.ncbi.nlm.nih.gov/pubmed/31088495>
- Rusin A et al.** (2021) Radiation exposure and mitochondrial insufficiency in Chronic Fatigue and Immune Dysfunction Syndrome. *Medical Hypothesis* 154: 110647. Link: doi.org/10.1016/j.mehy.2021.110647
- Schoeman EM et al.** (2017) Clinically proven mtDNA mutations are not common in those with chronic fatigue syndrome. *MBC Medical Genetics* 18: 29. Link: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5356238/>
- Schreiner P et al.** (2020) Human Herpesvirus-6 Reactivation, Mitochondrial Fragmentation, and the Coordination of Antiviral and Metabolic Phenotypes in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *ImmunoHorizons* 4 (4): 201-215. Link: <https://www.immunohorizons.org/content/4/4/201>
- Smits B et al.** (2011) Mitochondrial enzymes discriminate between mitochondrial disorders and chronic fatigue syndrome. *Mitochondrion* 11 (5): 735-738. Link: <https://www.ncbi.nlm.nih.gov/pubmed/21664495>
- Sweetman E et al.** (2020) A SWATH-MS analysis of Myalgic Encephalomyelitis/Chronic Fatigue Syndrome peripheral blood mononuclear cell proteomes reveals mitochondrial dysfunction. *Journal of Translational Medicine* 18 (365). Link: <https://tinyurl.com/y7rw58vq>
- Tomas C and Elson JL** (2019) The role of mitochondria in ME/CFS: a perspective. *Fatigue: Biomedicine, Health & Behaviour*. Link: <https://www.tandfonline.com/doi/abs/10.1080/21641846.2019.1580855>
- Tomas C et al.** (2019) Mitochondrial complex activity in permeabilised cells of chronic fatigue syndrome patients using two cell types. *PeerJ* 7: e6500. Link: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6398432/>

- Tomas C et al.** (2019) Assessing cellular energy dysfunction in CFS/ME using a commercially available laboratory test. *Scientific Reports* 9. **Link:** <https://www.nature.com/articles/s41598-019-47966-z>
- Tomas C et al.** (2020) The effect of myalgic encephalomyelitis/chronic fatigue syndrome (ME/CFS) severity on cellular bioenergetic function. *PLoS One* 15 (4). **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/32275686>
- Torrell H et al.** (2017) Mitochondrial dysfunction in a family with psychosis and chronic fatigue syndrome. *Mitochondrion* 34: 1-8. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/27989882>
- Tsilioni I et al.** (2022) Exosome-Associated Mitochondrial DNA from Patients with ME/CFS Stimulates Human Cultured Microglia to Release IL-1 β . *The European Journal Neuroscience* [Epub ahead of print]. **Link:** doi.org/10.1111/ejn.15828 (*NEW)
- Watson WS et al.** (1998) Increased Resting Energy Expenditure in the Chronic Fatigue Syndrome. *Journal of Chronic Fatigue Syndrome* 4(4): 3-14. **Link:** http://www.tandfonline.com/doi/abs/10.1300/J092v04n04_02
- Wood E et al.** (2020) Role of mitochondria, oxidative stress and the response to antioxidants in myalgic encephalomyelitis/chronic fatigue syndrome: A possible approach to SARS-CoV-2 'long-haulers'? *Chronic Diseases and Translational Medicine* 7 (1): 14-26. **Link:** <https://pubmed.ncbi.nlm.nih.gov/33251031/>

4.19. Muscle

- Arnold DL et al.** (1984) Excessive intracellular acidosis of skeletal muscle on exercise in a patient with a post-viral exhaustion/fatigue syndrome. *The Lancet* 323(8391): 137-1369. **Link:** <http://www.sciencedirect.com/science/article/pii/S0140673684918713>
- He J et al.** (2013) Cerebral vascular control is associated with skeletal muscle pH in chronic fatigue syndrome patients both at rest and during dynamic stimulation. *NeuroImage: Clinical* 2: 168-173. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/24179772>
- Jammes Y and Retornaz F** (2019) Understanding neuromuscular disorders in chronic fatigue syndrome. *F1000Research* [Epub ahead of print]. **Link:** <https://f1000research.com/articles/8-2020>
- Jammes Y et al.** (2020) Altered muscle membrane potential and redox status differentiates two subgroups of patients with chronic fatigue syndrome. *Journal of Translational Medicine* 18 (1): 173. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/32306967>

- Jones DEJ et al.** (2010) Abnormalities in pH handling by peripheral muscle and potential regulation by the autonomic nervous system in chronic fatigue syndrome. *Journal of Internal Medicine* 267(4): 394-401. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/20433583>
- Jones DEJ et al.** (2012) Loss of capacity to recover from acidosis on repeat exercise in chronic fatigue syndrome: case-control study. *European Journal of Clinical Investigation* 42(2): 186-194. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/21749371>
- Klaver-Krol EG et al.** (2021) Chronic fatigue syndrome: Abnormally fast muscle fiber conduction in the membranes of motor units at low static force load. *Clinical Neurophysiology* 132 (4): 967-974. **Link:** <https://pubmed.ncbi.nlm.nih.gov/33639451/>
- Lane RJM et al.** (2003) Enterovirus related metabolic myopathy: a post-viral fatigue syndrome. *Journal of Neurology, Neurosurgery & Psychiatric* 74(10): 1382:1386. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/14570830>
- McCully KK and Natelson BH** (1999) Impaired oxygen delivery to muscle in chronic fatigue syndrome. *Clinical Science* 97(5): 603-608. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/10545311>
- Paul L et al.** (1999) Demonstration of delayed recovery from fatiguing exercise in chronic fatigue syndrome. *European Journal of Neurology* 6(1): 63-69. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/10209352>
- Pietrangelo T et al.** (2009) Functional Characterization of Muscle Fibers from Patients with Chronic Fatigue Syndrome: Case-Control Study. *International Journal of Immunopathology and Pharmacology* 22(2): 247-436. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/19505395>
- Roca-Espiau M et al.** (2019) Muscle-tendon weakness contributes to chronic fatigue syndrome in Gaucher's disease. *Journal of Orthopaedic Surgeon Research* 14 (1): 383. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/31752949>
- Rutherford G et al.** (2016) Understanding muscle dysfunction in chronic fatigue syndrome. *Journal of Ageing Research* doi: 10.1155/2016/2497348. **Link:** <https://www.hindawi.com/journals/jar/2016/2497348/>
- Tiziana P et al.** (2018) Old muscle in young body: an aphorism describing the Chronic Fatigue Syndrome, *European Journal of Translational Myology* 28 (3). **Link:** <https://pagepressjournals.org/index.php/bam/article/view/7688/7470>
- Tomas C, et al** (2020) Substrate utilisation of cultured skeletal muscle cells in patients with CFS. *Science Reports* **Link:** <https://pubmed.ncbi.nlm.nih.gov/33106563/>
- Umay E et al.** (2020) What happens to muscles in fibromyalgia syndrome. *International Journal of Medical Science* 189 (2): 749-756. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/31773542>

Wessely S and Powell R. (1989) Fatigue syndromes: a comparison of chronic "postviral" fatigue with neuromuscular and affective disorders. *Journal of Neurology, Neurosurgery & Psychiatry* 52(8): 940-948. Link: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1031831/>

4.20. Neurology: Autonomic nervous system (ANS) dysfunction

Allen J et al. (2012) Chronic fatigue syndrome and impaired peripheral pulse characteristics on orthostasis – a new potential diagnostic biomarker. *Physiological Measurement* 33(2): 231-241. Link: <https://www.ncbi.nlm.nih.gov/pubmed/22273713>

Ballantine R et al. (2019) Gravity-induced exercise intervention in an individual with chronic fatigue syndrome/myalgic encephalomyelitis and postural tachycardia syndrome: a case report. *International Journal of Therapy and Rehabilitation* 26 (5). Link: <https://www.magonlinelibrary.com/doi/abs/10.12968/ijtr.2016.0035>

Benarroch EE. (2012) Postural Tachycardia Syndrome: A Heterogeneous and Multifactorial Disorder. *Mayo Clinic Proceedings* 87(12): 1214-1225. Link: [http://www.mayoclinicproceedings.org/article/S0025-6196\(12\)00896-8/abstract](http://www.mayoclinicproceedings.org/article/S0025-6196(12)00896-8/abstract)

Cambras T et al. (2018) Circadian rhythm abnormalities and autonomic dysfunction in patients with Chronic Fatigue Syndrome/Myalgic Encephalomyelitis. *PLoS One* 13 (6). Link: <https://www.ncbi.nlm.nih.gov/pubmed/29874259>

Cambras T et al. (2022) Circadian skin temperature rhythm and dysautonomia in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome: the role of endothelin-1 in the vascular dysregulation. ResearchSquare [preprint]. Link: doi.org/10.21203/rs.3.rs-2044838/v1 (*NEW)
Comment

Clark JE et al. (2019) Network structure underpinning (dys)homeostasis in chronic fatigue syndrome; Preliminary findings. *PLoS One* 14 (3). Link: <https://www.ncbi.nlm.nih.gov/pubmed/30908516>

Cvejic E et al. (2017) Autonomic nervous system function, activity patterns, and sleep after physical or cognitive challenge in people with chronic fatigue syndrome. *Journal of Psychosomatic Research* 103: 91-94. Link: <https://www.ncbi.nlm.nih.gov/pubmed/29167053>

Danilenko OV et al. (2022) Chronic Fatigue Exhibits Heterogeneous Autoimmunity Characteristics Which Reflect Etiology. *Pathophysiology* 29: 187-199. Link: doi.org/10.3390/pathophysiology29020016 (*NEW)

- Eccles J et al.** (2022) Mechanistic factors contributing to pain and fatigue in fibromyalgia and me/cfs: autonomic and inflammatory insights from an experimental medicine study. *Annals of the rheumatic diseases* 81: 1719. Link: https://ard.bmj.com/content/81/Suppl_1/1719.2 (*NEW)
- Finkelmeier A et al.** (2018) Intracranial compliance is associated with symptoms of orthostatic intolerance in chronic fatigue syndrome. *PLoS One* 13 (7): e0200068. Link: <https://www.ncbi.nlm.nih.gov/pubmed/29969498>
- Freeman R and Komaroff AL.** (1997) Does the Chronic Fatigue Syndrome Involve the Autonomic Nervous System? *The American Journal of Medicine* 102(4): 357-364. Link: <https://www.ncbi.nlm.nih.gov/pubmed/9217617>
- Freeman R.** (2002) The chronic fatigue syndrome is a disease of the autonomic nervous system. Sometimes. *Clinical Autonomic Research* 12(4): 231-233. Link: <https://www.ncbi.nlm.nih.gov/pubmed/12357274>
- Friedberg F** (2019) Autonomic markers, chronic fatigue syndrome, and post-exertion states. *Journal of Psychosomatic Research* 127. Link: <https://www.sciencedirect.com/science/article/abs/pii/S0022399919309055>
- Gandasegui IM., et al.** (2021) Myalgic Encephalomyelitis/Chronic Fatigue Syndrome: A Neurological Entity? *Medicina* 57: 1030. Link: <https://www.mdpi.com/1648-9144/57/10/1030>
- Garner R and Baraniuk J** (2019) Orthostatic intolerance in chronic fatigue syndrome. *Journal of Translational Medicine* 17: 185. Link: <https://tinyurl.com/y4zptpjy>
- Gunning WT et al.** (2022) Platelet Storage Pool Deficiency and Elevated Inflammatory Biomarkers Are Prevalent in Postural Orthostatic Tachycardia Syndrome. *Cells* 11: 774. Link: doi.org/10.3390/cells11050774
- He J et al.** (2013) Cerebral vascular control is associated with skeletal muscle pH in chronic fatigue syndrome patients both at rest and during dynamic stimulation. *NeuroImage: Clinical* 2: 168-173. Link: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3777833/>
- Hoad A et al.** (2008) Postural orthostatic tachycardia syndrome is an under-recognized condition in chronic fatigue syndrome. *QJM* 101(12): 961-965. Link: <https://academic.oup.com/qjmed/article/101/12/961/1564413>
- Kavi L et al.** (2016) A profile of patients with postural tachycardia syndrome and their experience of healthcare in the UK. *The British Journal of Cardiology* 23(1): 33. Link: <https://bjcardio.co.uk/2016/03/a-profile-of-patients-with-postural-tachycardia-syndrome-and-their-experience-of-healthcare-in-the-uk/>
- Kell DB and Pretorius E** (2022) The potential role of ischaemia-reperfusion injury in chronic, relapsing diseases such as rheumatoid arthritis, Long COVID, and ME/CFS: evidence, mechanisms, and therapeutic implications. *The Biochemical Journal* 479 (16): 1653-1708. Link: doi.org/10.1042/BCJ20220154 (*NEW)

- Kujawki S et al.** (2021) Relationship between Cardiopulmonary, Mitochondrial and Autonomic Nervous System Function Improvement after an Individualised Activity Programme upon Chronic Fatigue Syndrome Patients. (On Behalf Of The European Network On Me/Cfs Euromene.) *Journal of Clinical Medicine* 10 (7): 1542. **Link:** <https://pubmed.ncbi.nlm.nih.gov/33917586/>
- Lee J et al.** (2020) Clinically accessible tools for documenting the impact of orthostatic intolerance on symptoms and function in ME/CFS. *Work* [Epub ahead of print]. **Link:** <https://content.iospress.com/articles/work/wor203169>
- Li H et al.** (2014) Autoimmune Basis for Postural Tachycardia Syndrome. *Journal of the American Heart Association* 3: e000755. **Link:** <http://jaha.ahajournals.org/content/3/1/e000755>
- Li D et al.** (2020) Homeostatic disturbance of thermoregulatory functions in rats with chronic fatigue. *Neuroscience Research* [Epub ahead of print]. **Link:** <https://www.sciencedirect.com/science/article/pii/S0168010220301577>
- Miwa K and Inoue Y.** (2018) The etiologic relation between disequilibrium and orthostatic intolerance in patients with myalgic encephalomyelitis (chronic fatigue syndrome). *Journal of Cardiology* [Epub ahead of print] **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/29588088>
- Miwa K** (2019) Paradigme shift to disequilibrium in the genesis of orthostatic intolerance in patients with chronic fatigue syndrome. *European Heart Journal* 40 (1). **Link:** <https://tinyurl.com/y4t3qsut>
- McDonald C et al.** (2014) Postural tachycardia syndrome is associated with significant symptoms and functional impairment predominantly affecting young women: a UK perspective. *BMJ Open* 4(6): e004127. **Link:** <http://bmjopen.bmj.com/content/4/6/e004127>
- Morrow AK et al.** (2022) Long-Term COVID 19 Sequelae in Adolescents: the Overlap with Orthostatic Intolerance and ME/CFS. *Current Paediatric Reports*. **Link:** doi.org/10.1007/s40124-022-00261-4
- Natelson BH et al.** (2022) Physiological assessment of orthostatic intolerance in chronic fatigue syndrome. *Journal of Translational Medicine* 20: 95. **Link:** doi.org/10.1186/s12967-022-03289-8
- Newton JL et al.** (2007) Symptoms of autonomic dysfunction in chronic fatigue syndrome. *QJM* 100(8): 519-526. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/17617647>
- Nijs J and Ickmans K.** (2013) Postural orthostatic tachycardia syndrome as a clinically important subgroup of chronic fatigue syndrome: further evidence for central nervous system dysfunctioning. *Journal of Internal Medicine* 273(5): 498-500. **Link:** <https://tinyurl.com/y2xx7ftg>

- Oosterwijk JV et al.** (2017) The Role of Autonomic Function in Exercise-induced Endogenous Analgesia: A Case-control Study in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome and Healthy People. *Pain Physicians* 20(3): E389-E399. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/28339438>
- van Oosterwijk J et al.** (2021) Reduced Parasympathetic Reactivation during Recovery from Exercise in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Journal of Clinical Medicine* 10 (19): 4527. **Link:** doi.org/10.3390/jcm10194527
- Orjatsalo M et al.** (2017) Autonomic Nervous System Functioning Related to Nocturnal Sleep in Patients with Chronic Fatigue Syndrome Compared to Tired Controls. *Journal of Clinical Sleep Medicine*. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/29246267>
- Renz-Polster H et al.** (2022) The Pathobiology of Myalgic Encephalomyelitis/Chronic Fatigue Syndrome: The Case for Neuroglial Failure. *Frontiers in Cellular Neuroscience* 16: 888232. **Link:** doi.org/10.3389/fncel.2022.888232 (*NEW)
- Stomko J et al.** (2020) Autonomic Phenotypes in Chronic Fatigue Syndrome (CFS) Are Associated with Illness Severity: A Cluster Analysis. *Journal of Clinical Medicine* 9 (8). **Link:** <https://www.mdpi.com/2077-0383/9/8/2531>
- Strassheim V et al.** (2018) Managing fatigue in postural tachycardia syndrome (PoTS): The Newcastle approach. *Autonomic Neuroscience* 215: 56-61. **Link:** [https://www.autonomicneuroscience.com/article/S1566-0702\(17\)30328-4/abstract](https://www.autonomicneuroscience.com/article/S1566-0702(17)30328-4/abstract)
- Van Cauwenbergh D et al.** (2014) Malfunctioning of the autonomic nervous system in patients with chronic fatigue syndrome: a systematic literature review. *European Journal of Clinical Investigation* 44(5): 516-526. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/24601948>
- Vernon SD et al.** (2022) Orthostatic Challenge Causes Distinctive Symptomatic, Hemodynamic and Cognitive Responses in Long COVID and Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Frontiers in Medicine* 9: 917019. **Link:** doi.org/10.3389/fmed.2022.917019 (*NEW)
- Wirth, KJ et al.** (2021) Pathophysiology of skeletal muscle disturbances in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS). *Journal of Translational Medicine* 19 (1): 162. **Link:** <https://pubmed.ncbi.nlm.nih.gov/33882940/>
- Wirth KL et al.** (2021) An attempt to explain the neurological symptoms of Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Journal of Transitional Medicine* 19: 471. **Link:** <https://translational-medicine.biomedcentral.com/articles/10.1186/s12967-021-03143-3>

Wheeler C et al. (2022) Cardiovascular Autonomic Regulation, ETCO₂ and the Heart Rate Response to the Tilt Table Test in Patients with Orthostatic Intolerance. *Applied Psychophysiology and Biofeedback*. **Link:** doi.org/10.1007/s10484-022-09536-4

Zinn M et al. (2021) Central Autonomic Network Disturbance in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome: A Pilot Study. *NeuroRegulation* 8 (2): 72-86. **Link:** <https://www.neuroregulation.org/article/view/21387>

Zinn MA & Jason LA (2021) Cortical autonomic network connectivity predicts symptoms in myalgic encephalomyelitis/chronic fatigue syndrome (ME/CFS). *International Journal of Psychophysiology* 170: 89-101. **Link:** doi.org/10.1016/j.ijpsycho.2021.10.004

4.21. Neurology: Central nervous system and neuroimaging

Addiego FL et al. (2021) Subcortical brain segment volumes in Gulf War Illness and Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Life Sciences* 282: 119749. **Link:** <https://pubmed.ncbi.nlm.nih.gov/34214570/>

Albrecht DS et al. (2018) Brain glial activation in fibromyalgia- A multi-site positron emission tomography investigation. *Brain, Behaviour and Immunity* 75: 72:83. **Link:** doi.org/10.1016/j.bbi.2018.09.018

Almutairi B et al. (2020) Using structural and functional MRI as a neuroimaging technique to investigate chronic fatigue syndrome/myalgic encephalopathy: a systematic review. *BMJ Open* 10 (8). **Link:** <https://pubmed.ncbi.nlm.nih.gov/32868345/>

Almutairi BS (2022) Investigating the neural substrates of Chronic Fatigue Syndrome/Myalgic Encephalomyelitis (CFS/ME): a structural and functional MRI study. [Doctoral dissertation, University of Bristol] **Link:** <https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.866683> (*NEW)

Aoun Sebaiti M et al. (2022) Systematic review and meta-analysis of cognitive impairment in myalgic encephalomyelitis/chronic fatigue syndrome (ME/CFS). *Scientific Reports* 12 (1): 2157. **Link:** doi.org/10.1038/s41598-021-04764-w

Baraniuk JN and Shivapurka N. (2017) Exercise-induced changes in cerebrospinal fluid miRNAs in Gulf War Illness, Chronic Fatigue Syndrome and sedentary control subjects. *Scientific Reports* 7: 15338. **Link:** <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5681566/>

- Baraniuk JN et al.** (2021) Differential Effects of Exercise on fMRI of the Midbrain Ascending Arousal Network Nuclei in Myalgic Encephalomyelitis / Chronic Fatigue Syndrome (ME/CFS) and Gulf War Illness (GWI) in a Model of Postexertional Malaise (PEM). *Preprints*: 2021110420. **Link:** <https://www.preprints.org/manuscript/202111.0420/v1>
- Baraniuk JN.** (2022) Review of the Midbrain Ascending Arousal Network Nuclei and Implications for Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS), Gulf War Illness (GWI) and Postexertional Malaise (PEM). *Brain Science* 12: 132. **Link:** <https://www.mdpi.com/2076-3425/12/2/132>
- Barnden LR et al.** (2015) Evidence in chronic fatigue syndrome for severity-dependent upregulation of prefrontal myelination that is independent of anxiety and depression. *NMR in Biomedicine* 28(3): 404-413. **Link:** <http://onlinelibrary.wiley.com/doi/10.1002/nbm.3261/abstract>
- Barnden LR et al.** (2018) Hyperintense sensorimotor T1 spin echo MRI is associated with brainstem abnormality in chronic fatigue syndrome. *NeuroImage: Clinical* 20: 102-109. **Link:** <https://www.sciencedirect.com/science/article/pii/S2213158218302237>
- Barnden LR et al.** (2019) Intra brainstem connectivity is impaired in chronic fatigue syndrome. *Neuroimage: Clinical* 24. **Link:** <https://tinyurl.com/y24xs8nk>
- Barnden L, et al.** (2022) Anti-Correlated Myelin-Sensitive MRI Levels in Humans Consistent with a Subcortical to Sensorimotor Regulatory Process-Multi-Cohort Multi-Modal Evidence. *Brain Sciences* 12 (12): 1693. **Link:** doi.org/10.3390/brainsci12121693 (*NEW)
- Boissoneault J et al.** (2018) Static and dynamic functional connectivity in patients with chronic fatigue syndrome: use of arterial spin labelling fMRI. *Clinical Physiology and Functional Imaging* 38 (10): 128-137. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/27678090>
- Bourke JH et al.** (2021) Central sensitisation in chronic fatigue syndrome and fibromyalgia; a case control study. *Journal of Psychosomatic Research* 150: 110624. **Link:** doi.org/10.1016/j.jpsychores.2021.110624
- Bragee B et al.** (2020) Signs of Intracranial Hypertension, Hypermobility, and Craniocervical Obstructions in Patients With Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Frontiers in Neurology* 11. **Link:** <https://www.frontiersin.org/articles/10.3389/fneur.2020.00828/full>
- Brooks J et al.** (2000) Proton magnetic resonance spectroscopy and morphometry of the hippocampus in chronic fatigue syndrome. *The British Journal of Radiology* 73(875): 1206-1208. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/11144799>
- Buchwald D., et al.** (1992) A Chronic Illness Characterized by Fatigue, Neurologic and Immunologic Disorders, and Active Human Herpesvirus Type 6 Infection. *Annals of Internal Medicine* 116(2): 103-113. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/1309285>

- Chaudhuri A and Behan PO.** (2000) Fatigue and basal ganglia. *Journal of the Neurological Sciences* 179(1-2): 34-42. **Link:**
<https://www.ncbi.nlm.nih.gov/pubmed/11054483>
- Chaudhuri A et al.** (2003) Proton magnetic resonance spectroscopy of basal ganglia in chronic fatigue syndrome. *NeuroReport* 14(2): 225-228. **Link:**
<https://www.ncbi.nlm.nih.gov/pubmed/12598734>
- Chaudhuri A and Behan PO.** (2004) Fatigue in neurological disorders. *The Lancet* 363(9413): 978-988. **Link:**
<https://www.ncbi.nlm.nih.gov/pubmed/15043967>
- Costa DC et al.** (1995) Brainstem perfusion is impaired in chronic fatigue syndrome. *QJM* 88(11): 767-773. **Link:**
<https://www.ncbi.nlm.nih.gov/pubmed/8542261>
- de Lange FP et al.** (2004) Neural correlates of the chronic fatigue syndrome—an fMRI study. *Brain* 127(9): 1948-1957. **Link:**
<https://www.ncbi.nlm.nih.gov/pubmed/15240435>
- de Lange FP et al.** (2005) Gray matter volume reduction in the chronic fatigue syndrome. *NeuroImage* 26(3): 777-781. **Link:**
<https://www.ncbi.nlm.nih.gov/pubmed/15955487>
- Feng C-W et al.** (2021) Electroacupuncture improves cognitive function by inhibiting NF-κB activity in rats with chronic fatigue syndrome. *Zhen Ci Yan Jiu (Acupuncture Research)* 46 (9) :775-81. [Article in Chinese.] **Link:**
<https://pubmed.ncbi.nlm.nih.gov/34558244/>
- Ferrero K et al.** (2017) CNS findings in chronic fatigue syndrome and a neuropathological case report. *Journal of Investigative Medicine* 64 (6): 974-983. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/28386034>
- Filho AJ et al.** (2019) Shared microglial mechanisms underpinning depression and chronic fatigue syndrome and their comorbidities. *Behaviour and Brain Research* [Epub ahead of print] **Link:**
<https://www.ncbi.nlm.nih.gov/pubmed/31136774>
- Finkelmeyer A et al.** (2017) Grey and white matter differences in Chronic Fatigue Syndrome – A voxel-based morphometry study. *Neuroimage Clinical* 17: 24-30. **Link:**
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5633338/>
- Fujii H et al.** (2020) Altered Structural Brain Networks Related to Adrenergic/Muscarinic Receptor Autoantibodies in Chronic Fatigue Syndrome. *Journal of Neuroimaging* 30 (6): 822-827. **Link:**
doi.org/10.1111/jon.12751
- Gandasegui IM, et al.** (2021) Myalgic Encephalomyelitis/Chronic Fatigue Syndrome: A Neurological Entity? *Medicina* 57: 1030. **Link:**
<https://www.mdpi.com/1648-9144/57/10/1030>

Godlewska BR et al. (2021) Neurochemical abnormalities in chronic fatigue syndrome: a pilot magnetic resonance spectroscopy study at 7 Tesla. *Psychopharmacology* 239 (1): 163-171. **Link:** doi.org/10.1007/s00213-021-05986-6

Groven N et al. (2021) Kynurenine metabolites and ratios differ between Chronic Fatigue Syndrome, Fibromyalgia, and healthy controls. *Psychoneuroendocrinology* 131: 105287. **Link:** <https://www.sciencedirect.com/science/article/pii/S030645302100161X>

He Q et al. (2020) Neuroinflammation, Oxidative Stress, and Neurogenesis in a Mouse Model of Chronic Fatigue Syndrome, and the Treatment with Kampo Medicine. *Biological and Pharmaceutical Bulletin* 43 (1): 110-115. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/31902915>

Higgins N et al. (2014) What do lumbar puncture and jugular venoplasty say about a connection between chronic fatigue syndrome and idiopathic intracranial hypertension? *EJMINT*: 1448000223 **Link:** <http://www.ejmint.org/original-article/1443000223>

Higgins JNP and Pickard JD (2021) A paradigm for chronic fatigue syndrome: caught between idiopathic intracranial hypertension and spontaneous intracranial hypotension; caused by cranial venous outflow obstruction. *Fatigue: Biomedicine, Health & Behavior*. **Link:** <https://www.tandfonline.com/doi/full/10.1080/21641846.2021.1956223>

Hulens M., et al. (2018) The **Link** between idiopathic intracranial hypertension, fibromyalgia, and chronic fatigue syndrome: exploration of a shared pathophysiology. *Journal of Pain Research* 11: 3129-3140. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/30573989>

Ichise M et al. (1992) Assessment of regional cerebral perfusion by 99Tcm-HMPAO SPECT in chronic fatigue syndrome. *Nuclear Medicine Communications* 13(10): 767-772. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/1491843>

Keenan PA. (1999) Brain MRI abnormalities exist in chronic fatigue syndrome. *Journal of the Neurological Sciences* 171(1): 1-2. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/10567041>

Kimura Y et al. (2018) Brain abnormalities in myalgic encephalomyelitis/chronic fatigue syndrome: Evaluation by diffusional kurtosis imaging and neurite orientation dispersion and density imaging. *Journal of Magnetic Resonance Imaging* [Epub ahead of print]. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/30430664>

Komaroff AL et al. (2018) Neurologic Abnormalities in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome: A Review. *Brain and Nerve* 70 (1): 41-54. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/29348374> [Article in Japanese]

- Kuratsune H et al.** (2002) Brain Regions Involved in Fatigue Sensation: Reduced Acetylcarnitine Uptake into the Brain. *NeuroImage* 17(3): 1256-1265. Link: <https://www.ncbi.nlm.nih.gov/pubmed/12414265>
- Lange G et al.** (1999) Brain MRI abnormalities exist in a subset of patients with chronic fatigue syndrome. *Journal of the Neurological Sciences* 171(1): 3-7. Commentary on page 1-2. Link: <https://www.ncbi.nlm.nih.gov/pubmed/10567042>
- Lange G et al.** (2001) Quantitative Assessment of Cerebral Ventricular Volumes in Chronic Fatigue Syndrome. *Applied Neuropsychology* 8(1): 23-30. Link: <https://www.ncbi.nlm.nih.gov/pubmed/11388120>
- Lange G et al.** (2005) Objective evidence of cognitive complaints in Chronic Fatigue Syndrome: A BOLD fMRI study of verbal working memory. *NeuroImage* 26(2): 513-524. Link: <https://www.ncbi.nlm.nih.gov/pubmed/15907308>
- Li X et al.** (2021) Limbic Perfusion Is Reduced in Patients with Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS). *Tomography* 7 (4): 675-687. Link: <https://pubmed.ncbi.nlm.nih.gov/34842817/>
- Li Y et al.** (2022) Altered Effective Connectivity of Resting-State Networks by Tai Chi Chuan in Chronic Fatigue Syndrome Patients: A Multivariate Granger Causality Study. *Frontiers in Neurology* 13: 858833. Link: doi.org/10.3389/fneur.2022.858833 (*NEW)
- Mackay A** (2019) A neuro-inflammatory model can explain the onset, symptoms and flare-ups of myalgic encephalomyelitis/chronic fatigue syndrome. *Journal of Primary Health Care* 11 (4): 300-307. Link: <http://www.publish.csiro.au/HC/fulltext/HC19041>
- Mairal E et al.** (2021) Reversible widespread brain ¹⁸F-FDG PET hypometabolism in chronic fatigue syndrome treated by hyperbaric oxygen therapy. *Europe Journal of Nuclear Medicine and Molecular Imaging* 48 (5): 1680-1681. Link: <https://pubmed.ncbi.nlm.nih.gov/33420913/>
- Maksound R** (2020) A systematic review of neurological impairments in myalgic encephalomyelitis/ chronic fatigue syndrome using neuroimaging techniques. *PLoS One* 15 (4). Link: <https://www.ncbi.nlm.nih.gov/pubmed/32353033>
- Martinez ARM et al.** (2012) Sensory Neuronopathy and Autoimmune Diseases. *Autoimmune Diseases*. Link: <https://www.hindawi.com/journals/ad/2012/873587/>
- Mathew SJ et al.** (2009) Ventricular cerebrospinal fluid lactate is increased in chronic fatigue syndrome compared with generalized anxiety disorder: an in vivo 3.0 T 1H MRS imaging study. *NMR in Biomedicine* 22(3): 251-258. Link: <https://www.ncbi.nlm.nih.gov/pubmed/18942064>
- McCrae CS et al.** (2015) Fibromyalgia patients have reduced hippocampal volume compared with healthy controls. *Journal of Pain Research* 8: 47-52. Link: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4321661/>

- Miller AH et al.** (2014) Decreased Basal Ganglia Activation in Subjects with Chronic Fatigue Syndrome: Association with Symptoms of Fatigue. *PLoS ONE* 9(5): e98156. Link: <https://www.ncbi.nlm.nih.gov/pubmed/24858857>
- Morris G et al.** (2017) A Comparison of Neuroimaging Abnormalities in Multiple Sclerosis, Major Depression and Chronic Fatigue Syndrome (Myalgic Encephalomyelitis): is there a common cause? *Molecular Neurobiology*. Link: <https://www.ncbi.nlm.nih.gov/pubmed/28516431>
- Morriss RK et al.** (2002) Neuropsychological performance and noradrenaline function in chronic fatigue syndrome under conditions of high arousal. *Psychopharmacology* 163(2): 166-173. Link: <https://www.ncbi.nlm.nih.gov/pubmed/12202963>
- Mueller C et al.** (2019) Evidence of widespread metabolite abnormalities in Myalgic encephalomyelitis/chronic fatigue syndrome: assessment with whole-brain magnetic resonance spectroscopy. *Brain Imaging and Behaviour* [Epub ahead of print]. Link: <https://www.ncbi.nlm.nih.gov/pubmed/30617782>
- Murrough JW et al.** (2010) Increased ventricular lactate in chronic fatigue syndrome measured by 1H MRS imaging at 3.0 T. II: comparison with major depressive disorder. *NMR Biomed* 23 (6): 643-650. Link: <https://www.ncbi.nlm.nih.gov/pubmed/20661876>
- Nakatomi Y et al.** (2014) Neuroinflammation in Patients with Chronic Fatigue Syndrome/Myalgic Encephalomyelitis: An 11C-(R)-PK11195 PET Study. *Journal of Nuclear Medicine* 55(6): 945-950. Link: <https://www.ncbi.nlm.nih.gov/pubmed/24665088>
- Nakatomi Y et al.** (2018) Neuroinflammation in the Brain of Patients with Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Brain and Nerves* 70 (1): 19-25. Link: <https://www.ncbi.nlm.nih.gov/pubmed/29348371> (Article in Japanese)
- Narayan et al.** (2020) Informatics Inference of Exercise-Induced Modulation of Brain Pathways Based on Cerebrospinal Fluid Micro-RNAs in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Networks and System Medicine* 3 (1): 142-158. Link: <https://pubmed.ncbi.nlm.nih.gov/33274349/>
- Natelson BH et al.** (2005) Spinal Fluid Abnormalities in Patients with Chronic Fatigue Syndrome. *Clinical and Vaccine Immunology* 12(1): 52-55. Link: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC540195/>
- Natelson BH, et al.** (2017) Multimodal and simultaneous assessments of brain and spinal fluid abnormalities in chronic fatigue syndrome and the effects of psychiatric comorbidity. *Journal of Neurological Science* 375: 411-416. Link: <https://www.ncbi.nlm.nih.gov/pubmed/28320179>
- Natelson BH et al.** (2017) Elevations of Ventricular Lactate Levels Occur in Both Chronic Fatigue Syndrome and Fibromyalgia. *Fatigue* 5 (1): 15-20. Link: <https://www.ncbi.nlm.nih.gov/pubmed/29308330>

- Nelson T et al.** (2021) Brainstem Abnormalities in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome: A Scoping Review and Evaluation of Magnetic Resonance Imaging Findings. *Frontiers in Neurology* 12: 769511. Link: <https://pubmed.ncbi.nlm.nih.gov/34975729/>
- Noda M et al.** (2018) Glial Activation and Expression of the Serotonin Transporter in Chronic Fatigue Syndrome, *Frontiers in Psychiatry* 9. Link: <https://www.frontiersin.org/articles/10.3389/fpsy.2018.00589/full>
- O'Callaghan JP and Miller DB** (2019) Neuroinflammation disorders exacerbated by environmental stressors. *Metabolism Clinical and Experimental* 100: 153951. Link: [https://www.metabolismjournal.com/article/S0026-0495\(19\)30148-9/fulltext](https://www.metabolismjournal.com/article/S0026-0495(19)30148-9/fulltext)
- Okada T et al.** (2004) Mechanisms underlying fatigue: a voxel-based morphometric study of chronic fatigue syndrome. *BMC Neurology* 4: 14 Link: <https://www.ncbi.nlm.nih.gov/pubmed/15461817>
- Provenzano D et al.** (2020) A Machine Learning Approach to the Differentiation of Functional Magnetic Resonance Imaging Data of Chronic Fatigue Syndrome (CFS) From a Sedentary Control. *Frontiers in Computer Neuroscience* 14: 2. Link: <https://www.frontiersin.org/articles/10.3389/fncom.2020.00002/full>
- Provenzano D et al.** (2020) Machine Learning Detects Pattern of Differences in Functional Magnetic Resonance Imaging (fMRI) Data between Chronic Fatigue Syndrome (CFS) and Gulf War Illness (GWI). *Brain Sciences* 10 (7). Link: <https://www.mdpi.com/2076-3425/10/7/456/html>
- Puri BK et al.** (2002) Relative increase in choline in the occipital cortex in chronic fatigue syndrome. *Acta Psychiatrica Scandinavica* 106(3): 224-226. Link: <https://www.ncbi.nlm.nih.gov/pubmed/12197861>
- Puri BK et al.** (2012) Regional grey and white matter volumetric changes in myalgic encephalomyelitis (chronic fatigue syndrome): a voxel-based morphometry 3 T MRI study. *The British Journal of Radiology* 85(1015): e270-e273. Link: <https://www.ncbi.nlm.nih.gov/pubmed/22128128>
- Putra HA et al.** (2022) Sex Differences in the Correlation between Fatigue Perception and Regional Gray Matter Volume in Healthy Adults: A Large-Scale Study. *Journal of Clinical Medicine* 11 (20): 6037. Link: doi.org/10.3390/jcm11206037 (*NEW)
- Raijmakers R et al.** (2022) No Signs of Neuroinflammation in Women With Chronic Fatigue Syndrome or Q Fever Fatigue Syndrome Using the TSPO Ligand [¹¹C]-PK11195. *Neurology® Neuroimmunology and Neuroinflammation* 9 (1): e1113. Link: doi.org/10.1212/NXI.0000000000001113
- Renz-Polster H & Bienzle D** (2021) Broken Connections: The Evidence for Neuroglial Failure in ME/CFS. OSF Preprints. Link: <https://osf.io/ef3n4/>

Schutzer SE et al. (2011) Distinct Cerebrospinal Fluid Proteomes Differentiate Post- Treatment Lyme Disease from Chronic Fatigue Syndrome. *PLoS ONE* 6(2): e17287. **Link:**

<http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0017287>

Schwartz RB et al. (1994) SPECT imaging of the brain: comparison of findings in patients with chronic fatigue syndrome, AIDS dementia complex, and major unipolar depression. *American Journal of Roentgenology* 162(4). **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/8141022>

Sebaiti M et al. (2019) Macrophagic myofasciitis-associated dysfunctioning: An update of neuropsychological and neuroimaging features. *Best Practise and Research Clinical Rheumatology* [Epub ahead of print]. **Link:**

<https://tinyurl.com/y2q8uh3j>

Sevel LS et al. (2018) Structural brain changes versus self-report: machine-learning classification of chronic fatigue syndrome patients. *Experimental Brain Research* [Epub ahead of print] **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/29846797>

Shan ZY, et al (2016) Progressive brain changes in patients with chronic fatigue syndrome: A longitudinal MRI study. *Journal of Magnetic Resonance Imaging* doi: 10.1002/jmri.25283. **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/27123773>

Shan ZY et al. (2018) Decreased Connectivity and Increased Blood Oxygenation Level Dependent Complexity in the Default Mode Network in Individuals with Chronic Fatigue Syndrome. *Brain Connectivity*. **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/29152994>

Shan Z et al. (2020) Neuroimaging characteristics of myalgic encephalomyelitis/chronic fatigue syndrome (ME/CFS): a systematic review. *Journal of Translational Medicine* 18 (1): 335. **Link:**

<https://pubmed.ncbi.nlm.nih.gov/32873297/>

Shan ZY et al. (2022) Multimodal MRI of myalgic encephalomyelitis/chronic fatigue syndrome: A cross-sectional neuroimaging study toward its neuropathophysiology and diagnosis. *Frontiers in Neurology* 13: 954142. **Link:**

doi.org/10.3389/fneur.2022.954142 (*NEW) **Comment**

Shungu DC et al. (2012) Increased ventricular lactate in chronic fatigue syndrome. III. Relationships to cortical glutathione and clinical symptoms implicate oxidative stress in disorder pathophysiology. *NMR in Biomedicine* 25(9): 1073-1087. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/22281935>

Smith AP (2022) chronic fatigue syndrome, depression, sleep, age, intelligence and memory. *World Journal of Pharmaceutical and Medical Research* 8 (7): 50-59. **Link:**

https://orca.cardiff.ac.uk/id/eprint/150941/1/article_1656657046.pdf (*NEW)

Staud R et al. (2018) Task Related Cerebral Blood Flow Changes of Patients with Chronic Fatigue Syndrome: An Arterial Spin Labeling Study, *Fatigue* 6 (2): 63-79. **Link:** <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5914525/>

- Su J et al.** (2022) Connectivity between Salience and Default Mode Networks and subcortical nodes distinguishes between two classes of ME/CFS. *Brain Connectivity* [Epub ahead of print]. **Link:** doi.org/10.1089/brain.2022.0049 (*NEW) **Comment**
- Sun Y et al.** (2022) Inflammation From Peripheral Organs to the Brain: How Does Systemic Inflammation Cause Neuroinflammation? *Frontiers in Aging Neuroscience* 14: 903455. **Link:** doi.org/10.3389/fnagi.2022.903455 (*NEW)
- Tate W et al.** (2022) Molecular Mechanisms of Neuroinflammation in ME/CFS and Long COVID to Sustain Disease and Promote Relapses. *Frontiers in Neurology* 13: 877772. **Link:** doi.org/10.3389/fneur.2022.877772 (*NEW)
- Thapaliya K et al.** (2020) Mapping of pathological change in chronic fatigue syndrome using the ratio of T1- and T2-weighted MRI scans. *NeuroImage Clinical* 28. **Link:** <https://www.sciencedirect.com/science/article/pii/S2213158220302035>
- Thapalia K et al.** (2021) Diffusion tensor imaging reveals neuronal microstructural changes in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *The European Journal of Neuroscience* 54 (6): 6214-6228. **Link:** doi.org/10.1111/ejn.15413
- Thapalia K et al.** (2022) Volumetric differences in hippocampal subfields and associations with clinical measures in myalgic encephalomyelitis/chronic fatigue syndrome. *Journal of Neuroscience Research* 100 (7): 1476-1486. **Link:** doi.org/10.1002/jnr.25048
- Thapalia K et al.** (2022) Alteration of Cortical Volume and Thickness in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Frontiers in Neuroscience* 16: 848730. **Link:** doi.org/10.3389/fnins.2022.848730
- Tirelli U et al.** (1998) Brain positron emission tomography (PET) in chronic fatigue syndrome: preliminary data. *The American Journal of Medicine* 105(3): 54S-58S. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/9790483>
- VanElzakker MB et al.** (2018) Neuroinflammation and cytokines in myalgic encephalomyelitis/ chronic fatigue syndrome (ME/CFS): A critical review of research methods. *Frontiers in Neurology* [Epub ahead of print]. **Link:** <https://www.frontiersin.org/articles/10.3389/fneur.2018.01033/abstract>
- Vuong Q et al.** (2019) Brain Responses in CFS and TMD to Autonomic Challenges: An Exploratory fMRI Study. *JDR Clinical and Translational Research* [Epub ahead of print]. **Link:** <https://journals.sagepub.com/doi/abs/10.1177/2380084419872135>
- Wantanabe Y** (2018) Brain Science on Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Brain and Nerves* 70 (11): 1193-1201. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/30416112>
- Wortinger LA et al.** (2017) Altered right anterior insular connectivity and loss of associated functions in adolescent chronic fatigue syndrome. *PLoS One* 12 (9): e0184325. **Link:** <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5589232/>

Washington S et al. (2020) Exercise alters brain activation in Gulf War Illness and Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Brain Communications* 2 (2). **Link:**

<https://academic.oup.com/braincomms/article/2/2/fcaa070/5885074>

Wostyn P and De Deyn P. (2018) The putative glymphatic signature of chronic fatigue syndrome: A new view on the disease pathogenesis and therapy. *Medical Hypotheses* 118: 142-145. **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/30037603>

Wu K, et al. (2022) Tai Chi increases functional connectivity and decreases chronic fatigue syndrome: A pilot intervention study with machine learning and fMRI analysis. *PLoS One* 17 (12): e0278415. **Link:**

doi.org/10.1371/journal.pone.0278415 (*NEW)

Yasui M et al. (2019) Hyperactivation of proprioceptors induces microglia-mediated long-lasting pain in a rat model of chronic fatigue syndrome. *Journal of Neuroinflammation* 16: 67. **Link:**

<https://jneuroinflammation.biomedcentral.com/articles/10.1186/s12974-019-1456-x>

Yoshiuchi K et al. (2006) Patients with chronic fatigue syndrome have reduced absolute cortical blood flow. *Clinical Physiology and Functional Imaging* 26(2): 83-86. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/16494597>

Zeineh MM et al. (2015) Right Arcuate Fasciculus Abnormality in Chronic Fatigue Syndrome. *Radiology* 274(2): 517-526. **Link:**

<http://pubs.rsna.org/doi/abs/10.1148/radiol.14141079>

Zinn ML et al. (2016) Intrinsic Functional Hypoconnectivity in Core Neurocognitive Networks Suggests Central Nervous System Pathology in Patients with Myalgic Encephalomyelitis: A Pilot Study. *Appl Psychophysiol Biofeedback* 41: 283. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/26869373>

Zinn MA et al. (2018) Cortical Hypoactivation During Resting EEG Suggests Central Nervous System Pathology in Patients with Chronic Fatigue Syndrome. *Biological Psychology* [Epub ahead of print]. **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/29802861>

4.22. Neurology: Hypothalamic and neuroendocrine function

Altemus M et al. (2001) Abnormalities in response to vasopressin infusion in chronic fatigue syndrome. *Psychoneuroendocrinology* 26(2): 175-188. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/11087963>

Bakheit AM et al. (1992) Possible upregulation of hypothalamic 5-hydroxytryptamine receptors in patients with postviral fatigue syndrome. *BMJ* 304(6833): 1010-1012. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/1586780>

Bakheit AM et al. (1993) Abnormal arginine-vasopressin secretion and water metabolism in patients with postviral fatigue syndrome. *Acta Neurologica Scandinavica* 87(3): 234-238. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/8475696>

De Ballis et al. (2021) Hypothalamic-Pituitary autoimmunity and related impairment of hormone secretions in chronic fatigue syndrome. *Journal of Clinical Endocrinology and Metabolism* 106 (12): e5147-e5155. **Link:** doi.org/10.1210/clinem/dgab429

Chaudhuri A et al. (2011) Chronic Fatigue Syndrome: A Disorder of Central Cholinergic Transmission. *Journal of Chronic Fatigue Syndrome* 3(1): 3-16. **Link:** http://www.tandfonline.com/doi/abs/10.1300/J092v03n01_02

Demitrack MA et al. (1991) Evidence for impaired activation of the hypothalamic-pituitary-adrenal axis in patients with chronic fatigue syndrome. *The Journal of Clinical Endocrinology & Metabolism* 73(6): 1224-1234. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/1659582>

Hatziagelaki E et al. (2018) Myalgic Encephalomyelitis/Chronic Fatigue Syndrome-Metabolic Disease or Disturbed Homeostasis due to Focal Inflammation in the Hypothalamus? *Journal of Pharmacology and Experimental Therapeutics* 367 (1): 155-167. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/30076265>

Herane-Vives A et al. (2020) Cortisol Levels in Chronic Fatigue Syndrome and Atypical Depression Measured Using Hair and Saliva Specimens. *Journal of Affective Disorders* 267: 307-314. **Link:** <https://www.sciencedirect.com/science/article/abs/pii/S0165032719314466>

Hulens M et al. (2023) The Link Between Empty Sella Syndrome, Fibromyalgia, and Chronic Fatigue Syndrome: The Role of Increased Cerebrospinal Fluid Pressure. *Journal of Pain Research* 16: 205-219. **Link:** doi.org/10.2147/JPR.S394321 (*NEW)

Kitami T et al. (2020) Deep phenotyping of myalgic encephalomyelitis/chronic fatigue syndrome in Japanese population. *Scientific Reports* 10(1):19933. **Link:** <https://pubmed.ncbi.nlm.nih.gov/33199820/>

Mackay A and Tate WP (2018) A compromised paraventricular nucleus within a dysfunctional hypothalamus: A novel neuroinflammatory paradigm for ME/CFS. *International Journal of Immunopathology and Pharmacology*.

Link:

<https://journals.sagepub.com/doi/10.1177/2058738418812342#articleCitationDownloadContainer>

Miwa K. (2017) Down-regulation of renin-aldosterone and antidiuretic hormone systems in patients with myalgic encephalomyelitis/chronic fatigue syndrome. *Journal of Cardiology* 69 (4): 684-688. **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/27401397>

Morris M et al. (2019) Leveraging Prior Knowledge of Endocrine Immune Regulation in the Therapeutically Relevant Phenotyping of Women With Chronic Fatigue Syndrome. *Clinical Therapeutics* 41 (4): 656-674. **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/30929860>

Nater UM et al. (2008) Alterations in Diurnal Salivary Cortisol Rhythm in a Population-Based Sample of Cases with Chronic Fatigue Syndrome. *Psychosomatic Medicine* 70(3): 298-305. **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/18378875>

Papadopoulos AS and Cleare AJ. (2012) Hypothalamic-pituitary-adrenal axis dysfunction in chronic fatigue syndrome. *Nature Reviews Endocrinology* 8(1): 22-32. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/21946893>

Papanicolaou DA et al. (2004) Neuroendocrine Aspects of Chronic Fatigue Syndrome. *NeuroImmunoModulation* 11(2): 65-74. **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/14758052>

Pednekar DD et al. (2020) A System Theoretic Investigation of Cortisol Dysregulation in Fibromyalgia Patients with Chronic Fatigue. 2019 41st Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC). **Link:**

<https://ieeexplore.ieee.org/document/8857427/citations#citations>

Pednekar DD et al. (2020) Characterization of Cortisol Dysregulation in Fibromyalgia and Chronic Fatigue Syndromes: A State-Space Approach. *IEEE* [Epub ahead of print]. **Link:**

<https://ieeexplore.ieee.org/document/9025248>

Roerink ME et al. (2018) Hair and salivary cortisol in a cohort of women with chronic fatigue syndrome. *Hormones and Behaviour* [Epub ahead of Print]. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/29807037>

Ruiz-Núñez B et al. (2018) Higher Prevalence of "Low T3 Syndrome" in Patients with Chronic Fatigue Syndrome: A Case-Control Study. *Frontiers in Endocrinology*. **Link:**

<https://www.frontiersin.org/articles/10.3389/fendo.2018.00097/full>

Scott LV et al. (1999) Small adrenal glands in chronic fatigue syndrome: a preliminary computer tomography study. *Psychoneuroendocrinology* 24(7): 759-768. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/10451910>

Tak LM et al. (2011) Meta-analysis and meta-regression of hypothalamic-pituitary-adrenal axis activity in functional somatic disorders. *Biological Psychology* 87(2): 183-194. **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/21315796>

Thomas N et al. (2022) The underlying sex differences in neuroendocrine adaptations relevant to Myalgic Encephalomyelitis Chronic Fatigue Syndrome. *Frontiers in Neuroendocrinology*: 100995 66: 100995. **Link:**

doi.org/10.1016/j.yfrne.2022.100995

Tomic S et al. (2017) Neuroendocrine disorder in chronic fatigue syndrome. *Turkish Journal of Medical Science* 47 (4): 1097-1103. **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/29154201>

Van Den Eede F et al. (2007) Hypothalamic-Pituitary-Adrenal Axis Function in Chronic Fatigue Syndrome. *Neuropsychobiology* 55(2): 112-120. **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/17596739>

Van Den Eede F et al. (2008) Combined dexamethasone/corticotropin-releasing factor test in chronic fatigue syndrome. *Psychological Medicine* 38(07): 963-973. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/17803834>

Wheatland R. (2005) Chronic ACTH autoantibodies are a significant pathological factor in the disruption of the hypothalamic-pituitary-adrenal axis in chronic fatigue syndrome, anorexia nervosa and major depression. *Medical Hypotheses* 65(2): 287-295. **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/15885924>

Wyller VB et al. (2007) Abnormal thermoregulatory responses in adolescents with chronic fatigue syndrome: relation to clinical symptoms. *Pediatrics* 120: e129-e137. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/17606539>

Wyller VB et al. (2017) Erratum to: Altered neuroendocrine control and association to clinical symptoms in adolescent chronic fatigue syndrome: a cross-sectional study. *Journal of Translational Medicine* 15: 157. **Link:**

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5514483/>

4.23. Neurology: Neuropsychology and cognitive function

Beaumont A et al. (2012) Reduced Cardiac Vagal Modulation Impacts on Cognitive Performance in Chronic Fatigue Syndrome. *PLoS ONE* 7(11): e49518. **Link:**

<http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0049518>

DeLuca J et al. (1997) Cognitive functioning is impaired in patients with chronic fatigue syndrome devoid of psychiatric disease. *Journal of Neurology, Neurosurgery & Psychiatry* 62(2): 151-155. **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/9048715>

Joustra M L et al. (2022) Cognitive task performance and subjective cognitive symptoms in individuals with Chronic Fatigue Syndrome or Fibromyalgia: A cross-sectional analysis of the Lifelines cohort study. *Psychosomatic Medicine*: 10.1097/PSY.0000000000001117. [Epub ahead of print] **Link:** doi.org/10.1097/PSY.0000000000001117

Keynejad R et al. (2020) Attentional Processing and Interpretative Bias in Functional Neurological Disorder. *Psychosomatic Medicine* 82 (6): 586-592. **Link:**

<https://tinyurl.com/yaaqbc6l>

Manca R et al. (2021) Modulatory effects of cognitive exertion on regional functional connectivity of the salience network in women with ME/CFS: A pilot study. *Journal of the Neurological Science* 422: 117326. **Link:**

<https://pubmed.ncbi.nlm.nih.gov/33556867/>

Michiels V and Cluydts R. (2001) Neuropsychological functioning in chronic fatigue syndrome: a review. *Acta Psychiatrica Scandinavica* 103(2): 84-93. **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/11167310>

Milrad SF et al. (2017) Depression, evening salivary cortisol and inflammation in chronic fatigue syndrome: A psychoneuroendocrinological structural regression model. *International Journal of Psychophysiology* 131:124-130. **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/28918107>

Murga I et al. (2021) The maintained attention assessment in patients affected by Myalgic encephalomyelitis/chronic fatigue syndrome: a reliable biomarker? *Journal of Translational Medicine* 19 (1): 494. **Link:**

<https://pubmed.ncbi.nlm.nih.gov/34863209/>

Natelson BH, et al. (2017) Multimodal and simultaneous assessments of brain and spinal fluid abnormalities in chronic fatigue syndrome and the effects of psychiatric comorbidity. *Journal of Neurological Science* 375: 411-416. **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/28320179>

Øie MG et al. (2022) Subjective and objective cognitive function in adolescent with chronic fatigue following Epstein-Barr virus infection. *Journal of Psychosomatic Research* 163:111063. **Link:**

doi.org/10.1016/j.jpsychores.2022.111063 (*NEW)

- Rasouli O et al.** (2019) Neuropsychological dysfunction in chronic fatigue syndrome and the relation between objective and subjective findings. *Neuropsychology* 33 (5): 658-669. **Link:**
<https://www.ncbi.nlm.nih.gov/pubmed/31169386>
- Roor JJ et al.** (2018) Feedback on underperformance in patients with chronic fatigue syndrome: the impact on subsequent neuropsychological test performance. *Applied Neuropsychology* [Epub ahead of print]. **Link:**
<https://www.tandfonline.com/doi/full/10.1080/23279095.2018.1519509>
- Sebaiti M et al.** (2019) Macrophagic myofasciitis-associated dysfunctioning: An update of neuropsychological and neuroimaging features. *Best Practise and Research Clinical Rheumatology* [Epub ahead of print]. **Link:**
<https://tinyurl.com/y2q8uh3j>
- Smith AP et al.** (2022) Cognitive impairments in chronic fatigue syndrome patients: choice reaction time, encoding of new information, response organisation and selective attention. *World Journal of Pharmaceutical and Medical Research* 8(4): 27-36. **Link:**
https://www.researchgate.net/publication/359651216_COGNITIVE_IMPAIRMENTS_IN_CHRONIC_FATIGUE_SYNDROME_PATIENTS_CHOICE_REACTION_TIME_ENCODING_OF_NEW_INFORMATION_RESPONSE_ORGANISATION_AND_SELECTIVE_ATTENTION
- Smith AP** (2022) Chronic fatigue syndrome, depression, sleep, age, intelligence and memory. *World Journal of Pharmaceutical and Medical Research* 8 (7): 50-59. **Link:**
https://orca.cardiff.ac.uk/id/eprint/150941/1/article_1656657046.pdf (*NEW)
- Smith AP** (2022) Memory impairments in chronic fatigue syndrome patients. *World Journal of Pharmaceutical and Medical Research* 8 (6): 50-54. **Link:**
https://orca.cardiff.ac.uk/id/eprint/150176/1/article_1654063780_pub.pdf (*NEW)
- Teodoro T et al.** (2018) A unifying theory for cognitive abnormalities in functional neurological disorders, fibromyalgia and chronic fatigue syndrome: systematic review. *Journal of Neurology, Neurosurgery and Psychiatry* 98 (12): 1308-1319. **Link:**
<https://www.ncbi.nlm.nih.gov/pubmed/29735513>
- Van der Schaaf ME et al.** (2018) Fatigue Is Associated with Altered Monitoring and Preparation of Physical Effort in Patients with Chronic Fatigue Syndrome. *Biological Psychiatry Cognitive Neuroscience and Neuroimaging* 3 (4): 392-404. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/29628071>
- Vangeel EB et al.** (2018) Glucocorticoid receptor DNA methylation and childhood trauma in chronic fatigue syndrome patients. *Journal of Psychosomatic Research* 104: 55-60. **Link:**
<https://www.ncbi.nlm.nih.gov/pubmed/29275786>

Wirth KL et al. (2021) An attempt to explain the neurological symptoms of Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Journal of Transitional Medicine* 19: 471. **Link:** <https://translational-medicine.biomedcentral.com/articles/10.1186/s12967-021-03143-3>

Wortinger LA et al. (2017) Emotional conflict processing in adolescent chronic fatigue syndrome: A pilot study using functional magnetic resonance imaging. *Journal of Clinical and Experimental Neuropsychology* 39 (4): 355-368. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/27647312>

4.24. Neurology: Neurotransmitter function

Badawy AAB et al. (2005) Heterogeneity of serum tryptophan concentration and availability to the brain in patients with the chronic fatigue syndrome. *Journal of Psychopharmacology* 19(4): 385-391. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/15982993>

Cao Y and Li Q. (2017) The variation of the 5-hydroxytryptamine system between chronic unpredictable mild stress rats and chronic fatigue syndrome rats induced by forced treadmill running. *Neuroreports* 28 (11): 630-637. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/28505018>

Cleare AJ, et al. (2005) Brain 5-HT_{1A} receptor binding in chronic fatigue syndrome measured using positron emission tomography and [¹¹C] WAY-100635. *Biological Psychiatry* 57(3): 239-246. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/15691524>

Domingo JC et al. (2021) Are Circulating Fibroblast Growth Factor 21 and N-Terminal Prohormone of Brain Natriuretic Peptide Promising Novel Biomarkers in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome? *Antioxidants & Redox Signal* 34 (18): 1420-1427. **Link:** <https://pubmed.ncbi.nlm.nih.gov/33353469/>

Georgiades E et al. (2003) Chronic fatigue syndrome: new evidence for a central fatigue disorder. *Clinical Science* 105(2): 213-218. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/12708966>

Khan F et al. (2003) Prolonged acetylcholine-induced vasodilatation in the peripheral microcirculation of patients with chronic fatigue syndrome. *Clinical Physiology and Functional Imaging* 23(5): 282-285. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/12950326>

Narita M et al. (2003) Association between serotonin transporter gene polymorphism and chronic fatigue syndrome. *Biochemical and Biophysical Research Communications* 311(2): 264-266. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/14592408>

Noda M et al. (2018) Glial Activation and Expression of the Serotonin Transporter in Chronic Fatigue Syndrome, *Frontiers in Psychiatry* 9. **Link:** <https://www.frontiersin.org/articles/10.3389/fpsy.2018.00589/full>

- Renz-Polster H et al.** (2022) The Pathobiology of Myalgic Encephalomyelitis/Chronic Fatigue Syndrome: The Case for Neuroglial Failure. *Frontiers in Cellular Neuroscience* 16: 888232. **Link:** doi.org/10.3389/fncel.2022.888232 (*NEW)
- Smith AK et al.** (2008) Genetic evaluation of the serotonergic system in chronic fatigue syndrome. *Psychoneuroendocrinology* 33(2): 188-197. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/18079067>
- Spence VA et al.** (2000) Enhanced sensitivity of the peripheral cholinergic vascular response in patients with chronic fatigue syndrome. *The American Journal of Medicine* 108(9): 736-739. **Link:** [https://www.amjmed.com/article/S0002-9343\(00\)00407-1/fulltext](https://www.amjmed.com/article/S0002-9343(00)00407-1/fulltext)
- Yamamoto S et al.** (2004) Reduction of serotonin transporters of patients with chronic fatigue syndrome. *NeuroReport* 15(17): 2571-2574. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/15570154>

4.25. Pain

Also see our [leaflets](#) on Symptoms.

- Al-Rawaf et al.** (2019) MicroRNAs as biomarkers of pain intensity in patients with chronic fatigue syndrome. *Pain Practice* 19 (8): 848-860. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/31282597>
- Barhost EE et al.** (2021) Pain-related post-exertional malaise in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS) and Fibromyalgia: A systematic review and three-level meta-analysis. *Pain Medicine*: pnab308. [Epub ahead of print.] **Link:** doi.org/10.1093/pm/pnab308
- Brink AFT et al.** (2021) Validation of the Bath CRPS Body Perception Disturbance Scale. *Journal of pain* 22 (11): 1371-1384. **Link:** doi.org/10.1016/j.jpain.2021.04.007
- Collins SM et al.** (2017) Endogenous pain facilitation rather than inhibition differs between people with chronic fatigue syndrome, multiple sclerosis, and controls: An observational study. *Pain Physicians* 20 (4): E489-E497. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/28535557>
- Conde-Antón Á et al.** (2020) Effects of transcranial direct current stimulation and transcranial magnetic stimulation in patients with fibromyalgia. A systematic review. *Neurologia* **Link:** <https://pubmed.ncbi.nlm.nih.gov/33071017/>
- Eccles J et al.** (2022) Mechanistic factors contributing to pain and fatigue in fibromyalgia and me/cfs: autonomic and inflammatory insights from an experimental medicine study. *Annals of the rheumatic diseases* 81: 1719. **Link:** https://ard.bmj.com/content/81/Suppl_1/1719.2 (*NEW)

Goudman L et al. (2020) Processing of Laser-Evoked Potentials in Patients with Chronic Whiplash-Associated Disorders, Chronic Fatigue Syndrome, and Healthy Controls: A Case-Control Study. *Pain Medicine* 21 (10): 2553-2563.

Link: doi.org/10.1093/pm/pnaa068

Hulens M et al. (2021) High Prevalence of Perineural Cysts in Patients with Fibromyalgia and Chronic Fatigue Syndrome. *Pain Medicine* 22 (4): 883-890.

Link: <https://pubmed.ncbi.nlm.nih.gov/33260218/>

Petter, E et al. (2022) Muscle sodium content in patients with Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Journal of Translational Medicine* 20: 580. doi.org/10.1186/s12967-022-03616-z (*NEW) Comment

Polli A., et al. (2018) Exercise-induce hyperalgesia, complement system and elastase activation in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome - a secondary analysis of experimental comparative studies, *Scandinavian Journal of Pain* 19 (1): 183-192. Link: doi.org/10.1515/sjpain-2018-0075

Oaklander A and Nolano M (2019) Scientific Advances in and Clinical Approaches to Small-Fiber Polyneuropathy. *JAMA Network* [Epuba ahead of print]. Link: <https://jamanetwork.com/journals/jamaneurology/article-abstract/2749401>

Serafimova T et al. (2022) Experiences of pain in paediatric chronic fatigue syndrome/myalgic encephalomyelitis: a single-centre qualitative study. *BMJ Paediatrics Open* 6: e001201. Link: doi.org/10.1136/bmjpo-2021-001201

Surian A and Baraniuk A (2020) Systemic Hyperalgesia in Females with Gulf War Illness, Chronic Fatigue Syndrome and Fibromyalgia. *Scientific Reports* 10: 5751. Link: <https://www.nature.com/articles/s41598-020-62771-9>

Yang M et al. (2022) Assessing sleep and pain among adults with myalgic encephalomyelitis/chronic fatigue syndrome: psychometric evaluation of the PROMIS® sleep and pain short forms. *Quality of Life Research*. Link: doi.org/10.1007/s11136-022-03199-8 (*NEW)

Yen LT et al. (2020) Preventing the induction of acid saline-induced fibromyalgia pain in mice by electroacupuncture or APETx2 injection. *Acupuncture in Medicine* [Epub ahead of print]. Link: <https://www.ncbi.nlm.nih.gov/pubmed/31986902>

4.26. Phenotypes and sub-groups

Asprusten TT et al. (2021) Are there subgroups of chronic fatigue syndrome? An exploratory cluster analysis of biological markers. *Journal of Translational Medicine* 19 (1): 48. Link: <https://pubmed.ncbi.nlm.nih.gov/33516248/>

Das S et al. (2022) Genetic Risk Factors for ME/CFS Identified using Combinatorial Analysis. medRxiv [preprint]. Link: doi.org/10.1101/2022.09.09.22279773 (*NEW)

Huber K et al. (2018) Latent class analysis of a heterogeneous international sample of patients with myalgic encephalomyelitis/chronic fatigue syndrome. *Fatigue: Biomedicine, Health and Behaviour* 6 (3). Link: <https://www.tandfonline.com/doi/abs/10.1080/21641846.2018.1494530?journalCode=rftg20>

Jason LA and Torres C (2022) Differences in Symptoms among Black and White Patients with ME/CFS. *Journal of Clinical Medicine* 11 (22): 6708. Link: doi.org/10.3390/jcm11226708 (*NEW) Comment

Lewis I et al. (2013) Clinical characteristics of a novel subgroup of chronic fatigue syndrome patients with postural orthostatic tachycardia syndrome. *Journal of Internal Medicine* 273(5): 501-510. Link: <https://www.ncbi.nlm.nih.gov/pubmed/23206180>

Moneghetti KJ et al. (2018) Value of Circulating Cytokine Profiling During Submaximal Exercise Testing in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Scientific Reports* 8 (1): 2779. Link: <https://www.ncbi.nlm.nih.gov/pubmed/29426834>

Nagy-Szakal D et al. (2017) Fecal metagenomic profiles in subgroups of patients with myalgic encephalomyelitis/chronic fatigue syndrome. *Microbiome* 5: 44. Link: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5405467/>

Nagy-Szaki D et al. (2018) Insights into myalgic encephalomyelitis/chronic fatigue syndrome phenotypes through comprehensive metabolomics. *Scientific Reports* 8 (1): 10056. Link: <https://www.ncbi.nlm.nih.gov/pubmed/29968805>

Nijs J and Ickmans K. (2013) Postural orthostatic tachycardia syndrome as a clinically important subgroup of chronic fatigue syndrome: further evidence for central nervous system dysfunctioning. *Journal of Internal Medicine* 273(5): 498-500. Link: <https://onlinelibrary.wiley.com/doi/full/10.1111/joim.12034>

Palacios N, et al. (2023) Different risk factors distinguish myalgic encephalomyelitis/chronic fatigue syndrome from severe fatigue. *Scientific Reports* 13 (1): 2469. Link: doi.org/10.1038/s41598-023-29329-x (*NEW)

Putra HA et al. (2022) Sex Differences in the Correlation between Fatigue Perception and Regional Gray Matter Volume in Healthy Adults: A Large-Scale Study. *Journal of Clinical Medicine* 11 (20): 6037. **Link:** doi.org/10.3390/jcm11206037 (*NEW)

Sarzi-Puttini P et al. (2020) Fibromyalgia: an update on clinical characteristics, aetiopathogenesis and treatment *Nature Reviews Rheumatology*. **Link:** <https://pubmed.ncbi.nlm.nih.gov/33024295/>

Su J et al. (2022) Connectivity between Salience and Default Mode Networks and subcortical nodes distinguishes between two classes of ME/CFS. *Brain Connectivity* [Epub ahead of print]. **Link:** doi.org/10.1089/brain.2022.0049 (*NEW)

Stoothoff J et al. (2017) Subtyping Patients with Myalgic Encephalomyelitis (ME) and Chronic Fatigue Syndrome (CFS) By Course of Illness. *Journal of Biosensors, Biomarkers and Diagnoses* 2 (1). **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/29204592>

Thomas N et al. (2022) The underlying sex differences in neuroendocrine adaptations relevant to Myalgic Encephalomyelitis Chronic Fatigue Syndrome. *Frontiers in Neuroendocrinology* 66: 100995. **Link:** doi.org/10.1016/j.yfrne.2022.100995

Unger ER et al. (2017) Multi-Site Clinical Assessment of Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (MCAM): Design and Implementation of a Prospective/Retrospective Rolling Cohort Study. *American Journal of Epidemiology* 185 (8): 617-626. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/28338983>

Williams TE, et al. (2017) Heterogeneity in chronic fatigue syndrome - empirically defined subgroups from the PACE trial. *Psychological Medicine* 47 (8): 1454-1465. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/28112075>

Vaes AW, et al. (2023) Symptom-based clusters in people with ME/CFS: an illustration of clinical variety in a cross-sectional cohort. *Journal of Translational Medicine* 21: 112. **Link:** doi.org/10.1186/s12967-023-03946-6 (*NEW)

VanNess JM et al. (2003) Subclassifying Chronic Fatigue Syndrome through Exercise Testing. *Medicine & Science in Sports & Exercise* 35(6): 908-913. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/12783037>

Xu J et al. (2018) A new approach to find biomarkers in chronic fatigue syndrome/myalgic encephalomyelitis (CFS/ME) by single-cell Raman micro-spectroscopy. *RSC, Analyst*, 144 (3): 913-920. **Link:** <http://pubs.rsc.org/en/Content/ArticleLanding/2018/AN/C8AN01437J#!divAbstract>

4.27. Post-exertional malaise (PEM)

Baraniuk JN et al. (2021) Differential Effects of Exercise on fMRI of the Midbrain Ascending Arousal Network Nuclei in Myalgic Encephalomyelitis / Chronic Fatigue Syndrome (ME/CFS) and Gulf War Illness (GWI) in a Model of Postexertional Malaise (PEM). *Preprints*: 2021110420. **Link:** <https://www.preprints.org/manuscript/202111.0420/v1>

Barhost EE et al. (2020) Elevated Perceived Exertion in People with Myalgic Encephalomyelitis/Chronic Fatigue Syndrome and Fibromyalgia: A Meta-analysis. *Medicine and Science in Sports and Exercise* 52 (12): 2615-2627. **Link:** doi.org/10.1249/MSS.0000000000002421

Barhost EE et al. (2021) Pain-related post-exertional malaise in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS) and Fibromyalgia: A systematic review and three-level meta-analysis. *Pain Medicine*: pnab308. [Epub ahead of print.] **Link:** <https://pubmed.ncbi.nlm.nih.gov/34668532/>

Van Booven DJ et al. (2023) Stress-Induced Transcriptomic Changes in Females with Myalgic Encephalomyelitis/Chronic Fatigue Syndrome Reveal Disrupted Immune Signatures. *International Journal of Molecular Sciences* 24(3): 2698. **Link:** doi.org/10.3390/ijms24032698 (*NEW) **Comment**

Boruch AE et al. (2021) Predicting post-exertional malaise in Gulf War Illness based on acute exercise responses. *Life Science*:119701. **Link:** <https://pubmed.ncbi.nlm.nih.gov/34119538/>

Bouquet J et al. (2019) Whole blood human transcriptome and virome analysis of ME/CFS patients experiencing post-exertional malaise following cardiopulmonary exercise testing. *PLoS One* 14 (3). **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/30897114>

Brown A and Jason LA (2020) Meta-analysis investigating post-exertional malaise between patients and controls. *Journal of Health Psychology* 25 (13-14): 2053-2071. **Link:** <https://pubmed.ncbi.nlm.nih.gov/29974812/>

van Campen CLMC et al. (2021) Numeric Rating Scales Show Prolonged Post-exertional Symptoms After Orthostatic Testing of Adults With Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Frontiers in Medicine (Lausanne)* 7: 602894. **Link:** <https://pubmed.ncbi.nlm.nih.gov/33585505/>

Chu L et al. (2018) Deconstructing post-exertional malaise in myalgic encephalomyelitis/ chronic fatigue syndrome: A patient-centered, cross-sectional survey. *PLoS One* 13(6). **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/29856774>

Cook DB et al. (2017) Neural consequences of post-exertion malaise in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Brain and Behavioural Immunology* 62: 87-99. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/28216087>

Davenport TE et al. (2022) Lessons from Myalgic Encephalomyelitis/Chronic Fatigue Syndrome for Long COVID: Postexertional Symptom Exacerbation is an Abnormal Response to Exercise/Activity. *JOSPT*. **Link:** doi.org/10.2519/jospt.blog.20220202

Davenport TE et al. (2022) Lessons from Myalgic Encephalomyelitis/Chronic Fatigue Syndrome for Long COVID Part 2: Physiological Characteristics During Acute Exercise Are Abnormal in People With Postexertional Symptom Exacerbation. *JOSPT*. **Link:** doi.org/10.2519/jospt.blog.20220209

Davenport TE et al. (2022) Lessons from Myalgic Encephalomyelitis/Chronic Fatigue Syndrome for Long COVID Part 3: "Energy System First Aid" for People With Postexertional Symptom Exacerbation. *JOSPT*. **Link:** <https://www.jospt.org/doi/10.2519/jospt.blog.20220216>

Ghali A et al. (2019) Elevated blood lactate in resting conditions correlate with post-exertional malaise severity in patients with Myalgic encephalomyelitis/Chronic fatigue syndrome. *Scientific Reports* 9: 18817. **Link:** <https://www.nature.com/articles/s41598-019-55473-4>

Glass KA, et al. (2023) Urine Metabolomics Exposes Anomalous Recovery after Maximal Exertion in Female ME/CFS Patients. *International Journal of Molecular Sciences* 24 (4): 3685. **Link:** doi.org/10.3390/ijms24043685 (*NEW)
Comment

Holtzman C et al. (2019) Assessment of Post-Exertional Malaise (PEM) in Patients with Myalgic Encephalomyelitis (ME) and Chronic Fatigue Syndrome (CFS): A Patient-Driven Survey. *Diagnostics* 9 (1). **Link:** <https://www.mdpi.com/2075-4418/9/1/26>

Holtzman C et al. (2020) Factors Affecting the Characterization of Post-Exertional Malaise Derived from Patient Input. *Journal of Health Disparities Research and Practise* 13 (2). **Link:** <https://digitalscholarship.unlv.edu/jhdrp/vol13/iss2/5/>

Jason LA et al. (2018) The development of an instrument to assess post-exertional malaise in patients with myalgic encephalomyelitis and chronic fatigue syndrome, *Journal of Health Psychology* [Epub ahead or print] **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/30354489>

Joseph P et al. (2022) Neurovascular Dysregulation and Acute Exercise Intolerance in ME/CFS: A Randomized, Placebo-Controlled Trial of Pyridostigmine. *Chest*: S0012-3692(22)00890-X. [Epub ahead of Print] **Link:** doi.org/10.1016/j.chest.2022.04.146 (*NEW)

Manca R et al. (2021) Modulatory effects of cognitive exertion on regional functional connectivity of the salience network in women with ME/CFS: A pilot study. *Journal of the Neurological Science* 422: 117326. **Link:** <https://pubmed.ncbi.nlm.nih.gov/33556867/>

Mateo L et al. (2020) Post-exertional symptoms distinguish myalgic encephalomyelitis/chronic fatigue syndrome subjects from healthy controls. *Work* 66 (2):265-275. **Link:** doi.org/10.3233/WOR-203168

May M et al. (2019) Post-exertional malaise is associated with greater symptom burden and psychological distress in patients diagnosed with Chronic Fatigue Syndrome. *Journal of Psychosomatic Research* 129: 109893. **Link:**

<https://www.sciencedirect.com/science/article/abs/pii/S0022399919304672>

McGregor N et al. (2019) Post-Exertional Malaise Is Associated with Hypermetabolism, Hypoacetylation and Purine Metabolism Deregulation in ME/CFS Cases. *Diagnostics* 9 (3). **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/31277442>

McManimen SL and Jason LA. (2017) Post-Exertional Malaise in Patients with ME and CFS with Comorbid Fibromyalgia. *SRL Neurology and Neurosurgery* 3 (1): 22-27. **Link:** <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5464757/>

McManimen SL, Sunquist ML and Jason LA (2019) Deconstructing post-exertional malaise: an exploratory analysis. *Journal of Health Psychology*

Link: <https://www.ncbi.nlm.nih.gov/pubmed/27557649>

Nepotchatykh E et al. (2020) Profile of circulating microRNAs in myalgic encephalomyelitis and their relation to symptom severity, and disease pathophysiology. *Scientific Reports* 10 (1): 19620. **Link:**

<https://pubmed.ncbi.nlm.nih.gov/33184353/>

Paul L et al. (1999) Demonstration of delayed recovery from fatiguing exercise in chronic fatigue syndrome. *European Journal of Neurology* 6(1): 63-69. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/10209352>

Rayhan RU and Baraniuk JN (2021) Submaximal Exercise Provokes Increased Activation of the Anterior Default Mode Network During the Resting State as a Biomarker of Postexertional Malaise in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Frontiers in Neuroscience* 15: 748426. **Link:**

<https://pubmed.ncbi.nlm.nih.gov/34975370/>

Renz-Polster H et al. (2022) The Pathobiology of Myalgic Encephalomyelitis/Chronic Fatigue Syndrome: The Case for Neuroglial Failure. *Frontiers in Cellular Neuroscience* 16: 888232. **Link:**

doi.org/10.3389/fncel.2022.888232 (*NEW)

Renz-Polster H and Scheibenbogen C. (2022) Post-COVID syndrome with fatigue and exercise intolerance: myalgic encephalomyelitis/chronic fatigue syndrome. Post-COVID syndrome with fatigue and exercise intolerance: myalgic encephalomyelitis/chronic fatigue syndrome]. *Innere Medizin* 63 (8): 830-839. [Article in German.] **Link:** doi.org/10.1007/s00108-022-01369-x

(*NEW)

Stussman B et al. (2020) Characterization of Post-exertional Malaise in Patients With Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Frontiers in Neurology* 11: 1025. **Link:**

<https://www.frontiersin.org/articles/10.3389/fneur.2020.01025/full>

4.28. Relapse and recovery cycles

Helliwell AM et al. (2022) Dynamic Epigenetic Changes during a Relapse and Recovery Cycle in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. medRxiv [preprint]. Link: doi.org/10.1101/2022.02.24.22270912

Tate W et al. (2022) Molecular Mechanisms of Neuroinflammation in ME/CFS and Long COVID to Sustain Disease and Promote Relapses. *Frontiers in Neurology* 13: 877772. Link: doi.org/10.3389/fneur.2022.877772 (*NEW)

4.29. Sleep disturbance

Armitage R et al. (2007) The Impact of a 4-Hour Sleep Delay on Slow Wave Activity in Twins Discordant for Chronic Fatigue Syndrome. *Sleep* 30(5): 657-662. Link: <https://www.ncbi.nlm.nih.gov/pubmed/17552382>

Castro-Marrero J et al. (2018) Poor self-reported sleep quality and health-related quality of life in patients with chronic fatigue syndrome/myalgic encephalomyelitis. *Journal of Sleep Research* 27 (6). Link: <https://www.ncbi.nlm.nih.gov/pubmed/29770505>

Campbell R et al. (2018) Reciprocal associations between daily need-based experiences, energy, and sleep in chronic fatigue syndrome. *Health Psychology* 37 (12): 1168-1178. Link: <https://www.ncbi.nlm.nih.gov/pubmed/30321019>

Fatt SJ et al. (2019) Parasympathetic activity is reduced during slow-wave sleep, but not resting wakefulness, in patients with chronic fatigue syndrome. *Journal of Clinical Sleep Medicine* [Epub ahead of print]. Link: <https://www.ncbi.nlm.nih.gov/pubmed/31771749>

Gotts ZM et al. (2013) Are there sleep-specific phenotypes in patients with chronic fatigue syndrome? A cross-sectional polysomnography analysis. *BMJ Open* 3(6): e002999. Link: <http://bmjopen.bmj.com/content/3/6/e002999>

Gotts ZM et al. (2015) The Association between Daytime Napping and Cognitive Functioning in Chronic Fatigue Syndrome. *PLoS ONE* 10(1): e0117136. Link: <http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0117136>

Gotts ZM et al. (2016a) A comparative polysomnography analysis of sleep in healthy controls and patients with chronic fatigue syndrome. *Fatigue: Biomedicine, Health & Behavior* 4(2): 80-93. Link: <http://www.tandfonline.com/doi/abs/10.1080/21641846.2016.1167470>

Gotts ZM et al. (2016b) The experience of sleep in chronic fatigue syndrome: A qualitative interview study with patients. *British Journal of Health Psychology* 21(1): 71-92. Link: <https://www.ncbi.nlm.nih.gov/pubmed/25728396>

- Gupta A, Deka R and Gupta S** (2020) A Critical Review to Investigate Chronic Fatigue Syndrome as Sleep Disorder, *E-Cronicon* 12 (1). **Link:** <https://ecronicon.com/ecne/a-critical-review-to-investigate-chronic-fatigue-syndrome-as-sleep-disorder.php>
- Jackson ML and Bruck D.** (2012) Sleep abnormalities in chronic fatigue syndrome/ myalgic encephalomyelitis: a review. *Journal of Clinical Sleep Medicine* 8(6): 719-728. **Link:** <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3501671/>
- Jain V et al.** (2017) Prevalence of and risk factors for severe cognitive and sleep symptoms in ME/CFS and MS. *BMC Neurology* 17: 117. **Link:** <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5477754/>
- Josev EK et al.** (2017) Sleep Quality in Adolescents with Chronic Fatigue Syndrome/Myalgic Encephalomyelitis (CFS/ME). *Journal of Clinical Sleep Medicine* 13 (9): 1057-1066. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/28760189>
- Joustra ML et al.** (2018) Physical Activity and Sleep in Chronic Fatigue Syndrome and Fibromyalgia Syndrome: Associations with Symptom Severity in the General Population Cohort LifeLines. *Pain Research and Management* 2018: 8. **Link:** <https://www.hindawi.com/journals/prm/2018/5801510/>
- Maness C et al.** (2018) Systemic exertion intolerance disease/chronic fatigue syndrome is common in sleep centre patients with hypersomnolence: A retrospective pilot study. *Journal of Sleep Research* 28 (3). **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/29624767>
- Moderie C et al.** (2021) Sleep disorders in patients with a neurocognitive disorder. *Encephale*: S0013-7006 (21) 00229-3. [Article in French] [Epub ahead of print.] **Link:** <https://pubmed.ncbi.nlm.nih.gov/34916075/>
- Moldofsky H.** (1989) Nonrestorative sleep and symptoms after a febrile illness in patients with fibrositis and chronic fatigue syndromes. *The Journal of Rheumatology Supplement* 19: 150-53. **Link:** <http://europepmc.org/abstract/med/3236304>
- Morriss RK et al.** (1997) The relation of sleep difficulties to fatigue, mood and disability in chronic fatigue syndrome. *Journal of Psychosomatic Research* 42(6): 597-605. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/9226607>
- Morris G et al.** (2018) The putative role of oxidative stress and inflammation in the pathophysiology of sleep dysfunction across neuropsychiatric disorders: Focus on chronic fatigue syndrome, bipolar disorder and multiple sclerosis, *Sleep Medicine Reviews* 41: 255-265. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/29759891>
- Orjatsalo M et al. (2017)** Autonomic Nervous System Functioning Related to Nocturnal Sleep in Patients with Chronic Fatigue Syndrome Compared to Tired Controls. *Journal of Clinical Sleep Medicine*. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/29246267>

- Pedersen M et al.** (2017) Sleep-wake rhythm disturbances and perceived sleep in adolescent chronic fatigue syndrome. *Journal of Sleep Research* 26 (5): 595-601. Link: <https://www.ncbi.nlm.nih.gov/pubmed/28470767>
- Pajedienne E et al.** (2018) Sleep patterns among patients with chronic fatigue: A polysomnography-based study. *The Clinical Respiratory Journal* 12 (4): 1389-1397. Link: <https://www.ncbi.nlm.nih.gov/pubmed/28752613>
- Rahman K et al.** (2011) Sleep-wake behaviour in chronic fatigue syndrome. *Sleep* 34(5): 671-678. Link: <https://academic.oup.com/sleep/article/34/5/671/2281516>
- Shan ZY et al.** (2017) Medial prefrontal cortex deficits correlate with unrefreshing sleep in patients with chronic fatigue syndrome. *NMR Biomedicine* 30 (10). Link: <https://www.ncbi.nlm.nih.gov/pubmed/28661067>
- Yang M et al.** (2022) Assessing sleep and pain among adults with myalgic encephalomyelitis/chronic fatigue syndrome: psychometric evaluation of the PROMIS® sleep and pain short forms. *Quality of Life Research*. Link: doi.org/10.1007/s11136-022-03199-8 (*NEW)

4.30. Vision

- Ashmed NS et al.** (2018) Restricted Spatial Windows of Visibility in Myalgic Encephalomyelitis (ME). *Vision* 2 (10): 2. Link: <http://www.mdpi.com/2411-5150/2/1/2>
- Badham SP and Hutchinson CV** (2013). Characterising eye movement dysfunction in Myalgic Encephalomyelitis/ Chronic Fatigue Syndrome. *Graefe's Archive of Clinical and Experimental Ophthalmology*, 251, 2769-2776. Link: <https://link.springer.com/article/10.1007%2Fs00417-013-2431-3>
- Caffery BE et al.** (1994) The ocular signs and symptoms of chronic fatigue syndrome. *Journal of The American Optometric Association* 65 (3): 187-91. Link: <https://pubmed.ncbi.nlm.nih.gov/8201170/>
- Godts D et al.** (2016) Binocular Vision in Chronic Fatigue Syndrome. *The American Orthoptic Journal* 66 (1): 92-97. Link: <https://pubmed.ncbi.nlm.nih.gov/27799582/>
- Hutchinson CV and Badham SP** (2013). Patterns of abnormal visual attention in Myalgic Encephalomyelitis (ME). *Optometry and Vision Science*, 90, 607-614. Link: <https://pubmed.ncbi.nlm.nih.gov/23689679/>
- Hutchinson CV et al.** (2014). Vision-related symptoms as a clinical feature of Chronic Fatigue Syndrome/Myalgic Encephalomyelitis? Evidence from the DePaul Symptom Questionnaire. *British Journal of Ophthalmology*, 98, 144-145. Link: <https://pubmed.ncbi.nlm.nih.gov/24187048/>

Langelaan M et al. (2007) Impact of visual impairment on quality of life: a comparison with quality of life in the general population and with other chronic conditions. *Ophthalmic Epidemiology* 14 (3): 119-26. **Link:** <https://pubmed.ncbi.nlm.nih.gov/17613846/>

Potaznick W and Kozol N (1994) Ocular manifestations of chronic fatigue and immune dysfunction syndrome. *Optometry and Vision Science* 69 (10): 811-4. **Link:** <https://pubmed.ncbi.nlm.nih.gov/1437004/>

Wilson RL et al. (2018) Visual Aspects of Reading Performance in Myalgic Encephalomyelitis (ME). *Frontiers in Psychology* 9: 1468. **Link:** <https://pubmed.ncbi.nlm.nih.gov/30174633/>

5. PSYCHIATRY AND PSYCHOLOGY

Balinas C et al. (2021) Impact of Life Stressors on Myalgic Encephalomyelitis/Chronic Fatigue Syndrome Symptoms: An Australian Longitudinal Study. *International Journal of Environmental Resources and Public Health* 18 (20): 10614. **Link:** <https://pubmed.ncbi.nlm.nih.gov/34682360/>

Berardi G et al. (2022) The Relation of Pain, Fatigue, Disease Impact, and Psychological Factors with Physical Function in post-COVID-19 Syndrome, Fibromyalgia, and Chronic Fatigue Syndrome. *The Journal of Pain* 23 (3): 47. **Link:** doi.org/10.1016/j.jpain.2022.03.180 (*NEW)

Brooks SK et al. (2017) Chronic Fatigue Syndrome: Cognitive, Behavioural and Emotional Processing Vulnerability Factors. *Behavioural and Cognitive Psychotherapy* 45 (2): 156-169. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/28098051>

Bram A et al. (2018) Chronic fatigue syndrome and the somatic expression of emotional distress: Applying the concept of illusory mental health to address the controversy. *Journal of Clinical Psychology* 75 (1): 116-131. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/30152867>

Bram A et al. (2018) Emotional Regulation in Women with Chronic Fatigue Syndrome and Depression: Internal Representations and Adaptive Defenses. *Journal of American Psychoanalytic Association* 66 (4): 701-741. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/30249136>

Bransfield RC and Friedman KJ (2019) Differentiating Psychosomatic, Somatopsychic, Multisystem Illnesses and Medical Uncertainty. *Healthcare* 7 (4): 114. **Link:** <https://tinyurl.com/y2cvsoz2>

Byrne EA (2022) Grief in Chronic Illness: A Case Study of CFS/ME. *Journal of Consciousness Studies* 29 (9-10): 175-200. **Link:** doi.org/10.53765/20512201.29.9.175 (*NEW)

Van Campen C et al. (2022) Psychogenic Pseudosyncope: Real or Imaginary? Results from a Case-Control Study in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS) Patients. *Medicina* 58: 98. Link: <https://www.mdpi.com/1648-9144/58/1/98>

Catchpole S and Garip G. (2021) Acceptance and identity change: An interpretative phenomenological analysis of carers' experiences in myalgic encephalopathy/chronic fatigue syndrome. *Journal of Health Psychology* 26 (5): 672-687. Link: <https://pubmed.ncbi.nlm.nih.gov/30895822/>

Chandan JS et al. (2019) Association between child maltreatment and central sensitivity syndromes: a systematic review protocol. *BMJ Open* 9 (2). Link: <https://tinyurl.com/y26z76r7>

Chen C, et al. (2023) Presence of depression and anxiety with distinct patterns of pharmacological treatments before the diagnosis of chronic fatigue syndrome: a population-based study in Taiwan. *Journal of Translational Medicine* 21 (1): 98. Link: doi.org/10.1186/s12967-023-03886-1 (*NEW)

Clark JE et al. (2017) Rethinking Childhood Adversity in Chronic Fatigue Syndrome. *Fatigue: Biomedicine, Health and Behaviour* 6 (1). Link: <http://www.tandfonline.com/doi/full/10.1080/21641846.2018.1384095>

Daniels J et al. (2019) 'Prevalence and Treatment of Chronic Fatigue Syndrome/ME and Co-morbid Severe Health Anxiety', *Journal of the International Neuropsychological Society* [Epub ahead of print] Link: <https://researchportal.bath.ac.uk/en/publications/prevalence-and-treatment-of-chronic-fatigue-syndromeme-and-co-mor>

De Venter M et al. (2017) Differential effects of childhood trauma subtypes on fatigue and physical functioning in chronic fatigue syndrome. *Comprehensive Psychiatry* 78: 76-82. Link: <https://www.ncbi.nlm.nih.gov/pubmed/28806608>

De Venter M et al. (2020) The Relationship Between Childhood Trauma and the Response to Group Cognitive-Behavioural Therapy for Chronic Fatigue Syndrome. *Frontiers in Psychiatry* 11: 563. Link: <https://www.frontiersin.org/articles/10.3389/fpsy.2020.00536/full>

Doerr JM, et al. (2017) Patterns of control beliefs in chronic fatigue syndrome: results of a population-based survey. *MBC Psychology* 5: 6. Link: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5340015/>

Geraghty K and Scott MJ (2020) Treating medically unexplained symptoms via improving access to psychological therapy (IAPT): major limitations identified. *BMC Psychology* 8 (1): 13. Link: <https://www.ncbi.nlm.nih.gov/pubmed/32020880>

Hall KH et al. (2021) Successful Psychological Strategies of Experienced Chronic Fatigue Patients: A Qualitative Study. *Journal of Patient Experience*. Link: <https://journals.sagepub.com/doi/full/10.1177/23743735211034962>

- Hughes AM et al.** (2017) Cross-Cultural Study of Information Processing Biases in Chronic Fatigue Syndrome: Comparison of Dutch and UK Chronic Fatigue Patients. *International Journal of Behavioural Medicine*.
Link: <https://www.ncbi.nlm.nih.gov/pubmed/28836119>
- Hughes AM et al.** (2017) An attention and interpretation bias for illness-specific information in chronic fatigue syndrome. *Psychological Medicine* 47 (5): 853-865. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/27894380>
- Hunt K** (2022) Towards a critical psychology of chronic fatigue syndrome: Biopsychosocial narratives and UK welfare reform. *Journal of Critical Psychology, Counselling and Psychotherapy* 22 (1): 18-28. **Link:** https://www.researchgate.net/publication/361017759_Towards_a_critical_psychology_of_chronic_fatigue_syndrome_Biopsychosocial_narratives_and_UK_welfare_reform (*NEW)
- Jacob L et al.** (2020) Associations of physical and psychiatric conditions with chronic fatigue syndrome in Germany: an exploratory case-control study. *Psychological Medicine* 1-7. **Link:** <https://pubmed.ncbi.nlm.nih.gov/32686638/>
- Kroll C** (2021) Questioning Biomedicine's Privileging of Disease and Measurability. *AMA Journal of Ethics* 23 (7): E537-541. **Link:** <https://pubmed.ncbi.nlm.nih.gov/34351263/>
- Leveret J., et al.** (2022). Why Should ACT Work When CBT Has Failed? a Study Assessing Acceptability and Feasibility of Acceptance and Commitment Therapy (ACT) for Paediatric Patients With Chronic Fatigue Syndrome/myalgic Encephalomyelitis (CFS/ME). *BJPsych Open* 8 (S1): S58-S58. **Link:** doi.org/10.1192/bjo.2022.209 (*NEW)
- Lian OS and Grue J.** (2017) Generating a Social Movement Online Community through an Online Discourse: The Case of Myalgic Encephalomyelitis. *Journal of Medical Humanities* 38 (2): 173-189. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/27059618>
- Loades M** (2022) Improving the identification and treatment of co-morbid depression and/or anxiety in adolescents with Chronic Fatigue Syndrome (CFS/ME). [Doctoral dissertation, University of Bristol] **Link:** <https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.852541> (*NEW)
- Loades ME et al.** (2022) Mental health screening in adolescents with CFS/ME. *European Child and Adolescent Psychiatry* 31 (6): 1003-1005. **Link:** doi.org/10.1007/s00787-021-01734-5 (*NEW)
- Malfliet A et al.** (2017) Kinesiophobia and maladaptive coping strategies prevent improvements in pain catastrophizing following pain neuroscience education in fibromyalgia/chronic fatigue syndrome: An explorative study. *Physiotherapy Theory and Practice* 33 (8): 653-660. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/28605207>

Maroti D et al. (2017) Differences in alexithymia and emotional awareness in exhaustion syndrome and chronic fatigue syndrome. *Scandinavian Journal of Psychology* 58 (1): 52-61. **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/27686801>

Mousa RF et al. (2021) Chronic fatigue syndrome and fibromyalgia-like symptoms are an integral component of the phenome of schizophrenia: neuro-immune and opioid system correlates. *Metabolic Brain Diseases* 36 (1): 169-183. **Link:** <https://pubmed.ncbi.nlm.nih.gov/32965599/>

Larkin D and Martin CR. (2017) The interface between chronic fatigue syndrome and depression: A psychobiological and neurophysiological conundrum. *Neurophysiology Clinic* 47 (2): 123-129. **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/28314518>

Ojha A and Kumar D. (2021). Psychological Factors in Fibromyalgia and Chronic Fatigue Syndrome: Implications in Counseling. *Bharatiya Journal of Counselling Psychology*, 1 (1). **Link:**

<http://bjcp.in/index.php/bcpa/article/view/7>

Pederson CL and Wagner BM (2022) The Depressing Truth about Depression Scales for People with Chronic Invisible Illness. *Journal of Health Science & Education* 6 (1): 1-6. **Link:**

https://www.researchgate.net/publication/362077125_The_Depressing_Truth_about_Depression_Scales_for_People_with_Chronic_Invisible_Illness (*NEW)

Petersen M et al. (2019) Prevalence of functional somatic syndromes and bodily distress syndrome in the Danish population: the DanFunD study. *Scandinavian Journal of Public Health* 48 (5): 567-576. **Link:**

doi.org/10.1177/1403494819868592

Raanes EFW and Stiles TC (2021) Associations Between Psychological and Immunological Variables in Chronic Fatigue Syndrome/Myalgic Encephalomyelitis: A Systematic Review. *Frontiers in Psychiatry* 12:716320. **Link:** <https://pubmed.ncbi.nlm.nih.gov/34887782/>

Rusin A et al. (2022) Commonalities in the Features of Cancer and Chronic Fatigue Syndrome (CFS): Evidence for Stress-Induced Phenotype Instability? *International Journal of Molecular Sciences* 23: 691. **Link:**

<https://www.mdpi.com/1422-0067/23/2/691>

Saffariantoosi M et al. (2022) The Relationship Between Chronic Fatigue Syndrome and Depression: Mediating Roles of Executive Functions in Patients with Relapsing-Remitting Multiple Sclerosis. *Practice in Clinical Psychology* 10 (4). **Link:** <http://jpcp.uswr.ac.ir/article-1-843-fa.html> (*NEW)

Sandler CX et al. (2022) Predictors of Chronic Fatigue Syndrome and Mood Disturbance After Acute Infection. *Frontiers in Neurology* 13: 935442. **Link:**

doi.org/10.3389/fneur.2022.935442 (*NEW)

- Serafimova T et al.** (2021) Who should we ask about mental health symptoms in adolescents with CFS/ME? Parent-child agreement on the revised children's anxiety and depression scale. *Clinical Child Psychology and Psychiatry* 26 (2): 367-380. **Link:** <https://pubmed.ncbi.nlm.nih.gov/33586480/>
- Sirois FM and Hirsch JK** (2019) Self-compassion and Adherence in Five Medical Samples: the Role of Stress. *Mindfulness* 10 (1): 46-54. **Link:** <https://tinyurl.com/yxh226vf>
- Sirois FM et al.** (2021) A person-centred test of multidimensional perfectionism and health in people with chronic fatigue syndrome versus healthy controls. *Personality and Individual Difference*, 181: 111036. **Link:** <https://www.sciencedirect.com/science/article/abs/pii/S019188692100413X>
- Terman JM et al.** (2019) How Psychiatric Referrals Influence Stigmatization in Patients with Myalgic Encephalomyelitis and Chronic Fatigue Syndrome: an examination of American and British Models. *Community Psychology in Global Perspective* 5 (2): 19-29. **Link:** <https://tinyurl.com/yyxhqzup>
- Thompson et al.** (2019) Cognitive factors are associated with disability and pain, but not fatigue among physiotherapy attendees with persistent pain and fatigue. *Physiotherapy* 106: 94-100. **Link:** doi.org/10.1016/j.physio.2019.01.006
- Underhill R and Baillod R.** (2020) Myalgic Encephalomyelitis/Chronic Fatigue Syndrome: Organic Disease or Psychosomatic Illness? A Re-Examination of the Royal Free Epidemic of 1955. *Medicina (Kaunas)* 57 (1): 12. **Link:** <https://pubmed.ncbi.nlm.nih.gov/33375343/>
- Van Deuren S et al.** (2020) Fatigue-Related Cognitive-Behavioral Factors in Survivors of Childhood Cancer: Comparison with Chronic Fatigue Syndrome and Survivors of Adult-Onset Cancer. *Journal of Adolescent and Young Adult Oncology* 10:1, 92-99. **Link:** doi.org/10.1089/jayao.2020.0094
- Wight A et al.** (2021) Perfectionism, depression and anxiety in chronic fatigue syndrome: A systematic review. *Journal of Psychosomatic Research* 40:110322. **Link:** <https://pubmed.ncbi.nlm.nih.gov/33278659/>
- Wilde L et al.** (2020) "The real me shining through M.E.": Visualizing masculinity and identity threat in men with myalgic encephalomyelitis/chronic fatigue syndrome using photovoice and IPA. *Psychology of Men & Masculinities*, 21(2), 309-320. **Link:** <https://psycnet.apa.org/record/2019-32617-001>
- Williams AM, Christopher G and Jenkinson E.** (2019) The psychological impact of dependency in adults with chronic fatigue syndrome/myalgic encephalomyelitis: A qualitative exploration. *Journal of Health Psychology* 24 (2): 264-275. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/27098385>

Zhang F et al. (2019) Artificial intelligence-based discovery of the association between depression and chronic fatigue syndrome. *Journal of Affective Disorders* [Epub ahead of print]. **Link:**
<https://www.ncbi.nlm.nih.gov/pubmed/30877861>

6. SOCIOLOGY

Blease C and Geraghty K. (2018) Are ME/CFS Patient Organizations "Militant"? Patient Protest in a Medical Controversy. *Journal of Bioethical Inquires* [Epub ahead of print]. **Link:**
<https://www.ncbi.nlm.nih.gov/pubmed/29971693>

Cuesta A et al. (2019) Fibromyalgia, Chronic Fatigue Syndrome, and Multiple Chemical Sensitivity: Illness Experiences. *Clinical Nursing Research* [Epub ahead of print]. **Link:** <https://tinyurl.com/y68aa9ak>

Froehlich L et al. (2021) Causal attributions and perceived stigma for myalgic encephalomyelitis/chronic fatigue syndrome. *Journal of Health Psychology*:13591053211027631. [Epub ahead of print] **Link:**
<https://pubmed.ncbi.nlm.nih.gov/34240650/>

Gimeno Torrent X. (2021) The circuit of symbolic violence in chronic fatigue syndrome (CFS)/myalgic encephalomyelitis (ME) (I): A preliminary study. *Health Care Women International* 43 (1-3): 5-41. **Link:**
doi.org/10.1080/07399332.2021.1925900

Jason LA et al. (2021) Patient perceptions of infectious illnesses preceding Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Chronic Illness*:17423953211043106. [Epub ahead of print.] **Link:**
<https://pubmed.ncbi.nlm.nih.gov/34541918/>

Marks DF (2022) The Rise and Fall of the Psychosomatic Approach to Medically Unexplained Symptoms, Myalgic Encephalomyelitis and Chronic Fatigue Syndrome. *Archives of Epidemiology and Public Health Research* 1(2): 97-143. **Link:** doi.org/10.31234/osf.io/jpzaw (*NEW)

McManimen SL et al. (2018) Effects of unsupportive social interactions, stigma, and symptoms on patients with myalgic encephalomyelitis and chronic fatigue syndrome. *Journal of Community Psychology* 46 (8): 959-971. **Link:**
<https://www.ncbi.nlm.nih.gov/pubmed/30311972>

Milrad S et al. (2019) Relationship satisfaction, communication self-efficacy, and chronic fatigue syndrome-related fatigue. *Social Science and Medicine* 237. **Link:**
<https://www.sciencedirect.com/science/article/abs/pii/S0277953619303776>

Murray R et al. (2019) Duvet woman versus action man: the gendered aetiology of Chronic Fatigue Syndrome according to English newspapers. *Feminist Media Studies*. **Link:** <https://tinyurl.com/yyfayo7v>

Noble S et al. (2019) Could disease labelling have positive effects? An experimental study exploring the effect of the chronic fatigue syndrome label on intended social support. *Patient Education and Counselling* 102 (3): 486-493. **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/30514660>

Plioplys AV et al. (1997) Meeting the Frustrations of Chronic Fatigue Syndrome. *Hospital Practice* 32(6): 147-166. **Link:**

<http://www.tandfonline.com/doi/abs/10.1080/21548331.1997.11443513>

Terman JM et al. (2018) Confirmatory factor analysis of a myalgic encephalomyelitis and chronic fatigue syndrome stigma scale. *Journal of Health Psychology [Epub ahead of print]* **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/30183363>

Siegel ZA et al. (2017) A content analysis of chronic fatigue syndrome and myalgic encephalomyelitis in the news from 1987 to 2013. *Chronic Illness* 1: 1742395317703175. **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/28403636>

7. FUTURE RESEARCH RECOMMENDATIONS

Davenport T et al. (2018) Checking our blind spots: current status of research evidence summaries in ME/CFS. *British Journal of Sports Medicine* 53 (19): 1198. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/30018122>

Devendorf AR et al. (2019) Approaching recovery from myalgic encephalomyelitis and chronic fatigue syndrome: Challenges to consider in research and practice. *Journal of Health Psychology* 24 (10): 1412-1424. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/29182007>

Devereux-Cooke A et al. (2022) DecodeME: community recruitment for a large genetics study of myalgic encephalomyelitis / chronic fatigue syndrome. *BMC Neurology* 22: 269. **Link:** doi.org/10.1186/s12883-022-02763-6 (*NEW)

Friedman K (2019) Advances in ME/CFS: Past, Present, and Future. *Frontiers in Pediatrics* 7: 131. **Link:** <https://tinyurl.com/y63lthdg>

Gleason K. et al. (2018) Operationalizing Substantial Reduction in Functioning Among Young Adults with Chronic Fatigue Syndrome. *International Journal of Behavioural Medicine [Epub ahead of print]*. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/29872989>

Green CR et al. (2015) National Institutes of Health Pathways to Preventions Workshop: Advancing the Research on Myalgic Encephalomyelitis/ Chronic Fatigue Syndrome. *Annals of Internal Medicine* 162 (12): 860-865. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/26075757>

- Jeffrey M et al.** (2019) Treatment Avenues in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome: A Split-gender Pharmacogenomic Study of Gene-expression Modules. *Clinical Therapeutics* 41 (5): 815-835. **Link:**
<https://www.sciencedirect.com/science/article/abs/pii/S0149291819300475>
- Karfakis N.** (2018) The biopolitics of CFS/ME. *Studies in History and Philosophy of Biological and Biomedical Science* [Epub ahead of print]. **Link:**
<https://www.ncbi.nlm.nih.gov/pubmed/29887516>
- Mathur R et al.** (2021) mapMECFS: a portal to enhance data discovery across biological disciplines and collaborative sites. *Journal of Translational Medicine* 19 (1): 461. **Link:** <https://pubmed.ncbi.nlm.nih.gov/34749736/>
- Mirin A et al.** (2020) Research Update: The Relation Between ME/CFS Disease Burden and Research Funding in the USA. *Work* 66 (2): 277-282. **Link:**
doi.org/10.3233/WOR-203173
- Monro JA and Puri BK** (2018) A Molecular Neurobiological Approach to Understanding the Aetiology of Chronic Fatigue Syndrome (Myalgic Encephalomyelitis or Systemic Exertion Intolerance Disease) with Treatment Implications. *Molecular Neurobiology* 55 (9): 7377-7388. **Link:**
<https://www.ncbi.nlm.nih.gov/pubmed/29411266>
- Morris G. et al.** (2019) Myalgic encephalomyelitis or chronic fatigue syndrome: how could the illness develop? *Metabolic Brain Disease* 1-31. **Link:** <https://link.springer.com/article/10.1007%2Fs11011-019-0388-6>
- Murdock KW et al.** (2017) The utility of patient-reported outcome measures among patients with myalgic encephalomyelitis/chronic fatigue syndrome. *Quality of Life Research* 26 (4): 913-921. **Link:**
<https://www.ncbi.nlm.nih.gov/pubmed/27600520>
- Naviaux RK.** (2018) Metabolic features and regulation of the healing cycle – A new model for chronic disease pathogenesis and treatment. *Mitochondrion*. **Link:**
<https://www.sciencedirect.com/science/article/pii/S1567724918301053>
- O'Boyle S et al.** (2022) A Natural History of Disease Framework for Improving the Prevention, Management, and Research on Post-viral Fatigue Syndrome and Other Forms of Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Frontiers in Medicine* 8:688159. **Link:**
<https://www.frontiersin.org/articles/10.3389/fmed.2021.688159/full>
- Pheby D et al.** (2011) A Disease Register for ME/CFS: Report of a Pilot Study. *BMC Research Notes* 4: 139. **Link:**
<https://www.ncbi.nlm.nih.gov/pubmed/21554673>
- Ramiller A et al.** (2021) You + ME Registry: A Research Platform to Facilitate Clinical and Therapeutic Discoveries in ME/CFS and Related Diseases. *Preprints*: 2021110478. **Link:**
<https://www.preprints.org/manuscript/202111.0478/v1>

- Rusin A et al.** (2018) Chronic fatigue and immune deficiency syndrome (CFIDS), cellular metabolism, and ionizing radiation: a review of contemporary scientific literature and suggested directions for future research. *International Journal of Radiation Biology* 10: 1-17. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/29297728>
- Sharpe M et al.** (1991) A report – chronic fatigue syndrome: guidelines for research. *Journal of the Royal Society of Medicine* 84 (2): 118-121. **Link:** <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1293107/pdf/jrsocmed00127-0072.pdf>
- Shan ZY et al.** (2022) Multimodal MRI of myalgic encephalomyelitis/chronic fatigue syndrome: A cross-sectional neuroimaging study toward its neuropathophysiology and diagnosis. *Frontiers in Neurology* 13: 954142. **Link:** doi.org/10.3389/fneur.2022.954142 (*NEW) **Comment**
- Theoharides TC** (2019) In Search of Effective Treatments for Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Clinical Therapeutics* 41 (5): 796-797. **Link:** [https://www.clinicaltherapeutics.com/article/S0149-2918\(19\)30175-4/abstract](https://www.clinicaltherapeutics.com/article/S0149-2918(19)30175-4/abstract)
- Tokunaga K et al.** (2020) Inclusion of family members without ME/CFS in research studies promotes discovery of biomarkers specific for ME/CFS. *Work* 66 (2): 327-337. **Link:** doi.org/10.3233/WOR-203177
- Twisk FNM** (2019) Myalgic Encephalomyelitis, Chronic Fatigue Syndrome, and Chronic Fatigue: Three Distinct Entities Requiring Completely Different Approaches. *Current Rheumatological Reports* 21 (6): 27. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/31073713>
- Tyson S et al.** (2022) Research priorities for myalgic encephalomyelitis/chronic fatigue syndrome (ME/CFS): the results of a James Lind alliance priority setting exercise, *Fatigue: Biomedicine, Health & Behavior*. **Link:** doi.org/10.1080/21641846.2022.2124775 (*NEW) **Comment**
- White P** (2019) A perspective on causation of the chronic fatigue syndrome by considering its nosology. *Journal of Evaluation in Clinical Practice* 25 (6): 991-996. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/31373106>

7.1. Platforms to facilitate research

Lim EJ and Son CG (2022) Comparison of assessment scores for fatigue between multidimensional fatigue inventory (MFI-K) and modified chalder fatigue scale (mKCFQ). *Journal of Translational Medicine* 20 (1): 8. **Link:** <https://pubmed.ncbi.nlm.nih.gov/34980164/>

Mathur R et al. (2021) mapMECFS: a portal to enhance data discovery across biological disciplines and collaborative sites. *Journal of Translational Medicine* 19 (1): 461. **Link:** <https://pubmed.ncbi.nlm.nih.gov/34749736/>

Nap-van der Vlist MM, et al. (2022) Paediatric short fatigue questionnaire, a 4-item fatigue questionnaire for children. *Journal of Psychosomatic Research* 165: 111130. [Epub ahead of print.] **Link:** doi.org/10.1016/j.jpsychores.2022.111130 (*NEW)

Ramiller A et al. (2021) You + ME Registry: A Research Platform to Facilitate Clinical and Therapeutic Discoveries in ME/CFS and Related Diseases. *Preprints*: 2021110478. **Link:** <https://www.preprints.org/manuscript/202111.0478/v1>

Ramiller A et al. (2022) The Facilitation of Clinical and Therapeutic Discoveries in Myalgic Encephalomyelitis/ Chronic Fatigue Syndrome and Related Diseases: A Protocol for the You + ME Registry Research Platform. *JMIR Research Protocols* [Epub ahead of print]. **Link:** doi.org/10.2196/36798

Rekeland IG, et al. (2022) Activity monitoring and patient-reported outcome measures in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome patients. *PLOS ONE* 17(9): e0274472. **Link:** doi.org/10.1371/journal.pone.0274472 (*NEW) **Comment**

Vroegindeweij A et al. (2022) Identifying disrupted biological factors and patient-tailored interventions for chronic fatigue in adolescents and young adults with Q-Fever Fatigue Syndrome, Chronic Fatigue Syndrome and Juvenile Idiopathic Arthritis (QFS-study): study protocol for a randomized controlled trial with single-subject experimental case series design. *Trials* 23: 683. doi.org/10.1186/s13063-022-06620-2 (*NEW)

Wiedbusch E and Jason LA (2022) Comparing Operationalized Approaches for Substantial Reduction of Functioning in Chronic Fatigue Syndrome and Myalgic Encephalomyelitis. *Archives of Community Medicine* 4 (1): 59-63. **Link:** doi.org/10.36959/547/653 (*NEW)

Yang M et al. (2022) Assessing sleep and pain among adults with myalgic encephalomyelitis/chronic fatigue syndrome: psychometric evaluation of the PROMIS® sleep and pain short forms. *Quality of Life Research*. **Link:** doi.org/10.1007/s11136-022-03199-8 (*NEW)

8. CLINICAL ASSESSMENT, SYMPTOMS AND DIAGNOSIS

8.1. General

Also see our [leaflets](#) on Diagnosis.

Arnett SV and Clark IA. (2012) Inflammatory fatigue and sickness behaviour – Lessons for the diagnosis and management of chronic fatigue syndrome. *Journal of Affective Disorders* 141 (2–3): 130-142. **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/22578888>

Ayres JG et al. (1998) Post-infection fatigue syndrome following Q fever. *QJM* 91 (2): 105-123. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/9578893>

Baklund IH et al. (2021) Evaluating Routine Blood Tests According to Clinical Symptoms and Diagnostic Criteria in Individuals with Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Journal of Clinical Medicine* 10 (14): 3105. **Link:** <https://pubmed.ncbi.nlm.nih.gov/34300271/>

Baraniuk JN et al. (1998) Rhinitis Symptoms in Chronic Fatigue Syndrome. *Annals of Allergy, Asthma & Immunology* 81 (4): 359-365. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/9809501>

Bateman L et al. (2021) Myalgic Encephalomyelitis/Chronic Fatigue Syndrome: Essentials of Diagnosis and Management. *Mayo Clinic Proceedings* 96 (11): 2861-2878. **Link:** doi.org/10.1016/j.mayocp.2021.07.004

Baxter H. (2022) Ensuring the Voice of the Very Severely Affected Myalgic Encephalomyelitis/Chronic Fatigue Syndrome Patient Is Heard in Research—A Research Model. *Healthcare* 10: 1278. **Link:** doi.org/10.3390/healthcare10071278 (*NEW)

Bedree H et al. (2019) The DePaul Symptom Questionnaire-2: a validation study. *Fatigue: Biomedicine, Health and Behavior* 7 (3). **Link:** <https://www.tandfonline.com/doi/abs/10.1080/21641846.2019.1653471>

Bernhoff G et al. (2022) The Significance of Pain Drawing as a Screening Tool for Cervicogenic Headache and Associated Symptoms in Chronic Fatigue. *Journal of Pain Research* 15: 2547-2556. **Link:** doi.org/10.2147/JPR.S369470 (*NEW)

Bernhoff, G et al. (2022) A comparison of health-related factors between patients diagnosed with ME/CFS and patients with a related symptom picture but no ME/CFS diagnosis: a cross-sectional exploratory study. *Journal of Translational Medicine* 20: 577. **Link:** doi.org/10.1186/s12967-022-03769-x (*NEW)

Berger JR et al. (2013) Fatigue heralding multiple sclerosis. *Multiple Sclerosis Journal* 19 (11): 1526-1532. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/23439577>

- Bertilson BC et al.** (2022) "The Journey Towards Becoming Diagnosed with Myalgic Encephalomyelitis/Chronic Fatigue Syndrome - Patients' Experiences". *EC Neurology* 14.2: 49-56. **Link:** doi.org/10.1136/bmj.330.7492.648
- Bileviciute-Ljungar I et al.** (2018) Patients with chronic fatigue syndrome do not score higher on the autism-spectrum quotient than healthy controls: Comparison with autism spectrum disorder. *Scandinavian Journal of Psychology* [Epub ahead of print]. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/2973807>
- Blitshteyn S and Chopra P** (2018) Chronic Fatigue Syndrome: From Chronic Fatigue to More Specific Syndromes, *European Neurology* 80 (1-2): 73-77. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/30286454>
- Brenu EW et al.** (2011) Immunological abnormalities as potential biomarkers in chronic fatigue syndrome/myalgic encephalomyelitis. *Journal of Translational Medicine* 9: 81. **Link:** <https://translational-medicine.biomedcentral.com/articles/10.1186/1479-5876-9-81>
- Burnet RB and Chatterton BE.** (2004) Gastric emptying is slow in chronic fatigue syndrome. *BMC Gastroenterology* 4: 32. **Link:** <https://bmcgastroenterol.biomedcentral.com/articles/10.1186/1471-230X-4-32>
- Castro-Marrero J et al.** (2021) Complement Component C1q as a Potential Diagnostic Tool for Myalgic Encephalomyelitis/Chronic Fatigue Syndrome Subtyping. *Journal of Clinical Medicine* 10 (18): 4171. **Link:** <https://pubmed.ncbi.nlm.nih.gov/34575280/>
- Calabrese LH et al.** (1994) Chronic Fatigue Syndrome and a Disorder Resembling Sjogren's Syndrome: Preliminary Report. *Clinical Infectious Diseases* 18(Supplement 1): S28-S31. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/8148449>
- Conroy KE et al.** (2022) Evaluating case diagnostic criteria for myalgic encephalomyelitis/chronic fatigue syndrome (ME/CFS): toward an empirical case definition. *Disability and Rehabilitation*. **Link:** doi.org/10.1080/09638288.2022.2043462
- Cottle LE et al.** (2012) Lyme disease in a British referral clinic. *QJM* 105(6): 537-543. **Link:** <https://academic.oup.com/qjmed/article/105/6/537/1560675>
- Eguchi A et al.** (2019) Identification of actin network proteins, talin-1 and filamin-A, in circulating extracellular vesicles as blood biomarkers for human myalgic encephalomyelitis/chronic fatigue syndrome. *Brain, Behaviour and Immunity* [Epub ahead of print]. **Link:** <https://www.sciencedirect.com/science/article/pii/S0889159119307627>
- Faulkner S and Smith A.** (2008) A longitudinal study of the relationship between psychological distress and recurrence of upper respiratory tract infections in chronic fatigue syndrome. *British Journal of Health Psychology* 13(1): 177-186. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/17535488>

Gaber TA-Z et al. (2014) Multiple sclerosis/chronic fatigue syndrome overlap: when two common disorders collide. *NeuroRehabilitation* 35(3): 529-534.

Link: <https://www.ncbi.nlm.nih.gov/pubmed/25238862>

Higgins JNP et al. (2017) Chronic fatigue syndrome and idiopathic intracranial hypertension: Different manifestations of the same disorder of intracranial pressure? *Medical Hypotheses* 105: 6-9. Link:

<https://www.ncbi.nlm.nih.gov/pubmed/28735654>

Hurel SJ et al. (1995) Patients with a self-diagnosis of myalgic encephalomyelitis [Letter to the editor]. *BMJ* 311(7000): 329. Link:

<http://www.bmj.com/content/311/7000/329.1>

Hyland M et al. (2019) Symptom frequency and development of a generic functional disorder symptom scale suitable for use in studies of patients with irritable bowel syndrome, fibromyalgia syndrome or chronic fatigue syndrome. *Chronic Diseases and translational Medicine* 5 (2): 129-138. Link:

<https://tinyurl.com/y2aabtta>

Jason LA and Sunnquist M (2018) The Development of the DePaul Symptom Questionnaire: Original, Expanded, Brief, and Pediatric Versions, *Frontiers in Pediatrics* 6: 330. Link: <https://www.ncbi.nlm.nih.gov/pubmed/30460215>

Kavi L et al. (2016) A profile of patients with postural tachycardia syndrome and their experience of healthcare in the UK. *The British Journal of Cardiology* 23(1): 33. Link: <https://bjcardio.co.uk/2016/03/a-profile-of-patients-with-postural-tachycardia-syndrome-and-their-experience-of-healthcare-in-the-uk/>

Kim Dy et al., (2020) Systematic Review of Primary Outcome Measurements for Chronic Fatigue Syndrome/Myalgic Encephalomyelitis (CFS/ME) in Randomized Controlled Trials. *Journal of Clinical Medicine*. Link: <https://pubmed.ncbi.nlm.nih.gov/33126460/>

Kim Dy et al., (2020) Systematic Review of Primary Outcome Measurements for Chronic Fatigue Syndrome/Myalgic Encephalomyelitis (CFS/ME) in Randomized Controlled Trials. *Journal of Clinical Medicine*. Link: <https://pubmed.ncbi.nlm.nih.gov/33126460/>

<https://pubmed.ncbi.nlm.nih.gov/33126460/>

Kirke KD (2021) Measuring improvement and deterioration in myalgic encephalomyelitis/chronic fatigue syndrome: the pitfalls of the Chalder Fatigue Questionnaire. *Journal of the Royal Society of Medicine* 114 (2): 54. Link: <https://pubmed.ncbi.nlm.nih.gov/33319615/>

Link: <https://pubmed.ncbi.nlm.nih.gov/33319615/>

Klebek L et al. (2019) Differentiating post-polio syndrome from myalgic encephalomyelitis and chronic fatigue syndrome. *Fatigue: Biomedicine, Health and Behaviour*. Link:

<https://www.tandfonline.com/doi/abs/10.1080/21641846.2019.1687117>

Korenromp IHE et al. (2011) Characterization of chronic fatigue in patients with sarcoidosis in clinical remission. *Chest* 140(2): 441-447. Link:

<https://www.ncbi.nlm.nih.gov/pubmed/21330380>

Kuratsune H. (2018) Diagnosis and Treatment of Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Brain and Nerves* 70 (1): 11-18. Link: <https://www.ncbi.nlm.nih.gov/pubmed/29348370> (Article in Japanese)

Lim E-J et al. (2020) The Prospects of the Two-Day Cardiopulmonary Exercise Test (CPET) in ME/CFS Patients: A Meta-Analysis. *Journal of Clinical Medicine* 9 (12): 4040. Link: <https://pubmed.ncbi.nlm.nih.gov/33327624/>

Leem J-H, et al. (2022) A 2-day cardiopulmonary exercise test in chronic fatigue syndrome patients who were exposed to humidifier disinfectants. *Environmental Analysis Health and Toxicology* 37(4): e2022033-0. Link: doi.org/10.5620/eaht.2022033 (*NEW) Comment

Lewis I et al. (2013) Clinical characteristics of a novel subgroup of chronic fatigue syndrome patients with postural orthostatic tachycardia syndrome. *Journal of Internal Medicine* 273(5): 501-510. Link: <https://www.ncbi.nlm.nih.gov/pubmed/23206180>

Ling H et al. (2011) Decades of delayed diagnosis in 4 levodopa-responsive young-on- set monogenetic parkinsonism patients. *Movement Disorders* 26(7): 1337-1340. Link: <http://onlinelibrary.wiley.com/doi/10.1002/mds.23563/full>

MacLachlan L et al. (2017) Are current chronic fatigue syndrome criteria diagnosing different disease phenotypes? *PLoS One* 12 (10): e0186885. Link: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5650174/>

Maes M et al. (2019) Is a diagnostic blood test for chronic fatigue syndrome on the horizon? *Expert Review of Molecular Diagnostics* [Epub ahead of print]. Link: <https://www.tandfonline.com/doi/full/10.1080/14737159.2020.1681976>

Maes M et al. (2021) The reification of the clinical diagnosis of myalgic encephalomyelitis / chronic fatigue syndrome (ME/CFS) as an immune and oxidative stress disorder: construction of a data-driven nomothetic network and exposure of ME/CFS subgroups. *Current Topics in Medicinal Chemistry* 21 (16): 1488-1499. Link: doi.org/10.2174/1568026621666210727170147

Malato J et al. (2023) Impact of Misdiagnosis in Case-Control Studies of Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Diagnostics* 13 (3): 531. Link: doi.org/10.3390/diagnostics13030531 (*NEW)

Martin-Martinez E and Martin-Martinez M (2019) Varied Presentation of Myalgic Encephalomyelitis/Chronic Fatigue Syndrome and the Needs for Classification and Clinician Education: A Case Series. *Clinical Therapeutics* 41 (4): 619-624. Link: [https://www.clinicaltherapeutics.com/article/S0149-2918\(19\)30114-6/fulltext](https://www.clinicaltherapeutics.com/article/S0149-2918(19)30114-6/fulltext)

Muirhead N et al. (2021) Medical School Education on Myalgic Encephalomyelitis. *Medicina (Kaunas)* 57 (6): 542. Link: <https://pubmed.ncbi.nlm.nih.gov/34071264/>

Murga I and Lafuente JV (2019) From neurasthenia to post-exertion disease: Evolution of the diagnostic criteria of chronic fatigue syndrome/myalgic encephalomyelitis. *Atencion Primaria* [Epub ahead of print]. Link: <https://www.ncbi.nlm.nih.gov/pubmed/31182238>

- Murray R and Turner L** (2021) Using Communities of Practice Theory to Understand the Crisis of Identity in Chronic Fatigue Syndrome/Myalgic Encephalomyelitis (CFS/ME). *Chronic Illness*. **Link:** doi.org/10.1177/17423953211064989
- Nacul L et al.** (2017) How have selection bias and disease misclassification undermined the validity of myalgic encephalomyelitis/chronic fatigue syndrome studies? *Journal of Health Psychology* 24 (12): 1765-1769 **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/28810428>
- Nacul L et al. (2021)** European Network on Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (EUROMENE): Expert Consensus on the Diagnosis, Service Provision, and Care of People with ME/CFS in Europe. *Medicina* 57(5): 510. **Link:** <https://www.mdpi.com/1648-9144/57/5/510>
- National Institute for Health and Care Excellence.** (2007) Chronic fatigue syndrome/myalgic encephalomyelitis (or encephalopathy): diagnosis and management. *NICE guidelines [CG53]*. **Link:** <https://www.nice.org.uk/guidance/cg53>
- Nelson MJ et al.** (2019) Diagnostic sensitivity of 2-day cardiopulmonary exercise testing in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Journal of Translational Medicine* 17 (1): 80. **Link:** <https://translational-medicine.biomedcentral.com/articles/10.1186/s12967-019-1836-0>
- Newton JL, et al.** (2006) Fatigue in primary biliary cirrhosis is associated with excessive daytime somnolence. *Hepatology* 44(1): 91-98. **Link:** <https://www.ncbi.nlm.nih.gov/m/pubmed/16800007/>
- Newton JL et al.** (2008) Fatigue in non-alcoholic fatty liver disease (NAFLD) is significant and associates with inactivity and excessive daytime sleepiness but not with liver disease severity or insulin resistance. *Gut* 57(6): 807-813. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/18270241>
- Newton JL et al.** (2010) The Newcastle NHS Chronic Fatigue Syndrome Service: not all fatigue is the same. *The Journal of the Royal College of Physicians of Edinburgh* 40(4): 304-307. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/21132135>
- Nijs J and Ickmans K.** (2013) Postural orthostatic tachycardia syndrome as a clinically important subgroup of chronic fatigue syndrome: further evidence for central nervous system dysfunctioning. *Journal of Internal Medicine* 273(5): 498-500. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/23331489>
- Nojima N** (2019) Paradox of diagnosis: the positive effects and limitations of diagnosis in myalgic encephalomyelitis/chronic fatigue syndrome (me/cfs) and fibromyalgia (fm) sufferers *Osaka Human Sciences* 5: 55-70. **Link:** <https://tinyurl.com/y3yqn39o>

Nacul L et al. (2019) Evidence of Clinical Pathology Abnormalities in People with Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS) from an Analytic Cross-Sectional Study. *Diagnostics* 9 (2). **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/30974900>

O'Boyle S et al. (2022) A Natural History of Disease Framework for Improving the Prevention, Management, and Research on Post-viral Fatigue Syndrome and Other Forms of Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Frontiers in Medicine* 8:688159. **Link:**

<https://www.frontiersin.org/articles/10.3389/fmed.2021.688159/full>

Oter-Quintana C, et al. (2022) Nursing Diagnoses of Individuals with Myalgic Encephalomyelitis/Chronic Fatigue Syndrome: Research Protocol for a Qualitative Synthesis. *Healthcare* 10 (12): 2506. **Link:**

doi.org/10.3390/healthcare10122506 (*NEW)

Palaniappan R and Sirimanna T. (2002) Peripheral vestibular dysfunction in chronic fatigue syndrome. *International Journal of Pediatric Otorhinolaryngology* 64(1): 69-72. **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/12020917>

Palombo T et al. (2020) Accurate and objective determination of myalgic encephalomyelitis/chronic fatigue syndrome disease severity with a wearable sensor. *Journal of Translational Medicine* 18 (1): 423. **Link:**

<https://pubmed.ncbi.nlm.nih.gov/33168001/>

Penson A et al. (2020) Short fatigue questionnaire: Screening for severe fatigue. *Journal of Psychosomatic Research* 137. **Link:**

<https://www.sciencedirect.com/science/article/pii/S0022399920307911>

Ramírez-Morales R et al. (2022) Clinical overlap between fibromyalgia and myalgic encephalomyelitis. A systematic review and meta-analysis. *Autoimmunity Reviews* 21 (8): 103129. **Link:**

doi.org/10.1016/j.autrev.2022.103129 (*NEW)

Rasouli O et al. (2018) Lower regulatory frequency for postural control in patients with fibromyalgia and chronic fatigue syndrome. *PLoS One* 13 (4): e0195111. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/29617424>

Ravindran MK et al. (2011) Migraine headaches in Chronic Fatigue Syndrome (CFS): Comparison of two prospective cross-sectional studies. *BMC Neurology* 11(1): 1-9. **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/21375763>

Ravindran MK et al. (2013) Dyspnea in Chronic Fatigue Syndrome (CFS): Comparison of Two Prospective Cross-Sectional Studies. *Global Journal of Health Science* 5(2): 94-110. **Link:**

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4209305/>

Roerink ME et al. (2017) Postural orthostatic tachycardia is not a useful diagnostic marker for chronic fatigue syndrome. *Journal of International Medicine* 281 (2): 179-188. **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/27696568>

Saman H et al. (2022) A comparison of pain, fatigue, and function between post-COVID-19 condition, fibromyalgia, and chronic fatigue syndrome: a survey study. *PAIN* 10.1097/j.pain.000000000000271. **Link:**

doi.org/10.1097/j.pain.000000000000271 (*NEW)

Sandusky SB et al. (2009) Fatigue: an overlooked determinant of physical function in scleroderma. *Rheumatology* 48(2): 165-169. **Link:**

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2638541/>

Sato W (2022) Patients with Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS) Who Have Already Visited Some Medical Institutions: Diagnosis, Treatment and Research. *Brain and Nerve* 74 (5): 652-659. [Article in Japanese.] **Link:** doi.org/10.11477/mf.1416202093 (*NEW)

Schutzer SE et al. (2011) Distinct Cerebrospinal Fluid Proteomes Differentiate Post-Treatment Lyme Disease from Chronic Fatigue Syndrome. *PLoS ONE* 6(2): e17287. **Link:**

<http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0017287>

Serrador JM et al. (2018) Balance deficits in Chronic Fatigue Syndrome with and without fibromyalgia. *Neurorehabilitation* 42 (2): 235-246. **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/29562557>

Shanks MF and Ho-Yen DO. (1995) A clinical study of chronic fatigue syndrome. *The British Journal of Psychiatry* 166(6): 798-801. **Link:**

<http://bjp.rcpsych.org/content/166/6/798>

Shimomura T (2022) Patients with Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS) Who Have Already Visited Some Medical Institutions: The Points of Diagnosis and Treatment. *Brain and Nerve* 74 (5): 660-667. [Article in Japanese.] **Link:** doi.org/10.11477/mf.1416202094 (*NEW)

Sinaii N et al. (2002) High rates of autoimmune and endocrine disorders, fibromyalgia, chronic fatigue syndrome and atopic diseases among women with endometriosis: a survey analysis. *Human Reproduction* 17(10): 2715-2724. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/12351553>

Sirois DA and Natelson B. (2001) Clinicopathological findings consistent with primary Sjögren's syndrome in a subset of patients diagnosed with chronic fatigue syndrome: preliminary observations. *The Journal of Rheumatology* 28(1): 126-131. **Link:** <http://www.jrheum.org/content/28/1/126>

Son C (2019) Differential diagnosis between "chronic fatigue" and "chronic fatigue syndrome". *Integrative Medicine Research* 8 (2): 89-91. **Link:**

<https://www.sciencedirect.com/science/article/pii/S221342201930071X>

Straub RK & Powers CM (2021) Chronic Fatigue Syndrome: A Case Report Highlighting Diagnosing and Treatment Challenges and the Possibility of Jarisch–Herxheimer Reactions If High Infectious Loads Are Present. *Healthcare* 9 (11): 1537. **Link:** <https://www.mdpi.com/2227-9032/9/11/1537/htm>

Straus SE et al. (1988) Allergy and the chronic fatigue syndrome. *Journal of Allergy and Clinical Immunology* 81 (5): 791-795. **Link:**

[http://www.jacionline.org/article/0091-6749\(88\)90933-5/fulltext](http://www.jacionline.org/article/0091-6749(88)90933-5/fulltext)

Sunnquist M et al. (2019) The development of a short form of the DePaul Symptom Questionnaire. *Rehabilitation Psychology* [Epub ahead of print].

Link: <https://tinyurl.com/yy3wswpw>

Sweetman E et al. (2019) Current Research Provides Insight into the Biological Basis and Diagnostic Potential for Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS). *Diagnostics* 9 (3).

Link: <https://www.ncbi.nlm.nih.gov/pubmed/31295930>

Tokumasu K et al. (2022) Clinical Characteristics of Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS) Diagnosed in Patients with Long COVID. *Medicina* 58: 850. **Link:**

doi.org/10.3390/medicina58070850 (*NEW)

Uhde M et al. (2018) Markers of non-coeliac wheat sensitivity (NCWS) in patients with myalgic encephalomyelitis/chronic fatigue syndrome. *Gut Postscript Letter* 68 (2): 377-378. **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/29550784>

Vaes AW, et al. (2023) Symptom-based clusters in people with ME/CFS: an illustration of clinical variety in a cross-sectional cohort. *Journal of Translational Medicine* 21: 112. **Link:** doi.org/10.1186/s12967-023-03946-6

(*NEW)

Van Den Houte M et al. (2018) Perception of induced dyspnea in fibromyalgia and chronic fatigue syndrome. *Journal of Psychosomatic Research* 106: 49-55. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/29455899>

Vorobyova YD and Danilov AB (2020) Sindrom khronicheskoi ustalosti: sovremennye aspekty diagnostiki i lecheniya [Chronic fatigue syndrome: modern aspects of diagnosis and treatment- Article in Russian]. *Zh Nevrol Psikiatr Im S S Korsakova* 121 (4):113-120. **Link:**

<https://pubmed.ncbi.nlm.nih.gov/34037364/>

Wiedbusch E and Jason LA (2022) Comparing Operationalized Approaches for Substantial Reduction of Functioning in Chronic Fatigue Syndrome and Myalgic Encephalomyelitis. *Archives of Community Medicine* 4 (1): 59-63.

Link: doi.org/10.36959/547/653

Woolley J et al. (2004) Alcohol use in chronic fatigue syndrome. *Journal of Psychosomatic Research* 56(2): 203-206. **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/15016579>

Worm-Smeitink et al. (2021) Towards personalized assessment of fatigue perpetuating factors in patients with chronic fatigue syndrome using ecological momentary assessment: A pilot study. *Journal of Psychosomatic Research* 140: 110296. **Link:** <https://pubmed.ncbi.nlm.nih.gov/33264751/>

Wyller VB et al. (2007) Abnormal thermoregulatory responses in adolescents with chronic fatigue syndrome: relation to clinical symptoms. *Pediatrics* 120: e129-e137. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/17606539>

Yamano E and Kataoka Y. (2018) New Diagnostic Biomarkers for Chronic Fatigue Syndrome. *Brain and Nerves* 70 (1): 27-34. **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/29348372> (Article in Japanese)

Yang T-Y et al. (2015) Increased Risk of Chronic Fatigue Syndrome Following Atopy: A Population-based Study. *Medicine* 94(29): e1211. **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/26200644>

Yang M et al. (2019) Psychometric properties of the PROMIS® Fatigue Short Form 7a among adults with myalgic encephalomyelitis/chronic fatigue syndrome. *Quality of Life Research* 28 (12): 3375-3384. **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/31506915>

8.2. Investigations

Berkovitz S., et al. (2009) Serum 25-hydroxy vitamin D levels in chronic fatigue syndrome: a retrospective survey. *International Journal for Vitamin and Nutrition Research* 79(4): 250-254. **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/20209476>

Campen CLMV et al. (2020) Reductions in Cerebral Blood Flow Can Be Provoked by Sitting in

severe Myalgic Encephalomyelitis/Chronic Fatigue Syndrome Patients. *Healthcare (Basel)*. **Link:** <https://pubmed.ncbi.nlm.nih.gov/33050553/>

Chalmers RA et al. (2006) CFSUM1 and CFSUM2 in urine from patients with chronic fatigue syndrome are methodological artefacts. *Clinica Chimica Acta* 364(1-2): 148-158. **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/16095585>

Chia JK and Chia LY. (1999) Chronic Chlamydia Pneumoniae Infection: A Treatable Cause of Chronic Fatigue Syndrome. *Clinical Infectious Diseases* 29(2): 452-453. **Link:** <https://academic.oup.com/cid/article/29/2/452/274438>

Cleary KJ and White PD. (1993) Gilbert's and chronic fatigue syndromes in men, *Lancet* 341(8848): 842. **Link:**

[http://www.thelancet.com/journals/lancet/article/PII0140-6736\(93\)90629-U/abstract](http://www.thelancet.com/journals/lancet/article/PII0140-6736(93)90629-U/abstract)

Coucke F et al. (2013) Morphological and functional abnormalities of the hypophyse in patients with diagnose of CFS or fibromyalgia [sic]. An example of misdiagnosis by Belgian chronic fatigue centres. *Endocrine Abstracts* 32: P222. **Link:** <http://www.endocrine-abstracts.org/ea/0032/ea0032p222.htm>

De Meirleir KL., et al. (2018) Evaluation of four clinical laboratory parameters for the diagnosis of myalgic encephalomyelitis, *Journal of Translational Medicine* 16 (1): 322. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/30463572>

- Earl KE et al.** (2017) Vitamin D status in chronic fatigue syndrome/myalgic encephalomyelitis: a cohort study from the North-West of England. *BMJ Open* 7 (11): e015296. **Link:** <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5695299/>
- Esfandyarpour R et al.** (2019) A nanoelectronics-blood-based diagnostic biomarker for myalgic encephalomyelitis/chronic fatigue syndrome (ME/CFS). *Proceedings of the National Academy of Science USA* 116 (21): 10250-10257. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/31036648>
- European Society of Cardiology.** (2009) Guidelines for the diagnosis and management of syncope (version 2009): The task force for the Diagnosis and Management of Syncope of the European Society of Cardiology. *European Heart Journal* 30(21): 2631-2671. **Link:** <https://academic.oup.com/eurheartj/article/30/21/2631/2887508>
- Farmer A et al.** (1996) Screening for psychiatric morbidity in subjects presenting with chronic fatigue syndrome. *The British Journal of Psychiatry* 168(3): 354-358. **Link:** <http://bjp.rcpsych.org/content/168/3/354>
- Gandasegui IM, et al.** (2021) Myalgic Encephalomyelitis/Chronic Fatigue Syndrome: A Neurological Entity? *Medicina* 57: 1030. **Link:** <https://www.mdpi.com/1648-9144/57/10/1030>
- Groven N et al.** (2019) Patients with Fibromyalgia and Chronic Fatigue Syndrome show increased hsCRP compared to healthy controls. *Brain, Behaviour and Immunity* [Epub ahead of print] **Link:** <https://www.sciencedirect.com/science/article/pii/S0889159119302089>
- Hadjivassiliou M et al.** (2006) Neuropathy associated with gluten sensitivity. *Journal of Neurology, Neurosurgery & Psychiatry* 77(11): 1262-1266. **Link:** <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2077388/>
- Heap LC et al.** (1999) Vitamin B Status in Patients with Chronic Fatigue Syndrome. *Journal of the Royal Society of Medicine* 92(4): 183-185. **Link:** <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1297139/>
- Jacobson W et al.** (1993) Serum folate and chronic fatigue syndrome. *Neurology* 43(12): 2645. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/8255470>
- Jones MG et al.** (2005a) Urinary and plasma organic acids and amino acids in chronic fatigue syndrome. *Clinica Chimica Acta* 361(1-2): 150-158. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/15992788>
- Jones MG et al.** (2005b) Plasma and urinary carnitine and acylcarnitines in chronic fatigue syndrome. *Clinica Chimica Acta* 360(1-2): 173-177. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/15967423>
- Keller BA et al.** (2014) Inability of myalgic encephalomyelitis/chronic fatigue syndrome patients to reproduce VO₂peak indicates functional impairment. *Journal of Translational Medicine* 12: 104. **Link:** <https://translational-medicine.biomedcentral.com/articles/10.1186/1479-5876-12-104>

- Krupp LB et al.** (1989) The fatigue severity scale: Application to patients with multiple sclerosis and systemic lupus erythematosus. *Archives of Neurology* 46(10): 1121-1123. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/2803071>
- Lidbury B et al.** (2019) Rethinking ME/CFS Diagnostic Reference Intervals via Machine Learning, and the Utility of Activin B for Defining Symptom Severity. *Diagnostics* 9 (3). **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/31331036>
- Lim EJ and Son CG** (2022) Comparison of assessment scores for fatigue between multidimensional fatigue inventory (MFI-K) and modified chalder fatigue scale (mKCFQ). *Journal of Translational Medicine* 20 (1): 8. **Link:** <https://pubmed.ncbi.nlm.nih.gov/34980164/>
- Miller NA et al.** (1991) Antibody to Coxsackie B virus in diagnosing postviral fatigue syndrome. *BMJ* 302(6769): 140-143. **Link:** <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1668819/>
- Missailidis D et al.** (2020) Cell-Based Blood Biomarkers for Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *International Journal of Molecular Science* 21 (3). **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/32046336>
- Sharma O.P.** (1999) Fatigue and sarcoidosis. *European Respiratory Journal* 13(4): 713-714. **Link:** <http://erj.ersjournals.com/content/13/4/713>
- Sheedy JR et al.** (2009) Increased D-Lactic Acid Intestinal Bacteria in Patients with Chronic Fatigue Syndrome. *in vivo* 23(4): 621-628. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/19567398>
- Skowera A et al.** (2001) High prevalence of serum markers of coeliac disease in patients with chronic fatigue syndrome [Correspondence]. *Journal of Clinical Pathology* 54(4): 335-336. **Link:** <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1731400/>
- Snell CR et al.** (2013) Discriminative Validity of Metabolic and Workload Measurements for Identifying People with Chronic Fatigue Syndrome. *Physical Therapy* 93(11): 1484-1492. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/23813081>
- Studd J and Panay N.** (1996) Chronic fatigue syndrome [Letter to the editor]. *The Lancet* 348(9038): 1384. **Link:** [http://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(05\)65448-7/fulltext](http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(05)65448-7/fulltext)
- Taylor SE et al.** (2003) An organic cause of neuropsychiatric illness in adolescence. *The Lancet* 361(9357): 572. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/12598143>
- Togo F et al.** (2015) Attention network test: Assessment of cognitive function in chronic fatigue syndrome. *Journal of Neuropsychology* 9(1): 1-9. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/24112872>
- Tomic S et al.** (2012) Lipid and protein oxidation in female patients with chronic fatigue syndrome. *Archives of Medical Science* 8(5): 886-891. **Link:** <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3506242/>

VanNess JM et al. (2003) Subclassifying Chronic Fatigue Syndrome through Exercise Testing. *Medicine & Science in Sports & Exercise* 35(6): 908-913. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/12783037>

8.3. Physical examination

Ash-Bernal R et al. (1995) Vestibular Function Test Anomalies in Patients with Chronic Fatigue Syndrome. *Acta Oto-Laryngologica* 115(1): 9-17. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/7762393>

Campen CM et al. (2018b) Low sensitivity of abbreviated tilt table testing for diagnosing postural tachycardia syndrome in adults with ME/CFS. *Frontiers in Paediatrics* [Epub ahead of print]. **Link:** <https://www.frontiersin.org/articles/10.3389/fped.2018.00349/abstract>

Eyskens J et al. (2019) Assessing chronic fatigue syndrome: Self-reported physical functioning and correlations with physical testing. *Journal of Bodywork and Movement Therapies* 23 (3): 598-603. **Link:** <https://www.sciencedirect.com/science/article/abs/pii/S1360859219301019>

Hives L et al. (2017) Can physical assessment techniques aid diagnosis in people with chronic fatigue syndrome/myalgic encephalomyelitis? A diagnostic accuracy study. *BMJ Open* 7 (11): e017521. **Link:** <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5695376/>

Jäkel B et al. (2021) Hand grip strength and fatigability: correlation with clinical parameters and diagnostic suitability in ME/CFS. *Journal of Translational Medicine* 19(1): 159. **Link:** <https://pubmed.ncbi.nlm.nih.gov/33874961/>

Jammes Y et al. (2020) Maximal handgrip strength can predict maximal physical performance in patients with chronic fatigue. *Clinical Biomechanics* 73: 162-165. **Link:** [https://www.clinbiomech.com/article/S0268-0033\(19\)30701-6/abstract](https://www.clinbiomech.com/article/S0268-0033(19)30701-6/abstract)

Nacul LC et al. (2018) Hand grip strength as a clinical biomarker for ME/CFS and disease severity. *Frontiers in Neurology* 9. **Link:** <https://www.frontiersin.org/articles/10.3389/fneur.2018.00992/full>

Palaniappan R and Sirimanna T. (2002) Peripheral vestibular dysfunction in chronic fatigue syndrome. *International Journal of Pediatric Otorhinolaryngology* 64(1): 69-72. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/12020917>

Richardson AM et al. (2018) Weighting of orthostatic intolerance time measurements with standing difficulty score stratifies ME/CFS symptom severity and analyte detection. *Journal of Translational Medicine* 16 (1): 97. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/29650052>

Rowe PC et al. (1999) Orthostatic intolerance and chronic fatigue syndrome associated with Ehlers-Danlos syndrome. *The Journal of Pediatrics* 135(4): 494-499. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/10518084>

Rowe PC et al. (2014) Impaired Range of Motion of Limbs and Spine in Chronic Fatigue Syndrome. *The Journal of Pediatrics* 165(2): 360-366. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/24929332>

Rowe PC et al. (2018) Two-Year Follow-Up of Impaired Range of Motion in Chronic Fatigue Syndrome. *Journal of Pediatrics* 200:249-253. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/29866593>

Rowe PC. (2014) Guest Blog: Dr Peter Rowe – Is the physical examination normal in CFS? Part 3. *Solve ME/CFS Initiative*. **Link:** <http://solvecfs.org/guest-blog-dr-peter-rowe-is-the-physical-examination-normal-in-cfs-part-3/>

Vergauwen K et al. (2021) An exploratory study of discrepancies between objective and subjective measurement of the physical activity level in female patients with chronic fatigue syndrome. *Journal of Psychosomatic Research* 144: 110417. **Link:** <https://pubmed.ncbi.nlm.nih.gov/33773330/>

8.4. Symptoms

Also see our **leaflets** on Symptoms.

Pain – see **Biomedical Research**, 4.25 above.

Post-Exertional Malaise – see **Biomedical Research**, 4.27 above.

Sleep disturbance – see **Biomedical Research**, 4.29 above.

Vision – see **Biomedical Research**, 4.30 above.

9. MANAGEMENT

Also see our [leaflets](#) on Management.

9.1. Cognitive Behavioural Therapy (CBT)

Adamson J et al. (2020) Cognitive behavioural therapy for chronic fatigue and chronic fatigue syndrome: outcomes from a specialist clinic in the UK. *Journal of The Royal Society of Medicine* 113 (10): 394-402. **Link:** doi.org/10.1177/0141076820951545

Albers E et al. (2021) Effectiveness of Internet-Based Cognitive Behavior Therapy (Fatigue in Teenagers on the Internet) for Adolescents With Chronic Fatigue Syndrome in Routine Clinical Care: Observational Study. *Journal of Medical Internet Research* 23 (8): e24839. **Link:** <https://pubmed.ncbi.nlm.nih.gov/34397389/>

Ahmed SA et al. (2019) Assessment of the scientific rigour of randomized controlled trials on the effectiveness of cognitive behavioural therapy and graded exercise therapy for patients with myalgic encephalomyelitis/chronic fatigue syndrome: A systematic review. *Journal of Health Psychology* [Epub ahead of print] **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/31072121>

Akagi H et al. (2001) Cognitive behavioural therapy for chronic fatigue syndrome in a general hospital – feasible and effective. *General Hospital Psychiatry* 23(5): 254-260. **Link:** <http://www.sciencedirect.com/science/article/pii/S0163834301001542>

Baos S et al. (2018) Investigating the effectiveness and cost-effectiveness of FITNET-NHS (Fatigue In Teenagers on the interNET in the NHS) compared to Activity Management to treat paediatric chronic fatigue syndrome (CFS)/myalgic encephalomyelitis (ME): protocol for a randomised controlled trial. *Trials* 19 (1): 136. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/29471861>

Braamse A et al. (2020) The role of partners' fatigue and the patient-partner relationship in the outcome of cognitive behavioural therapy for chronic fatigue syndrome. *Journal of Psychosomatic Research* 135:110133. **Link:** <https://pubmed.ncbi.nlm.nih.gov/32450339/>

Burgess M et al. (2018) Home-based family focused rehabilitation for adolescents with severe Chronic Fatigue Syndrome. *Clinical Child Psychology and Psychiatry* 24 (1): 19-28. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/30114945>

Chalder T et al. (2019) Persistent physical symptoms reduction intervention: a system change and evaluation in secondary care (PRINCE secondary) - a CBT-based transdiagnostic approach: study protocol for a randomised controlled trial. *BMC Psychiatry* 19 (1): 307. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/31640632>

- Chand SP et al.** (2021) Cognitive Behavior Therapy. In: *StatPearls* [Internet]. Treasure Island (FL): StatPearls Publishing; 2021 Jan. **Link:** <https://pubmed.ncbi.nlm.nih.gov/29261869/>
- Clapperton B** (2022) Applying latent class cluster analysis and data mining methods to identify classes of chronic fatigue syndrome patients that are predictive of treatment success. [Doctoral dissertation, King's College London].
Link: https://kclpure.kcl.ac.uk/portal/files/181949538/2022_Clapperton_Ben_0976409_ethesis.pdf (*NEW)
- Clark C and Holtum S** (2021) 'A life I can cope with'. An alternative model of cognitive behavioural therapy (CBT) for CFS/ME. *Health Expectations* 25 (1): 91-102. **Link:** doi.org/10.1111/hex.13326
- Clery P et al.** (2022) What treatments work for anxiety and depression in children and adolescents with chronic fatigue syndrome? An updated systematic review. *BMJ Open*. 12 (1): e051358. **Link:** <https://pubmed.ncbi.nlm.nih.gov/35105619/>
- Deale A et al.** (1997) Cognitive behaviour therapy for chronic fatigue syndrome: a randomized controlled trial. *American Journal of Psychiatry* 154(3): 408-414. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/9054791>
- Deale A et al.** (2001) Long-Term Outcome of Cognitive Behaviour Therapy Versus Relaxation Therapy for Chronic Fatigue Syndrome: A 5-Year Follow-Up Study. *American Journal of Psychiatry* 158(12): 2038-2042. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/11729022>
- Van Deuren S et al.** (2021) Fatigue-Related Cognitive-Behavioral Factors in Survivors of Childhood Cancer: Comparison with Chronic Fatigue Syndrome and Survivors of Adult-Onset Cancer. *Journal of Adolescent and Young Adult Oncology* 10 (1): 92-99. **Link:** <https://pubmed.ncbi.nlm.nih.gov/32857640/>
- Divya SM et al.** (2022) Impact of exercise vs cognitive therapy in athletes with chronic fatigue syndrome. *International Journal of Medical and Exercise Science* 8(1):1181-1197. **Link:** doi.org/10.36678/IJMAES.2022.V08I01.003
- Friedberg F and Krupp LB.** (1994) A Comparison of Cognitive Behavioural Treatment for Chronic Fatigue Syndrome and Primary Depression. *Clinical Infectious Diseases* 18(Supplement 1): S105-S110. **Link:** https://www.jstor.org/stable/4457611?seq=1#page_scan_tab_contents
- Garg H et al.** (2021) Recovery from refractory chronic fatigue syndrome with CBT and modafinil. *BMJ Case Reports* 14 (3): e240283. **Link:** <https://pubmed.ncbi.nlm.nih.gov/33753384/>

Ghatineh S and Vink M. (2017) FITNET's Internet-Based Cognitive Behavioural Therapy Is Ineffective and May Impede Natural Recovery in Adolescents with Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. A Review. *Behavioural Science* 7 (3). **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/28800089>

Gier M, et al. (2022) The relation between cognitive-behavioural responses to symptoms in patients with long term medical conditions and the outcome of cognitive behavioural therapy for fatigue – A secondary analysis of four RCTs. *Behaviour Research and Therapy* 161: 104243. **Link:** doi.org/10.1016/j.brat.2022.104243 (*NEW)

Geraghty KJ and Blease C. (2017) Cognitive behavioural therapy in the treatment of chronic fatigue syndrome: A narrative review on efficacy and informed consent. *Journal of Health Psychology* 23 (1): 127-138. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/27634687>

Geraghty K and Adeniji C (2019) The 'Cognitive Behavioural Model' of Chronic Fatigue Syndrome: Critique of a Flawed Model *Health Psychology Open*. **Link:** doi.org/10.1177/2055102919838907

Gotaas ME et al. (2021) Cognitive Behavioral Therapy Improves Physical Function and Fatigue in Mild and Moderate Chronic Fatigue Syndrome: A Consecutive Randomized Controlled Trial of Standard and Short Interventions. *Frontiers in Psychiatry* 12: 580924. **Link:** <https://pubmed.ncbi.nlm.nih.gov/33912079/>

Gotaas ME, et al. (2023) Characteristics associated with physical functioning and fatigue in patients with chronic fatigue syndrome (CFS): secondary analyses of a randomized controlled trial. *Fatigue: Biomedicine, Health & Behavior*. **Link:** doi.org/10.1080/21641846.2023.2175521 (*NEW)

Hansen AL et al. (2013) Heart Rate Variability and Fatigue in Patients with Chronic Fatigue Syndrome After a Comprehensive Cognitive Behaviour Group Therapy Program. *Journal of Psychophysiology* 27(2): 67-75. **Link:** <http://psycnet.apa.org/record/2013-13709-003>

Huibers MJH et al. (2004) Efficacy of cognitive-behavioural therapy by general practitioners for unexplained fatigue among employees. *The British Journal of Psychiatry* 184(3): 240-246. **Link:** <http://bjp.rcpsych.org/content/184/3/240>

Hughes BM and Tuller D (2022) Response to Adamson et al. (2020): 'Cognitive behavioural therapy for chronic fatigue and chronic fatigue syndrome: Outcomes from a specialist clinic in the UK'. *Journal of Health Psychology* 27 (7): 1783-1789. **Link:** doi.org/10.1177/13591053211008203 (*NEW)

- Ingman T et al.** (2022) A systematic literature review of randomized controlled trials evaluating prognosis following treatment for adults with chronic fatigue syndrome. *Psychological medicine*. **Link:** [https://kclpure.kcl.ac.uk/portal/en/publications/a-systematic-literature-review-of-randomized-controlled-trials-evaluating-prognosis-following-treatment-for-adults-with-chronic-fatigue-syndrome\(bbffadae-b24f-4ef4-8739-c3fdb036429\).html](https://kclpure.kcl.ac.uk/portal/en/publications/a-systematic-literature-review-of-randomized-controlled-trials-evaluating-prognosis-following-treatment-for-adults-with-chronic-fatigue-syndrome(bbffadae-b24f-4ef4-8739-c3fdb036429).html) (*NEW)
- Janse A et al.** (2017) Long-term follow-up after cognitive behaviour therapy for chronic fatigue syndrome. *Journal of Psychosomatic Research* 97: 45-51. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/28606498>
- Janse A et al.** (2018) Efficacy of web-based cognitive-behavioural therapy for chronic fatigue syndrome: randomised controlled trial. *British Journal of Psychiatry* 212 (2): 112-118. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/29436329>
- Janse A et al.** (2019) Prediction of long-term outcome after cognitive behavioural therapy for chronic fatigue syndrome. *Journal of Psychosomatic Research* 121: 93-99. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/31006534>
- Kalfas M et al.** (2022) Generalised worry in patients with Chronic Fatigue Syndrome following Cognitive Behavioural Therapy - a prospective cohort study in secondary care. *Behavior Therapy* 53 (5): 828-842. **Link:** doi.org/10.1016/j.beth.2022.01.004 (*NEW)
- Kindlon T.** (2011) Reporting of harms associated with graded exercise therapy and cognitive behaviour therapy in myalgic encephalomyelitis/chronic fatigue syndrome. *Bulletin of IACFS/ME* 19(2): 59-111. **Link:** <http://iacfsme.org/PDFS/Reporting-of-Harms-Associated-with-GET-and-CBT-in.aspx>
- Laws KR.** (2017) Distress signals: Does cognitive behavioural therapy reduce or increase distress in chronic fatigue syndrome/myalgic encephalomyelitis? *Journal of Health Psychology* 22 (9): 1177-1180. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/28805513>
- Leong KH et al.** (2022) Treatments of chronic fatigue syndrome and its debilitating comorbidities: a 12-year population-based study. *Journal of Translational Medicine* 20: 268. **Link:** doi.org/10.1186/s12967-022-03461-0 (*NEW)
- Malik S et al.** (2020) Cognitive-behavioural therapy combined with music therapy for chronic fatigue following Epstein-Barr virus infection in adolescents: a feasibility study. *BMJ Paediatrics Open* 4 (1). **Link:** <https://bmjpaedsopen.bmj.com/content/4/1/e000620.abstract>
- Malouff JM et al.** (2008) Efficacy of cognitive behavioural therapy for chronic fatigue syndrome: A meta-analysis. *Clinical Psychology Review* 28(5): 736-745. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/18060672>

- Marks DF** (2023) Treatment Harms to Patients with Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Advances in Bioengineering & Biomedical Science Research* 6(1): 01-04. **Link:** doi.org/10.33140/ABBSR.06.01.01 (*NEW)
- McPhee G.** (2017) Cognitive behaviour therapy and objective assessments in chronic fatigue syndrome. *Journal of Health Psychology* 22 (9): 1181-1186. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/28805529>
- McPhee G et al.** (2021) Monitoring treatment harm in myalgic encephalomyelitis/chronic fatigue syndrome: A freedom-of-information study of National Health Service specialist centres in England. *Journal of Health Psychology* 26 (7): 975-984. **Link:** <https://pubmed.ncbi.nlm.nih.gov/31234662/>
- Mengshoel AM et al.** (2020) Patients' experiences and effects of non-pharmacological treatment for myalgic encephalomyelitis/chronic fatigue syndrome – a scoping mixed methods review. *International Journal of Qualitative Studies on Health and Wellbeing* 15 (01). **Link:** <https://www.tandfonline.com/doi/full/10.1080/17482631.2020.1764830>
- Morey A and Loades ME** (2021) Review: How has cognitive behaviour therapy been adapted for adolescents with comorbid depression and chronic illness? A scoping review. *Child and Adolescent Mental Health* 26 (3): 252-264. **Link:** doi.org/10.1111/camh.12421
- Müller F et al.** (2022) Response Shift After Cognitive Behavioral Therapy Targeting Severe Fatigue: Explorative Analysis of Three Randomized Controlled Trials. *International Journal of Behavioral Medicine*. **Link:** doi.org/10.1007/s12529-022-10111-8 (*NEW)
- Nijhof L, et al.** (2023). Internet-delivered cognitive behavioural therapy for chronic fatigue among adolescents with a chronic medical condition: A single case study. *Behavioural and Cognitive Psychotherapy*: 1-6. **Link:** doi.org/10.1017/S1352465822000716 (*NEW)
- O'Dowd H et al.** (2006) Cognitive behavioural therapy in chronic fatigue syndrome: a randomised controlled trial of an outpatient group programme. *Health Technology Assessment* 10(37). **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/17014748>
- O'Dowd H et al.** (2020) The feasibility and acceptability of an early intervention in primary care to prevent chronic fatigue syndrome (CFS) in adults: randomised controlled trial. *Pilot and Feasibility Studies* 6. **Link:** <https://pilotfeasibilitystudies.biomedcentral.com/articles/10.1186/s40814-020-00595-0>
- O'Dowd B and Griffith G** (2020) "I Need to Start Listening to What my Body Is Telling Me.": Does Mindfulness-Based Cognitive Therapy Help People with Chronic Fatigue Syndrome? *Human Arenas* 5: 5-24. **Link:** doi.org/10.1007/s42087-020-00123-9

- Prins JB et al.** (2001) Cognitive behaviour therapy for chronic fatigue syndrome: a multicentre randomised controlled trial. *The Lancet* 357(9259): 841-847. Link: <https://www.ncbi.nlm.nih.gov/pubmed/11265953>
- Picariello F et al.** (2017) 'It feels sometimes like my house has burnt down, but I can see the sky': A qualitative study exploring patients' views of cognitive behavioural therapy for chronic fatigue syndrome. *British Journal of Health Psychology* 22 (3): 383-413. Link: <https://www.ncbi.nlm.nih.gov/pubmed/28349621>
- Picariello F et al.** (2023) The Cognitive and Behavioural Responses to Symptoms Questionnaire (CBRQ): Development, reliability and validity across several long-term conditions. *British Journal of Health Psychology* 00: 1– 20. Link: <https://doi.org/10.1111/bjhp.12644> (*NEW)
- Ridsdale L et al.** (2001) Chronic fatigue in general practice: is counselling as good as cognitive behaviour therapy? A UK randomised trial. *British Journal of General Practice* 51(462): 19-24. Link: <https://www.ncbi.nlm.nih.gov/pubmed/11271868>
- Roor JJ et al.** (2021) Performance Validity and Outcome of Cognitive Behavior Therapy in Patients with Chronic Fatigue Syndrome. *Journal of International Neuropsychology Society* 1-10. [Epub ahead of print.] Link: <https://pubmed.ncbi.nlm.nih.gov/34130768/>
- Sarter L et al.** (2021) Cognitive and emotional variables predicting treatment outcome of cognitive behavior therapies for patients with medically unexplained symptoms: A meta-analysis. *Journal of Psychosomatic Research* 146: 110486. Link: <https://pubmed.ncbi.nlm.nih.gov/33879330/>
- Scott MJ et al.** (2022) The 'medically unexplained symptoms' syndrome concept and the cognitive-behavioural treatment model. *Journal of Health Psychology* 27 (1): 3-8. Link: doi.org/10.1177/13591053211038042
- Sharpe M et al.** (1996) Cognitive behaviour therapy for the chronic fatigue syndrome: a randomised controlled trial. *BMJ* 312(7022): 22-26. Link: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2349693/>
- Sharpe M et al.** (2021) Evidence-Based Care for People with Chronic Fatigue Syndrome and Myalgic Encephalomyelitis. *Journal of General Internal Medicine* 37 (2): 449-452. Link: doi.org/10.1007/s11606-021-07188-4
- Smith AP and Thomas M** (2022) Cognitive behaviour therapy, multi-convergent therapy, and the mood and cognitive performance of chronic fatigue syndrome patients. *World Journal of Pharmaceutical and Medical Research* 8(5): 58-65. Link: https://www.wjpmr.com/home/article_abstract/4164 (*NEW)
- Stubhaug B et al.** (2018) A 4-Day Mindfulness-Based Cognitive Behavioral Intervention Program for CFS/ME. An Open Study, With 1-Year Follow-Up. *Frontiers in Psychiatry* 9: 720. Link: <https://www.frontiersin.org/articles/10.3389/fpsy.2018.00720/full>

Stulemeijer M et al. (2005) Cognitive behaviour therapy for adolescents with chronic fatigue syndrome: randomised controlled trial. *BMJ* 330(7481): 14.

Link: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC539840/>

Sunnquist M and Jason LA (2018) A re-examination of the cognitive behavioral model of chronic fatigue syndrome. *Journal of Clinical Psychology* [Epub ahead of print]. Link:

<https://www.ncbi.nlm.nih.gov/pubmed/29457646>

Twisk F and Corsius L (2018) Cognitive-behavioural therapy for chronic fatigue syndrome: neither efficacious nor safe. *British Journal of Psychiatry* 213 (2): 500-501. Link: <https://www.ncbi.nlm.nih.gov/pubmed/30027882>

Twisk FNM (2019) Cognitive-behavioural and graded exercise therapies for chronic fatigue (syndrome) are associated with lower levels of work/school attendance. *Journal of Behavioural Medicine* 42 (3): 576-577. Link:

<https://www.ncbi.nlm.nih.gov/pubmed/30924061>

Van der Vaart R et al. (2019) Implementing guided ICBT for chronic pain and fatigue: A qualitative evaluation among therapists and managers. *Internet Interventions* 18. Link:

<https://www.sciencedirect.com/science/article/pii/S2214782919300910>

Vink M and Vink-Niese A (2019) Cognitive behavioural therapy for myalgic encephalomyelitis/chronic fatigue syndrome is not effective. Re-analysis of a Cochrane review. *Health Psychology Open* 6 (1). Link:

<https://www.ncbi.nlm.nih.gov/pubmed/31080632>

Vink M and Vink-Niese A (2020) Could Cognitive Behavioural Therapy Be an Effective Treatment for Long COVID and Post COVID-19 Fatigue Syndrome? Lessons from the Qure Study for Q-Fever Fatigue Syndrome. *Healthcare (Basel, Switzerland)* 8 (4): 552. Link:

<https://pubmed.ncbi.nlm.nih.gov/33322316/>

Worm-Smeitink M et al. (2019) Internet-Based Cognitive Behavioral Therapy in Stepped Care for Chronic Fatigue Syndrome: Randomized Noninferiority Trial. *Journal of Medical Internet Research* 21 (3). Link:

<https://www.ncbi.nlm.nih.gov/pubmed/30869642>

Worm-Smeitink M et al. (2019) Internet-Based Cognitive Behavioral Therapy for Chronic Fatigue Syndrome Integrated in Routine Clinical Care: Implementation Study. *Journal of Medical Internet Research* 21 (10). Link:

<https://www.ncbi.nlm.nih.gov/pubmed/31603428>

Xie F et al. (2022) The Qigong of Prolong Life With Nine Turn Method Relieve Fatigue, Sleep, Anxiety and Depression in Patients With Chronic Fatigue Syndrome: A Randomized Controlled Clinical Study. *Frontiers in Medicine* 9: 828414. Link: doi.org/10.3389/fmed.2022.828414 (*NEW)

9.2. Complementary and alternative therapies

Also see our [leaflets](#) on
Vitamins & Supplements.

Alraek T et al. (2011) Complementary and alternative medicine for patients with chronic fatigue syndrome: A systematic review. *BMC Complementary and Alternative Medicine* 11: 87. **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/21982120>

Arring NM et al. (2018) Ginseng as a Treatment for Fatigue: A Systematic Review. *Journal of Alternative and Complimentary Medicine* [Epub ahead of print]. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/29624410>

Campen C et al. (2018) The Effect of Curcumin on Patients with Chronic Fatigue Syndrome/Myalgic Encephalomyelitis: An Open Label Study. *Scientific Research* 9 (5) 356-366. **Link:**
<http://www.scirp.org/journal/PaperInformation.aspx?PaperID=84389&#abstract>

Castro-Marrero J et al. (2022) Does Dietary Coenzyme Q10 plus Selenium Supplementation Ameliorate Clinical Outcomes by Modulating Oxidative Stress and Inflammation in Individuals with Myalgic Encephalomyelitis/Chronic Fatigue Syndrome? *Antioxidants & Redox Signalling* 36 (10-12): 729-739. **Link:** doi.org/10.1089/ars.2022.0018

Chan JSM et al. (2017) Adiponectin Potentially Contributes to the Antidepressive Effects of Baduanjin Qigong Exercise in Women with Chronic Fatigue Syndrome-Like Illness. *Cellular Transplant* 26 (3): 493-501. **Link:**
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5657703/>

Chi A et al. (2017) Characterization of a protein-bound polysaccharide from *Herba Epimedii* and its metabolic mechanism in chronic fatigue syndrome. *Journal of Ethnopharmacology* 203: 241-251. **Link:**
<https://www.ncbi.nlm.nih.gov/pubmed/28359851>

Chirumbolo S et al. (2022). Male vs. Female Differences in Responding to Oxygen–Ozone Autohemotherapy (O₂-O₃-AHT) in Patients with Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS). *Journal of Clinical Medicine* 11: 173. **Link:** <https://www.mdpi.com/2077-0383/11/1/173/html>

Comhaire F (2022) The Role of Immunity and Inflammation in ME/ CFS and Post-COVID Syndrome: Implications for Treatment. *MedLife Clinics* Volume 4 (2): 1043. **Link:** <https://www.medtextpublications.com/open-access/the-role-of-immunity-and-inflammation-in-me-cfs-and-1254.pdf> (*NEW)
Comment

Comhaire F and Pen J. (2021) Boosting Health Recovery by Food Supplements: The Case of ME/CFS versus Post-Covid-19 Syndrome. *Journal of Clinical Pharmacology and Therapeutics* 2 (3): 1022. **Link:**
<http://www.medtextpublications.com/open-access/boosting-health-recovery-by-food-supplements-the-case-of-me-947.pdf>

- Crosby LD et al.** (2021) Off label use of Aripiprazole shows promise as a treatment for Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS): a retrospective study of 101 patients treated with a low dose of Aripiprazole. *Journal of Translational Medicine* 19: 50. **Link:** <https://translational-medicine.biomedcentral.com/articles/10.1186/s12967-021-02721-9>
- Fang Y et al.** (2022) Acupuncture and moxibustion for chronic fatigue syndrome: A systematic review and network meta-analysis. *Medicine* 101 (31): e29310. **Link:** doi.org/10.1097/MD.00000000000029310 (*NEW)
- Fangfang X et al.** (2021) Effects of The Prolong Life With Nine Turn Method (Yan Nian Jiu Zhuan) Qigong On Brain Functional Changes in Patients With Chronic Fatigue Syndrome in Terms of Fatigue and Quality of Life. *BMC Palliative Care BMC Series (ResearchSquare)*. [Epub ahead of print.] **Link:** <https://www.researchsquare.com/article/rs-963598/v1>
- Fangfang X et al.** (2021) Can prolong life with nine turn method (Yan Nian Jiu Zhuan) Qigong alleviates Fatigue, Sleep quality, Depression and anxiety on Patients with Chronic Fatigue Syndrome: a Randomized, Controlled, Clinical Study? (ResearchSquare) [Epub ahead of print.] **Link:** <https://www.researchsquare.com/article/rs-965010/v1>
- Fluge Ø et al.** (2021) Pathomechanisms and possible interventions in myalgic encephalomyelitis/chronic fatigue syndrome (ME/CFS). *The Journal of Clinical Investigations* 131 (14) :e150377. **Link:** <https://pubmed.ncbi.nlm.nih.gov/34263741/>
- Friedberg F & Choi D** (2022) Hydrogen water as a treatment for myalgic encephalomyelitis/chronic fatigue syndrome: a pilot randomized trial. *Fatigue: Biomedicine, Health & Behavior*. **Link:** doi.org/10.1080/21641846.2022.2038519
- Groven KS and Dahl-Michelsen T** (2019) Recovering from chronic fatigue syndrome as an intra-active process. *Health Care Women International* 12: 1-12. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/31513470>
- Haghighi S et al.** (2021) Open-label study with the monoamine stabilizer (-)-OSU6162 in myalgic encephalomyelitis/chronic fatigue syndrome. *Brain and Behaviour* 11 (4): e02040. **Link:** <https://pubmed.ncbi.nlm.nih.gov/33528911/>
- Hirano S-I et al.** (2022) Molecular Hydrogen as a Medical Gas for the Treatment of Myalgic Encephalomyelitis/Chronic Fatigue Syndrome: Possible Efficacy Based on a Literature Review. *Frontiers in Neurology* 13: 841310. **Link:** doi.org/10.3389/fneur.2022.841310
- Hirobumi I** (2023) Autonomic Nervous System Regulation Effects of Epipharyngeal Abrasive Therapy for Myalgic Encephalomyelitis/Chronic Fatigue Syndrome Associated With Chronic Epipharyngitis. *Cureus* 15(1): e33777. **Link:** doi.org/10.7759/cureus.33777 (*NEW)

Kaiyang X et al. (2022) Efficacy and safety of Ma's Bamboo-based medicinal moxibustion therapy for chronic fatigue syndrome- An exploratory study protocol for randomized controlled trial. *Medicine Case Reports and Study Protocols* 3 (1): e0193. **Link:** https://journals.lww.com/md-cases/Fulltext/2022/01000/Efficacy_and_safety_of_Ma_s_Bamboo_based_medicinal.6.aspx?context=LatestArticles

Kan J et al. (2021) A Botanical Product Containing Cistanche and Ginkgo Extracts Potentially Improves Chronic Fatigue Syndrome Symptoms in Adults: A Randomized, Double-Blind, and Placebo-Controlled Study. *Frontiers in Nutrition* 8: 658630. **Link:** <https://pubmed.ncbi.nlm.nih.gov/34901100/>

Kujawski S et al. (2022) Combination of whole body cryotherapy with static stretching exercises reduces fatigue and improves functioning of the autonomic nervous system in Chronic Fatigue Syndrome. *Journal of Translational Medicine* 20: 273. **Link:** doi.org/10.1186/s12967-022-03460-1 (*NEW)

Li C-R et al. (2022) Mechanism of acupuncture and moxibustion in treatment of chronic fatigue syndrome from perspective of intestinal flora. *Zhongguo Zhen Jiu (Chinese Accupunture & Moxibustion)* 42 (8): 956-60. [Article in Chinese.] **Link:** doi.org/10.13703/j.0255-2930.20210829-k0003 (*NEW)

Li Y-H et al. (2021) Current state about researches on selection of experimental indexes mechanisms of acupuncture underlying improvement of chronic fatigue syndrome. *Zhen Ci Yan Jiu (Acupuncture research)* 46 (11): 980-4. [Article in Chinese] **Link:** <https://pubmed.ncbi.nlm.nih.gov/34865338/>

Li ZX et al. (2022) Effect of electroacupuncture at back-shu points of five zang on fatigue status and cortical excitability in chronic fatigue syndrome. *Zhongguo Zhen jiu (Chinese Acupuncture & Moxibustion)* 42 (11): 1205-1210. **Link:** doi.org/10.13703/j.0255-2930.20220124-k0006 (*NEW)

Lin W et al. (2019) Jin's three-needle acupuncture technique for chronic fatigue syndrome: a study protocol for a multicentre, randomized, controlled trial. *Trials* 20 (1): 155. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/30832713>

Lin Y-F et al. (2021) Ginger-separated moxibustion for chronic fatigue syndrome and its effect on intestinal flora]. *Zhongguo Zhen Jiu (Chinese Accupunture & Moxibustion)* 41 (3): 269-74. Article in Chinese. **Link:** <https://pubmed.ncbi.nlm.nih.gov/33798308/>

Leong KH et al. (2022) Treatments of chronic fatigue syndrome and its debilitating comorbidities: a 12-year population-based study. *Journal of Translational Medicine* 20: 268. **Link:** doi.org/10.1186/s12967-022-03461-0 (*NEW)

Mahjoub F et al. (2017) Are Traditional Remedies Useful in Management of Fibromyalgia and Chronic Fatigue Syndrome? A Review Study. *Journal of Evidence Based Complementary and Alternative Medicine* 22 (4): 1011-1016. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/28597692>

- Mairal E et al.** (2021) Reversible widespread brain ¹⁸F-FDG PET hypometabolism in chronic fatigue syndrome treated by hyperbaric oxygen therapy. *Europe Journal of Nuclear Medicine and Molecular Imaging* 48 (5): 1680-1681. Link: <https://pubmed.ncbi.nlm.nih.gov/33420913/>
- Moncorps F et al.** (2021) Specifics of chronic fatigue syndrome coping strategies identified in a French flash survey during the COVID-19 containment. *Health & Social Care in the Community* :10.1111/hsc.13376. Link: <https://pubmed.ncbi.nlm.nih.gov/33825299/>
- Munemoto T et al.** (2017) Increase in the Regional Cerebral Blood Flow following Waon Therapy in Patients with Chronic Fatigue Syndrome: A Pilot Study. *International Medicine* 56 (14): 1817-1824. Link: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5548673/>
- Natelson BH et al.** (2022) Transcutaneous Vagus Nerve Stimulation in the Treatment of Long Covid-Chronic Fatigue Syndrome. medRxiv [preprint] Link: doi.org/10.1101/2022.11.08.22281807
- Nipate SS and Tiwari AH** (2018) Antioxidant and immunomodulatory properties of *Spilanthes oleracea* with potential effect in chronic fatigue syndrome infirmity, *Journal of Ayurveda and Integrative Medicine* [Epub ahead of print]. Link: <https://www.ncbi.nlm.nih.gov/pubmed/30455072>
- Numata T et al.** (2019) Successful Treatment of Myalgic Encephalomyelitis/Chronic Fatigue Syndrome with Chronic Febricula Using the Traditional Japanese Medicine Shosaikoto. *International Medicine* 59 (2): 297-300. Link: <https://www.ncbi.nlm.nih.gov/pubmed/31534083>
- Oka, T et al.** (2022) Clinical effects of wasabi extract containing 6-MSITC on myalgic encephalomyelitis/chronic fatigue syndrome: an open-label trial. *BioPsychoSocial Medicine* 16: 26. Link: doi.org/10.1186/s13030-022-00255-0 (*NEW) Comment
- Rakityanskaya IA et al.** (2021) Dynamics of endogenous interferon-alpha and -gamma production under the influence of ingaron therapy in patients with chronic epstein – barr viral infection with chronic fatigue syndrome. *Bulletin of the Russian Military Medical Academy* 23 (2): 17-28. Link: <https://journals.eco-vector.com/1682-7392/article/view/71302>
- Ren J et al.** (2021) The effects of traditional Chinese manual therapy (Tuina) for chronic fatigue syndrome- A protocol for systematic review and meta-analysis. *Medicine* 100 (44): e27700. Link: https://journals.lww.com/md-journal/Fulltext/2021/11050/The_effects_of_traditional_Chinese_manual_therapy.56.aspx
- Selinheimo S et al.** (2023) A randomized controlled trial protocol for persistent physical symptoms associated with indoor environment or chronic fatigue: Effectiveness of video-based functional case conceptualization and web-program for improving quality of life. *Frontiers in Psychology* 13: 923532. Link: doi.org/10.3389/fpsyg.2022.923532 (*NEW)

Shin S et al. (2021) Effectiveness a herbal medicine (*Sipjeondaebotang*) on adults with chronic fatigue syndrome: A randomized, double-blind, placebo-controlled trial. *Integrative Medicine Research* 10 (2): 100664. **Link:** <https://pubmed.ncbi.nlm.nih.gov/33101925/>

Singh J et al. (2022) Non-pharmacological therapies for post-viral syndromes, including Long COVID: A systematic review. *International Journal of Environmental Research and Public Health* 20 (4): 3477. **Link:** doi.org/10.3390/ijerph20043477 (*NEW) **Comment**

Stanculescu D et al. (2021) Theory: Treatments for Prolonged ICU Patients May Provide New Therapeutic Avenues for Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS). *Frontiers in Medicine (Lausanne)* 8: 672370. **Link:** <https://pubmed.ncbi.nlm.nih.gov/34026797/>

Tang L et al. (2021) Acupuncture therapy on chronic fatigue syndrome based on radar plot: A protocol for an overview of systematic reviews. *Medicine (Baltimore)* 100 (14): e24572. **Link:** <https://pubmed.ncbi.nlm.nih.gov/33832063/>

Teitelbaum J and Goudie S (2021) An Open-Label, Pilot Trial of HRG80™ Red Ginseng in Chronic Fatigue Syndrome, Fibromyalgia, and Post-Viral Fatigue. *Pharmaceuticals* 15: 43. **Link:** <https://www.mdpi.com/1424-8247/15/1/43>

Tirelli U et al. (2022) Patients with Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS) Greatly Improved Fatigue Symptoms When Treated with Oxygen-Ozone Autohemotherapy. *Journal of Clinical Medicine* 11: 29. **Link:** <https://www.mdpi.com/2077-0383/11/1/29>

Toogood PL et al. (2021) Myalgic encephalomyelitis/chronic fatigue syndrome (ME/CFS): Where will the drugs come from? *Pharmacological Research* 165: 105465. **Link:** <https://pubmed.ncbi.nlm.nih.gov/33529750/>

Traianos, E et al. (2021) The effects of non-invasive vagus nerve stimulation on immunological responses and patient reported outcome measures of fatigue in patients with chronic fatigue syndrome, fibromyalgia, and rheumatoid arthritis. *Annals of the Rheumatic Diseases* 80: 1057-1058. **Link:** https://ard.bmj.com/content/80/Suppl_1/1057.3.abstract

Vittorio S et al. (2020) Comparison between Acupuncture and Nutraceutical Treatment with Migratens® in Patients with Fibromyalgia Syndrome: A Prospective Randomized Clinical Trial. *Nutrients* 12 (3). **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/32204554>

Wang T et al. (2017) Acupuncture and moxibustion for chronic fatigue syndrome in traditional Chinese medicine: a systematic review and meta-analysis. *BMC Complementary and Alternative Medicine* 17:163. **Link:** <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5363012/>

- Wang Y et al.** (2022) Wang Y, Ma C, Dou D. Semen raphani weakened the action of ginseng under chronic fatigue condition. *Journal of Ethnopharmacology* 295: 115352. Link: doi.org/10.1016/j.jep.2022.115352 (*NEW)
- Weatherley-Jones E et al.** (2004) A randomised, controlled, triple-blind trial of the efficacy of homeopathic treatment for chronic fatigue syndrome. *Journal of Psychosomatic Research* 56(2): 189-197. Link: <https://www.ncbi.nlm.nih.gov/pubmed/15016577>
- Weigel B et al.** (2022). Dietary supplements, daily nutrient intake, and health-related quality of life among people with myalgic encephalomyelitis/chronic fatigue syndrome. *Proceedings of the Nutrition Society* 81 (OCE3): E80. Link: doi.org/10.1017/S0029665122001057 (*NEW)
- Xie F et al.** (2023) Effects of Yijinjing Qigongin Alleviating Fatigue, Sleep Quality and Health Status on Patients with Chronic Fatigue Syndrome: A Randomized, Controlled, and Parallel Group Clinical Study. *Complement Medicine Research*. [Epub ahead of print] Link: doi.org/10.1159/000528827 (*NEW)
- Xu Y et al.** (2019) Acupuncture in the treatment of chronic fatigue syndrome based on "interaction of brain and kidney" in TCM: a randomized controlled trial. *Zhongguo Zhen Jiu* 39 (2): 123-7. Link: <https://tinyurl.com/yyzywhd7>
- Xu Y et al.** (2019) Clinical research of auricular gold-needle therapy in treatment of chronic fatigue syndrome of qi deficiency constitution. *Zhongguo Zhen Jiu* 39 (20): 128-132. Link: <https://tinyurl.com/yxwy7xqn>
- Xue K et al.** (2021) The efficacy and safety of moxibustion for chronic fatigue syndrome: A protocol for systematic review and meta-analysis. *Medicine*, 100 (18): p e25742. Link: <https://europepmc.org/article/med/33950958>
- Xu XS et al.** (2022) Effect of herbal cake-separated moxibustion on behavioral stress reactions and blood lactic acid level and muscular AMPK/PGC-1 α signaling in rats with chronic fatigue syndrome. *Zhen Ci Yan Jiu* [Accupunture research] 47 (10): 878-84. [Article in Chinese.] Link: doi.org/10.13702/j.1000-0607.20220017 (*NEW)
- Xue KY and Cui J** (2022) Treatment of chronic fatigue syndrome from yangming meridian. *Zhongguo Zhen Jiu* 42 (2): 203-7. [Article in Chinese]. doi.org/10.13703/j.0255-2930.20210106-0001
- Yang G et al.** (2019) Is the efficacy of repetitive transcranial magnetic stimulation influenced by baseline severity of fatigue symptom in patients with myalgic encephalomyelitis. *National Journal of Neuroscience* 130 (1): 64-70. Link: <https://www.ncbi.nlm.nih.gov/pubmed/31483181>
- Yang J et al.** (2022) Ginseng for the Treatment of Chronic Fatigue Syndrome: A Systematic Review of Clinical Studies. *Global Advances in Health and Medicine*. Link: doi.org/10.1177/2164957X221079790

- Yang J et al.** (2022) Effectiveness of Electroacupuncture in Patients with Chronic Fatigue Syndrome: A Systematic Review and Meta-analysis. *Journal of Acupuncture Research* 39 (3):170-181. **Link:** doi.org/10.13045/jar.2022.00143 (*NEW)
- Yin C et al.** (2021) A proprietary herbal drug Young Yum Pill ameliorates chronic fatigue syndrome in mice. *Phytomedicine* 88: 153602. **Link:** <https://pubmed.ncbi.nlm.nih.gov/34102522/>
- Yin Z et al.** (2020) Acupuncture for Chronic Fatigue Syndrome: An Overview of Systematic Reviews. *Chinese Journal of Integrative Medicine* [Epub ahead of print]. **Link:** <https://link.springer.com/article/10.1007/s11655-020-3195-3#citeas>
- You J et al.** (2021) Moxibustion for Chronic Fatigue Syndrome: A Systematic Review and Meta-Analysis. *Evidence-based Based Complementary Alternative Medicine: eCAM* 2021:6418217. **Link:** <https://pubmed.ncbi.nlm.nih.gov/34804182/>
- Zhang G et al.** (2023) Panax ginseng improves physical recovery and energy utilization on chronic fatigue in rats through the PI3K/AKT/mTOR signalling pathway. *Pharmaceutical Biology* 61(1): 316-323. **Link:** doi.org/10.1080/13880209.2023.2169719 (*NEW)
- Zhang H et al.** (2022) Red ginseng extract improves skeletal muscle energy metabolism and mitochondrial function in chronic fatigue mice. *Frontiers in Pharmacology* 13: 1077249. **Link:** doi.org/10.3389/fphar.2022.1077249 (*NEW)
Comment
- Zhang J et al.** (2022) Mechanism of action of Bu Zhong Yi Qi Decoction in the treatment of chronic fatigue syndrome based on network pharmacology and molecular docking. *Pharmacological Research - Modern Chinese Medicine* 4: 100139. **Link:** <https://doi.org/10.1016/j.prmcm.2022.100139> (*NEW)
- Zhang M-L et al.** (2021) Effect of acupoint catgut embedding in chronic fatigue syndrome patients: A protocol for systematic review and meta-analysis. *Medicine (Baltimore)* 100 (5): e23946. **Link:** <https://pubmed.ncbi.nlm.nih.gov/33592847/>
- Zhang Q et al.** (2019) Acupuncture for chronic fatigue syndrome: a systematic review and meta-analysis. *Acupuncture in Medicine* 37 (4): 211-222. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/31204859>
- Zhang X et al.** (2020) Advances in Clinical Research on Traditional Chinese Medicine Treatment of Chronic Fatigue Syndrome. *Evidence Based Complement Alternative Medicine (eCAM)* 2020: 4715679. **Link:** <https://pubmed.ncbi.nlm.nih.gov/33343675/>
- Zhang Y et al.** (2022) Chinese herbal medicine for the treatment of chronic fatigue syndrome: A systematic review and meta-analysis. *Frontiers in Pharmacology* 13: 958005. **Link:** doi.org/10.3389/fphar.2022.958005 (*NEW)

9.3. Diet and nutrition

Also see our [leaflets](#) on Diet & Nutrition.

- Al-Ani S et al.** (2021) Differences in Dietary Intake Among Healthy Volunteers and Myalgic Encephalomyelitis/ Chronic Fatigue Syndrome Patients. *Journal of the Academy of Nutrition and Dietetics* 232 (10): 124. **Link:** [https://jandonline.org/article/S2212-2672\(21\)01114-X/fulltext#relatedArticles](https://jandonline.org/article/S2212-2672(21)01114-X/fulltext#relatedArticles)
- Behan PO et al.** (1990) Effect of high doses of essential fatty acids on the postviral fatigue syndrome. *Acta Neurologica Scandinavica* 82(3): 209-216. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/2270749>
- Bjorklund G et al.** (2018) Chronic fatigue syndrome (CFS): Suggestions for a nutritional treatment in the therapeutic approach, *Biomedicine and Pharmacotherapy* 109: 1000-1007. **Link:** <https://tinyurl.com/y6cnaxpd>
- Campagnolo N et al.** (2017) Dietary and nutrition interventions for the therapeutic treatment of chronic fatigue syndrome/myalgic encephalomyelitis: a systematic review. *Journal of Human Nutrition and Diet* 30 (3): 247-259. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/28111818>
- Castro-Marrero J et al.** (2018) Low omega-3 index and polyunsaturated fatty acid status in patients with chronic fatigue syndrome/myalgic encephalomyelitis, *Prostaglandins Leukotrienes and Essential Fatty Acids* 139, 20-24. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/30471769>
- Castro-Marrero J et al.** (2021) Effect of Dietary Coenzyme Q10 Plus NADH Supplementation on Fatigue Perception and Health-Related Quality of Life in Individuals with Myalgic Encephalomyelitis/Chronic Fatigue Syndrome: A Prospective, Randomized, Double-Blind, Placebo-Controlled Trial. *Nutrients* 13: 2658. **Link:** <https://www.mdpi.com/2072-6643/13/8/2658>
- Castro-Marrero J et al.** (2022) Does Dietary Coenzyme Q10 plus Selenium Supplementation Ameliorate Clinical Outcomes by Modulating Oxidative Stress and Inflammation in Individuals with Myalgic Encephalomyelitis/Chronic Fatigue Syndrome? *Antioxidants & Redox Signalling* 36 (10-12): 729-739. **Link:** doi.org/10.1089/ars.2022.0018
- Cossington J et al.** (2020) Potential benefits of a ketogenic diet to improve response and recovery from physical exertion in people with Myalgic encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS): A feasibility study. *International Journal of Sport, Exercise and Health Research* 3 (2): 33-39. **Link:** http://www.sportscienceresearch.com/IJSEHR_201932_02.pdf
- Heap LC et al.** (1999) Vitamin B Status in Patients with Chronic Fatigue Syndrome. *Journal of the Royal Society of Medicine* 92(4): 183-185. **Link:** <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1297139/>
- Hobday RA et al.** (2008) Dietary intervention in chronic fatigue syndrome. *Journal of Human Nutrition and Dietetics* 21 (2): 141-149. **Link:** <http://onlinelibrary.wiley.com/doi/10.1111/j.1365-277X.2008.00857.x/abstract>

- Jacobson W et al.** (1993) Serum folate and chronic fatigue syndrome. *Neurology* 43(12): 2645. **Link:**
<https://www.ncbi.nlm.nih.gov/pubmed/8255470>
- Jones K and Probst Y.** (2017) Role of dietary modification in alleviating chronic fatigue syndrome symptoms: a systematic review. *Australian and New Zealand Journal of Public Health* 41 (4): 338-344. **Link:**
<https://www.ncbi.nlm.nih.gov/pubmed/28616881>
- Joustra ML et al.** (2017) Vitamin and mineral status in chronic fatigue syndrome and fibromyalgia syndrome: A systematic review and meta-analysis. *PLoS One* 12 (4): e0176631. **Link:**
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5409455/>
- Kim S-H et al.** (2022) A Comparative Study of Antifatigue Effects of Taurine and Vitamin C on Chronic Fatigue Syndrome. *Pharmacology & Pharmacy* 13 (8): 300-312. **Link:** doi.org/10.4236/pp.2022.138023 (*NEW)
- Krishnakumar P et al.** (2022) Intracellular Nutritional Biomarker Differences in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome Subjects and Healthy Controls. *Current Developments in Nutrition* 6 (1): 745. **Link:** doi.org/10.1093/cdn/nzac062.014 (*NEW)
- Maggini S et al.** (2021) Benefits of micronutrient supplementation on nutritional status, energy metabolism, and subjective wellbeing. *Nutricion Hospitalaria* 38 (Spec No2): 3-8. **Link:** doi.org/10.20960/nh.03788
- Marshall RP et al.** (2022) Role of Creatine Supplementation in Conditions Involving Mitochondrial Dysfunction: A Narrative Review. *Nutrients* 14 (3): 529. **Link:** doi.org/10.3390/nu14030529
- Russell-Jones G** (2022) Functional Vitamin B12 deficiency in Chronic Fatigue Syndrome. *International Journal of Psychiatry* 7 (3): 152-158. **Link:**
<https://b12oils.com/B12inCFSF.pdf> (*NEW)
- Shao et al.** (2019) Therapeutic Effect and Metabolic Mechanism of A Selenium-Polysaccharide from Ziyang Green Tea on Chronic Fatigue Syndrome. *Polymers* 10 (11). **Link:** <https://tinyurl.com/y4ckfpfu>
- Świątczak M et al.** (2022). Chronic Fatigue Syndrome in Patients with Deteriorated Iron Metabolism. *Diagnostics* 12 (9): 2057. **Link:**
doi.org/10.3390/diagnostics12092057 (*NEW)
- Venturini L et al.** (2019) Modification of Immunological Parameters, Oxidative Stress Markers, Mood Symptoms, and Well-Being Status in CFS Patients after Probiotic Intake: Observations from a Pilot Study. *Oxidative Medicine and Cellular Longevity* 2019. **Link:**
<https://www.hindawi.com/journals/omcl/2019/1684198/>
- Warren G et al.** (1999) The role of essential fatty acids in chronic fatigue syndrome: A case-controlled study of red-cell membrane essential fatty acids (EFA) and a placebo-controlled treatment study with high dose of EFA. *Acta Neurologica Scandinavica* 99(2): 112-116. **Link:**
<https://www.ncbi.nlm.nih.gov/pubmed/10071170>

Weigel B et al. (2021) A preliminary investigation of nutritional intake and supplement use in Australians with myalgic encephalomyelitis/chronic fatigue syndrome and the implications on health-related quality of life. *Food & Nutrition Research*, 65. **Link:**

<https://foodandnutritionresearch.net/index.php/fnr/article/view/5730>

Weigel B et al. (2022). Dietary supplements, daily nutrient intake, and health-related quality of life among people with myalgic encephalomyelitis/chronic fatigue syndrome. *Proceedings of the Nutrition Society* 81 (OCE3): E80. **Link:** doi.org/10.1017/S0029665122001057 (*NEW)

Yin C et al. (2021) A proprietary herbal drug Young Yum Pill ameliorates chronic fatigue syndrome in mice. *Phytomedicine* 88: 153602. **Link:**

<https://doi.org/10.1016/j.phymed.2021.153602>

9.4. Exercise, Pacing and activity management

Abonie US et al. (2018) Effects of activity pacing in patients with chronic conditions associated with fatigue complaints: a meta-analysis, *Disability and Rehabilitation*. **Link:**

<https://www.tandfonline.com/doi/abs/10.1080/09638288.2018.1504994>

Antcliff D et al. (2019) Survey of activity pacing across healthcare professionals informs a new activity pacing framework for chronic pain/fatigue. *Musculoskeletal Care* 1– 11. **Link:**

<https://onlinelibrary.wiley.com/doi/10.1002/msc.1421>

Antcliff D et al. (2021) “Pacing does help you get your life back”: The acceptability of a newly developed activity pacing framework for chronic pain/fatigue. *Musculoskeletal Care*: 1-12. **Link:**

<https://onlinelibrary.wiley.com/doi/pdf/10.1002/msc.1557>

Antcliff D et al. (2021) Testing a newly developed activity pacing framework for chronic pain/fatigue: a feasibility study. *BMJ Open* 11 (12): e045398. **Link:**

<https://pubmed.ncbi.nlm.nih.gov/34880007/>

Ballantine R et al. (2019) Gravity-induced exercise intervention in an individual with chronic fatigue syndrome/myalgic encephalomyelitis and postural tachycardia syndrome: a case report. *International Journal of Therapy and Rehabilitation* 26 (5). **Link:**

<https://www.magonlinelibrary.com/doi/abs/10.12968/ijtr.2016.0035>

Barhost EE et al. (2021) Pain-related post-exertional malaise in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS) and Fibromyalgia: A systematic review and three-level meta-analysis. *Pain Medicine*. [Epub ahead of print.] **Link:** <https://pubmed.ncbi.nlm.nih.gov/34668532/>

Bazelmans E et al. (2001) Is physical deconditioning a perpetuating factor in chronic fatigue syndrome? A controlled study on maximal exercise performance and relations with fatigue, impairment and physical activity. *Psychological Medicine* 31(1): 107-114. **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/11200949>

Black CD et al. (2005) Increased daily physical activity and fatigue symptoms in chronic fatigue syndrome. *Dynamic Medicine* 4(1): 3. **Link:**

<https://link.springer.com/article/10.1186/1476-5918-4-3>

Breach J et al. (2022) Evaluation of a training programme to enable MSK physiotherapists to identify individuals with CFS symptoms post-COVID19. *Physiotherapy* 114 (1 E178): 145. **Link:** doi.org/10.1016/j.physio.2021.12.151

Broadbent S et al. (2020) Patient experiences and the psychosocial benefits of group aquatic exercise to reduce symptoms of Myalgic Encephalomyelitis/Chronic Fatigue Syndrome: a pilot study. *Fatigue: Biomedicine, Health and Behaviour* 8 (2): 84-96. **Link:**

doi.org/10.1080/21641846.2020.1751455

Brigden A et al. (2019) Results of the feasibility phase of the managed activity graded exercise in teenagers and pre-adolescents (MAGENTA) randomised controlled trial of treatments for chronic fatigue syndrome/myalgic encephalomyelitis. *Pilot and Feasibility Studies* 5: 151. **Link:**

<https://pilotfeasibilitystudies.biomedcentral.com/articles/10.1186/s40814-019-0525-3>

Broadbent S et al. (2018) Effects of a short-term aquatic exercise intervention on symptoms and exercise capacity in individuals with chronic fatigue syndrome/myalgic encephalomyelitis: a pilot study. *European Journal of Applied physiology* [Epub ahead of print]. **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/29923110>

Brown SI (2021) Graded exercise therapy for ME/CFS: finding consensus between the royal colleges, patients, and researchers. *BMJ* 2021 375: n3026. **Link:** <https://pubmed.ncbi.nlm.nih.gov/34880053/>

van Campen CM and Visser FC (2022) Comparison of the Degree of Deconditioning in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS) Patients with and without Orthostatic Intolerance. *Medical Research Archives* 10 (6). **Link:** doi.org/10.18103/mra.v10i6.2858 (*NEW)

Casson S et al. (2022) The effectiveness of activity pacing interventions for people with chronic fatigue syndrome: a systematic review and meta-analysis. *Disability and Rehabilitation* 8: 1-15 [Epub ahead of print]. **Link:**

doi.org/10.1080/09638288.2022.2135776 (*NEW)

Chalder T et al. (2022) Patients with chronic fatigue syndrome can improve with graded exercise therapy: response to Vink et al. 2022. *Disability and Rehabilitation*: 1-2. **Link:** doi.org/10.1080/09638288.2022.2059112

Cheshire A et al. (2018) Guided graded Exercise Self-help for chronic fatigue syndrome: patient experiences and perceptions, *Disability Rehabilitation* [Epub ahead of print] **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/30325677>

Clague-Baker N et al. (2021) Survey of people with Myalgic Encephalomyelitis (ME) to explore their use and experiences of physiotherapy services in the UK. *Physiotherapy* P076 113 (1): E101-E102. **Link:** [https://www.physiotherapyjournal.com/article/S0031-9406\(21\)00164-4/fulltext#relatedArticles](https://www.physiotherapyjournal.com/article/S0031-9406(21)00164-4/fulltext#relatedArticles)

Clark LV et al. (2017) Guided graded exercise self-help plus specialist medical care versus specialist medical care alone for chronic fatigue syndrome (GETSET): a pragmatic randomised controlled trial. *Lancet* 390 (10092): 363-373. **Link:** <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5522576/>

Clark LV et al. (2021) Guided graded exercise self-help for chronic fatigue syndrome: Long term follow up and cost-effectiveness following the GETSET trial. *Journal of Psychosomatic Research* 146: 110484. **Link:** <https://pubmed.ncbi.nlm.nih.gov/33895431/>

Clauw DJ. (2017) Guided graded exercise self-help as a treatment of fatigue in chronic fatigue syndrome. *Lancet* 390 (10092): 335-336. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/28648401>

Cook DB et al. (2022) Cardiopulmonary, metabolic, and perceptual responses during exercise in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS): A Multi-site Clinical Assessment of ME/CFS (MCAM) sub-study. *PLoS ONE* 17(3): e0265315. **Link:** doi.org/10.1371/journal.pone.0265315

Dannaway J et al. (2017) Exercise therapy is a beneficial intervention for chronic fatigue syndrome (PEDro synthesis). *British Journal of Sports Medicine*. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/28982730>

Eik H et al. (2020) Rebuilding a tolerable life: narratives of women recovered from fibromyalgia. *Physiotherapy Theory and Practice*. **Link:** <https://www.tandfonline.com/doi/abs/10.1080/09593985.2020.1830454?journalCode=iptp20>

Espejo JA et al. (2018) Unraveling the Molecular Determinants of Manual Therapy: An Approach to Integrative Therapeutics for the Treatment of Fibromyalgia and Chronic Fatigue Syndrome/Myalgic Encephalomyelitis. *International Journal of Molecular Science* 19 (9). **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/30205597>

Farragher JF et al. (2020) Energy management education and occupation-related outcomes in adults with chronic diseases: A scoping review. *British Journal of Occupational Therapy* [Epub ahead of print]. **Link:** <https://journals.sagepub.com/doi/abs/10.1177/0308022620904327?journalCode=bjod&#articleCitationDownloadContainer>

- Ferrar KE et al.** (2017) Pacing, Conventional Physical Activity and Active Video Games to Increase Physical Activity for Adults with Myalgic Encephalomyelitis/Chronic Fatigue Syndrome: Protocol for a Pilot Randomized Controlled Trial. *JMIR Research Protocols* 6 (8): e117. **Link:** <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5558045/>
- Fulcher KY and White PD.** (1997) Randomised controlled trial of graded exercise in patients with the chronic fatigue syndrome. *BMJ* 314(7095): 1647. Correspondence: see *BMJ* 1997, 315: 947. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/9180065>
- Geraghty K et al.** (2019) Myalgic encephalomyelitis/chronic fatigue syndrome patients' reports of symptom changes following cognitive behavioural therapy, graded exercise therapy and pacing treatments: Analysis of a primary survey compared with secondary surveys. *Journal of Health Psychology* 24 (10): 1318-1333 **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/28847166>
- Geraghty K and Blease C.** (2018) Myalgic encephalomyelitis/chronic fatigue syndrome and the biopsychosocial model: a review of patient harm and distress in the medical encounter. *Disability and Rehabilitation* 21: 1-10. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/29929450>
- Goudsmit EM et al.** (2012) Pacing as a strategy to improve energy management in myalgic encephalomyelitis/chronic fatigue syndrome: a consensus document. *Disability and Rehabilitation* 34(13): 1140-1147. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/22181560>
- Ingman T et al.** (2022) A systematic literature review of randomized controlled trials evaluating prognosis following treatment for adults with chronic fatigue syndrome. *Psychological medicine*. **Link:** [https://kclpure.kcl.ac.uk/portal/en/publications/a-systematic-literature-review-of-randomized-controlled-trials-evaluating-prognosis-following-treatment-for-adults-with-chronic-fatigue-syndrome\(bbfadae-b24f-4ef4-8739-c3fdb036429\).html](https://kclpure.kcl.ac.uk/portal/en/publications/a-systematic-literature-review-of-randomized-controlled-trials-evaluating-prognosis-following-treatment-for-adults-with-chronic-fatigue-syndrome(bbfadae-b24f-4ef4-8739-c3fdb036429).html) (*NEW)
- Kindlon T and Goudsmit EM.** (2010) Graded exercise for chronic fatigue syndrome: too soon to dismiss reports of adverse reactions [Letter to the editor]. *Journal of Rehabilitation Medicine* 42(2): 184. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/20140417>
- Kindlon T.** (2017) Do graded activity therapies cause harm in chronic fatigue syndrome? *Journal of Health Psychology* 22 (9): 1146-1154. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/28805516>
- King E et al.** (2020) Patterns of daytime physical activity in patients with chronic fatigue syndrome. *Journal of Psychosomatic Research* [Epub ahead of print]. **Link:** <https://www.sciencedirect.com/science/article/abs/pii/S0022399919310323>

- Kos D et al.** (2015) Activity Pacing Self-Management in Chronic Fatigue Syndrome: A Randomized Controlled Trial. *American Journal of Occupational Therapy* 69(5). **Link:**
<https://www.ncbi.nlm.nih.gov/pubmed/26356665>
- Kujawski S et al.** (2020) Prediction of Discontinuation of Structured Exercise Programme in Chronic Fatigue Syndrome Patients. *Journal of Clinical Medicine* **Link:** <https://pubmed.ncbi.nlm.nih.gov/33114704/>
- Lapp CW.** (1997) Exercise limits in chronic fatigue syndrome [Letter to the editor]. *The American Journal of Medicine* 103(1): 83. **Link:**
<https://www.ncbi.nlm.nih.gov/pubmed/9236491>
- Larun L et al.** (2017) Exercise therapy for chronic fatigue syndrome. *Cochrane Database of Systematic Reviews* 4. **Link:**
<https://www.ncbi.nlm.nih.gov/pubmed/28444695>
- Leong KH et al.** (2022) Treatments of chronic fatigue syndrome and its debilitating comorbidities: a 12-year population-based study. *Journal of Translational Medicine* 20: 268. **Link:** doi.org/10.1186/s12967-022-03461-0 (*NEW)
- Li Y et al.** (2022) Altered Effective Connectivity of Resting-State Networks by Tai Chi Chuan in Chronic Fatigue Syndrome Patients: A Multivariate Granger Causality Study. *Frontiers in Neurology* 13: 858833. **Link:**
doi.org/10.3389/fneur.2022.858833 (*NEW)
- Macnamara C et al.** (2018) Personalised relaxation practice to improve sleep and functioning in patients with chronic fatigue syndrome and depression: study protocol for a randomised controlled trial. *Trials* 19 (1): 371. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/29996933>
- Marks DF** (2023) Treatment Harms to Patients with Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Advances in Bioengineering & Biomedical Science Research* 6(1): 01-04. **Link:**
doi.org/10.33140/ABBSR.06.01.01 (*NEW)
- Moss-Morris R et al.** (2005) A Randomized Controlled Graded Exercise Trial for Chronic Fatigue Syndrome: Outcomes and Mechanisms of Change. *Journal of Health Psychology* 10(2): 245-259. **Link:**
<https://www.ncbi.nlm.nih.gov/pubmed/15723894>
- Oka T et al.** (2017) Development of a recumbent isometric yoga program for patients with severe chronic fatigue syndrome/myalgic encephalomyelitis: A pilot study to assess feasibility and efficacy. *Biopsychosocial Medicine* 11: 5. **Link:**
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5335724/>
- Oka T et al.** (2018) Changes in fatigue, autonomic functions, and blood biomarkers due to sitting isometric yoga in patients with chronic fatigue syndrome. *Biopsychosocial Medicine* 12: 3. **Link:**
<https://www.ncbi.nlm.nih.gov/pubmed/29643935>

- Oka T et al.** (2019) The longitudinal effects of seated isometric yoga on blood biomarkers, autonomic functions, and psychological parameters of patients with chronic fatigue syndrome: a pilot study. *BioPsychoSocial Medicine* 13 (28). **Link:** <https://bpsmedicine.biomedcentral.com/articles/10.1186/s13030-019-0168-x>
- Powell P et al.** (2001) Randomised controlled trial of patient education to encourage graded exercise in chronic fatigue syndrome. *BMJ* 322: 387. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/11179154>
- Sharpe M et al.** (2021) Evidence-Based Care for People with Chronic Fatigue Syndrome and Myalgic Encephalomyelitis. *Journal of General Internal Medicine* 37 (2): 449-452. **Link:** doi.org/10.1007/s11606-021-07188-4
- Shepherd C.** (2001) Pacing and Exercise in Chronic Fatigue Syndrome. *Physiotherapy* 87(8): 395-396. **Link:** <http://www.sciencedirect.com/science/article/pii/S0031940605654570>
- Smakowski A et al.** (2021) Graded Exercise Therapy for Patients with Chronic Fatigue Syndrome in Secondary care: a benchmarking study. *Disability & Rehabilitation*. **Link:** [https://kclpure.kcl.ac.uk/portal/en/publications/graded-exercise-therapy-for-patients-with-chronic-fatigue-syndrome-in-secondary-care\(fbd405e8-ae37-4690-9e75-54b3052690f4\)/export.html](https://kclpure.kcl.ac.uk/portal/en/publications/graded-exercise-therapy-for-patients-with-chronic-fatigue-syndrome-in-secondary-care(fbd405e8-ae37-4690-9e75-54b3052690f4)/export.html)
- Thompson DP et al.** (2017) Symptoms of chronic fatigue syndrome/myalgic encephalopathy are not determined by activity pacing when measured by the chronic pain coping inventory. *Physiotherapy*. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/28843450>
- Takakura S et al.** (2019) Changes in circulating microRNA after recumbent isometric yoga practice by patients with myalgic encephalomyelitis/chronic fatigue syndrome: an explorative pilot study. *Biopsychosocial Medicine* 13: 29. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/31827600>
- Van Campen CL et al.** (2020) Heart Rate Thresholds to Limit Activity in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome Patients (Pacing): Comparison of Heart Rate Formulae and Measurements of the Heart Rate at the Lactic Acidosis Threshold during Cardiopulmonary Exercise Testing. *Advances in Physical Education* 10 (2). **Link:** <https://www.scirp.org/journal/paperinformation.aspx?paperid=100333>
- Vink M and Vink-Niese A** (2020) Graded exercise therapy doesn't restore the ability to work in ME/CFS. Rethinking of a Cochrane review. *Work* 66 (2): 283-308. **Link:** doi.org/10.3233/WOR-203174
- Vink M and Vink-Niese A** (2018) Multidisciplinary rehabilitation treatment is not effective for myalgic encephalomyelitis/chronic fatigue syndrome: A review of the FatiGo trial. *Health Psychology Open* 5 (2): 2055102918792648. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/30094055>

- Vink M and Vink-Niese A** (2018) Graded exercise therapy for myalgic encephalomyelitis/chronic fatigue syndrome is not effective and unsafe. Re-analysis of a Cochrane review, *Health Psychology Open* 5 (2). **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/30305916>
- Wallman KE et al.** (2004) Randomised controlled trial of graded exercise in chronic fatigue syndrome. *Medical Journal of Australia* 180(9): 444. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/15115421>
- White PD and Etherington J** (2021) Adverse outcomes in trials of graded exercise therapy for adult patients with chronic fatigue syndrome. *Journal of Psychosomatic Research* 147: 110533. **Link:** doi.org/10.1016/j.jpsychores.2021.110533
- Wormgoor MEA and Rodenburg SC.** (2021) The evidence base for physiotherapy in myalgic encephalomyelitis/chronic fatigue syndrome when considering post-exertional malaise: a systematic review and narrative synthesis. *Journal of Translational Medicine* 19 (1): 1. **Link:** <https://pubmed.ncbi.nlm.nih.gov/33397399/>
- Wu K, et al.** (2022) Tai Chi increases functional connectivity and decreases chronic fatigue syndrome: A pilot intervention study with machine learning and fMRI analysis. *PLoS One* 17 (12): e0278415. **Link:** doi.org/10.1371/journal.pone.0278415 (*NEW)
- Xie F et al.** (2022) The Qigong of Prolong Life With Nine Turn Method Relieve Fatigue, Sleep, Anxiety and Depression in Patients With Chronic Fatigue Syndrome: A Randomized Controlled Clinical Study. *Frontiers in Medicine* 9: 828414. **Link:** doi.org/10.3389/fmed.2022.828414 (*NEW)
- Yu X** (2021) The Therapeutic Effect of Sports on Relieving Chronic Fatigue. *Revista Brasileira de Medicina do Esporte* 27 (3) Jul-Sep 2021: 338-341. **Link:** <https://www.scielo.br/j/rbme/a/7krKXJd9SgZ9WWyLNNVZJsd/?lang=en>
- Zalewski P et al.** (2019) The Impact of a Structured Exercise Programme upon Cognitive Function in Chronic Fatigue Syndrome Patients. *Brain Science* 10 (1): 4. **Link:** <https://www.mdpi.com/2076-3425/10/1/4>
- Zhu Y et al.** (2022) Electroacupuncture at BL15 attenuates chronic fatigue syndrome by downregulating iNOS/NO signaling in C57BL/6 mice. *Anatomical Record (Hoboken)* [Epub ahead of print]. **Link:** doi.org/10.1002/ar.24953 (*NEW)
- Zhao S et al.** (2022) Differential Metabolites and Metabolic Pathways Involved in Aerobic Exercise Improvement of Chronic Fatigue Symptoms in Adolescents Based on Gas Chromatography–Mass Spectrometry. *International Journal of Environmental Research and Public Health* 19: 2377. **Link:** doi.org/10.3390/ijerph19042377

9.5. General management

- Ali S et al.** (2017) Guided Self-Help for Patients with Chronic Fatigue Syndrome Prior to Starting Cognitive Behavioural Therapy: a Cohort Study. *Behavioural and Cognitive Psychotherapy* 45 (5): 448-466. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/28473005>
- Arnett SV and Clark IA.** (2012) Inflammatory fatigue and sickness behaviour – Lessons for the diagnosis and management of chronic fatigue syndrome. *Journal of Affective Disorders* 141 (2–3): 130-142. **Link:** [http://www.jad-journal.com/article/S0165-0327\(12\)00235-2/abstract](http://www.jad-journal.com/article/S0165-0327(12)00235-2/abstract)
- BACME.** (2015) British Association for CFS/ME: Therapy and Symptom Management in CFS/ME. **Link:** <https://www.bacme.info/>
- Bateman L et al.** (2021) Myalgic Encephalomyelitis/Chronic Fatigue Syndrome: Essentials of Diagnosis and Management. *Mayo Clinic Proceedings* 96 (11): 2861-2878. **Link:** doi.org/10.1016/j.mayocp.2021.07.004
- Castro-Marrero J et al.** (2017) Treatment and management of chronic fatigue syndrome/myalgic encephalomyelitis: all roads lead to Rome. *British Journal of Pharmacology* 174 (5): 345-369. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/28052319>
- Catchpole S and Garip G** (2019) Acceptance and identity change: An interpretative phenomenological analysis of carers' experiences in myalgic encephalopathy/chronic fatigue syndrome. *Journal of Health Psychology*. **Link:** <https://tinyurl.com/y3fpxwht>
- Chu L et al.** (2020) Environmental accommodations for university students affected by myalgic encephalomyelitis/chronic fatigue syndrome (ME/CFS). *Work* 66 (2): 315-326. **Link:** doi.org/10.3233/WOR-203176
- Clery P et al.** (2022) What treatments work for anxiety and depression in children and adolescents with chronic fatigue syndrome? An updated systematic review. *BMJ Open*. 12 (1): e051358. **Link:** <https://pubmed.ncbi.nlm.nih.gov/35105619/>
- Collin SM et al.** (2018) Chronic fatigue syndrome (CFS/ME) symptom-based phenotypes and 1-year treatment outcomes in two clinical cohorts of adult patients in the UK and The Netherlands. *Journal of Psychosomatic Research* 104: 29-34. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/29275782>
- Collin SM. and Crawley E.** (2017) Specialist treatment of chronic fatigue syndrome/ME: a cohort study among adult patients in England. *MBC Health Services Research* 17:488. **Link:** <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5513420/>
- Crawley EM et al.** (2017) Clinical and cost-effectiveness of the Lightning Process in addition to specialist medical care for paediatric chronic fatigue syndrome: randomised controlled trial. *Archives of Disease in Childhood*, 103 (2): 155-164. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/28931531>

Daniels J and Loades ME. (2017) A Novel Approach to Treating CFS and Co-morbid Health Anxiety: A Case Study. *Clinical Psychology and Psychotherapy* 24 (3): 727-736. **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/27714891>

Deale A et al. (1998) Illness beliefs and treatment outcome in chronic fatigue syndrome. *Journal of Psychosomatic Research* 45(1): 77-83. **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/9720857>

Devendorf AR et al. (2017) Approaching recovery from myalgic encephalomyelitis and chronic fatigue syndrome: Challenges to consider in research and practice. *Journal of Health Psychology* 1:1359105317742195. **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/29182007>

Froehlich L et al. (2021) Medical Care Situation of People with Myalgic Encephalomyelitis/Chronic Fatigue Syndrome in Germany. *Medicina* 57, 646. **Link:** <https://www.mdpi.com/1648-9144/57/7/646>

Green CR et al. (2015) National Institutes of Health Pathways to Prevention Workshop: Advancing the Research on Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Annals of Internal Medicine* 162(12): 860-865. **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/26075757>

Jonsjo MA et al. (2019) Acceptance & Commitment Therapy for ME/CFS (Chronic Fatigue Syndrome) – A feasibility study. *Journal of Contextual Behaviour Science* [Epub ahead of print]. **Link:**

<https://www.sciencedirect.com/science/article/pii/S2212144718301959>

Khanpour Ardestani S et al. (2021) Systematic Review of Mind-Body Interventions to Treat Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Medicina* 57: 652. **Link:** <https://pubmed.ncbi.nlm.nih.gov/34202826/>

Kraaj V et al. (2017) Cognitive and behavioral coping in people with Chronic fatigue syndrome: An exploratory study searching for intervention targets for depressive symptoms. *Journal of Health Psychology* 1: 1359105317707259. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/28810458>

Kuratsune H. (2018) Diagnosis and Treatment of Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Brain and Nerves* 70 (1): 11-18. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/29348370> (Article in Japanese)

Li SH et al. (2017) Randomised controlled trial of online continuing education for health professionals to improve the management of chronic fatigue syndrome: a study protocol. *BMJ Open*. 7 (5): e014133. **Link:**

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5541332/>

Leong KH et al. (2022) Treatments of chronic fatigue syndrome and its debilitating comorbidities: a 12-year population-based study. *Journal of Translational Medicine* 20: 268. **Link:** doi.org/10.1186/s12967-022-03461-0 (*NEW)

- McBride RL et al.** (2017) Cognitive remediation training improves performance in patients with chronic fatigue syndrome. *Psychiatry Research* 257:400-405. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/28830024>
- McDonald S et al.** (2021) Exploring Symptom Fluctuations and Triggers in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome Using Novel Patient-Centred N-of-1 Observational Designs: A Protocol for a Feasibility and Acceptability Study. *Patient* 15 (2): 197-206. **Link:** doi.org/10.1007/s40271-021-00540-0
- McCrone P et al.** (2012) Adaptive Pacing, Cognitive Behaviour Therapy, Graded Exercise, and Specialist Medical Care for Chronic Fatigue Syndrome: A Cost- Effectiveness Analysis. *PLoS ONE* 7(8): e40808. **Link:** <http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0040808>
- McKay PG et al.** (2021) Chronic fatigue syndrome (CFS)/Myalgic Encephalomyelitis (ME) and Fibromyalgia (FM): the foundation of a relationship. *British Journal of Pain* 15 (1): 26-39. **Link:** <https://pubmed.ncbi.nlm.nih.gov/33633851/>
- McPhee G et al.** (2019) Monitoring treatment harm in myalgic encephalomyelitis/chronic fatigue syndrome: A freedom-of-information study of National Health Service specialist centres in England. *Journal of Health Psychology* [Epub ahead of print]. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/31234662>
- ME Association, The** (2010) Managing my M.E.: What people with ME/CFS and their carers want from the UK's health and social services. *Gawcott: The ME Association*. **Link:** <http://www.meassociation.org.uk/wp-content/uploads/2010/09/2010-survey-report-lo-res10.pdf>
- ME Association, The** (2015) 'No decisions about me without me': ME/CFS Illness Management Survey Results Part 1. *Gawcott: The ME Association*. **Link:** <https://tinyurl.com/y24dv3s8>
- National Institute for Health and Care Excellence.** (2007) Chronic fatigue syndrome/myalgic encephalomyelitis (or encephalopathy): diagnosis and management. *NICE guideline [CG53]*. **Link:** <https://www.nice.org.uk/guidance/cg53>
- National Institute for Health and Care Excellence.** (2012) Headaches in over 12s: diagnosis and management. *NICE guidelines [CG150]*. **Link:** <https://www.nice.org.uk/guidance/cg150>
- National Institute for Health and Care Excellence.** (2013) Neuropathic pain in adults: pharmacological management in non-specialist settings. *NICE guidelines [CG173]*. **Link:** <https://www.nice.org.uk/guidance/cg173>
- NHS Scotland.** (2010) Scottish Good Practice Statement on ME-CFS. *Edinburgh: The Scottish Government*. **Link:** <http://www.scot.nhs.uk/scottish-good-practice-statement-on-me-cfs/>

O'Boyle S et al. (2022) A Natural History of Disease Framework for Improving the Prevention, Management, and Research on Post-viral Fatigue Syndrome and Other Forms of Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Frontiers in Medicine* 8:688159. **Link:**

<https://www.frontiersin.org/articles/10.3389/fmed.2021.688159/full>

Rowe K (2022) Chronic Fatigue Syndrome/Myalgic Encephalomyelitis (CFS/ME) in Adolescents: Practical Guidance and Management Challenges. *Adolescent Health, Medicine and Therapeutics* 14: 13-26. **Link:** doi.org/10.2147/AHMT.S317314 (*NEW) **Comment**

Russell C et al. (2017) Do evidence-based interventions for chronic fatigue syndrome improve sleep? A systematic review and narrative synthesis. *Sleep Medicine Review* 33: 101-110. **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/27524207>

Ryckeghem H et al. (2017) Exploring the potential role of the advanced nurse practitioner within a care path for patients with chronic fatigue syndrome. *Journal of Advanced Nursing* 73 (7): 1610-1619. **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/28000331>

Sato W (2022) Patients with Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS) Who Have Already Visited Some Medical Institutions: Diagnosis, Treatment and Research. *Brain and Nerve* 74 (5): 652-659. [Article in Japanese.] **Link:** doi.org/10.11477/mf.1416202093 (*NEW)

Schmaling KB et al. (2005) A longitudinal study of physical activity and body mass index among persons with unexplained chronic fatigue. *Journal of Psychosomatic Research* 58(4): 375-381. **Link:**

<http://www.sciencedirect.com/science/article/pii/S0022399904006415>

Sharpe M and Greco M (2019) Chronic fatigue syndrome and an illness-focused approach to care: controversy, morality and paradox. *Medical Humanities* [Epub ahead of print] **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/31213482>

Sharpe M et al. (2021) Evidence-Based Care for People with Chronic Fatigue Syndrome and Myalgic Encephalomyelitis. *Journal of General Internal Medicine* 37 (2): 449-452. **Link:** doi.org/10.1007/s11606-021-07188-4

Shimomura T (2022) Patients with Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS) Who Have Already Visited Some Medical Institutions: The Points of Diagnosis and Treatment. *Brain and Nerve* 74 (5): 660-667. [Article in Japanese.] **Link:** doi.org/10.11477/mf.1416202094 (*NEW)

Sirois FM and Hirsch JK (2019) Self-compassion and Adherence in Five Medical Samples: the Role of Stress. *Mindfulness* 10 (1): 46-54. **Link:**

<https://tinyurl.com/yxh226vf>

- Smith MEB et al.** (2015) Treatment of Myalgic Encephalomyelitis/Chronic Fatigue Syndrome: A Systematic Review for a National Institutes of Health Pathways to Prevention Workshop Treatment of Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Annals of Internal Medicine* 162(12): 841-850. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/26075755>
- Spencer LH et al.** (2023) What interventions or best practice are there to support people with Long COVID, or similar post-viral conditions or conditions characterised by fatigue, to return to normal activities: a rapid review. *medRxiv* [Preprint]. **Link:** doi.org/10.1101/2023.01.24.23284947 (*NEW)
- Staud R et al.** (2015) Evidence for sensitized fatigue pathways in patients with chronic fatigue syndrome. *PAIN* 156(4): 750-759. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/25659069>
- Straub RK & Powers CM** (2021) Chronic Fatigue Syndrome: A Case Report Highlighting Diagnosing and Treatment Challenges and the Possibility of Jarisch–Herxheimer Reactions If High Infectious Loads Are Present. *Healthcare* 9 (11): 1537. **Link:** <https://www.mdpi.com/2227-9032/9/11/1537/htm>
- Sutcliffe K et al.** (2010) Home orthostatic training in chronic fatigue syndrome – a randomized, placebo-controlled feasibility study. *European Journal of Clinical Investigation* 40(1): 18-24. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/19912315>
- Tan MP et al.** (2010) Home orthostatic training in vasovagal syncope modifies autonomic tone: results of a randomized, placebo-controlled pilot study. *Europace* 12(2): 240-246. **Link:** <https://academic.oup.com/europace/article/12/2/240/431552>
- Turner-Stokes L and Wade DT** (2020) Updated NICE guidance on chronic fatigue syndrome. *BMJ* 371: m4774. **Link:** <https://pubmed.ncbi.nlm.nih.gov/33328173/>
- Van Oosterwijck J et al.** (2017) The Role of Autonomic Function in Exercise-Induced Endogenous Analgesia: A Case-control study in Myalgic Encephalomyelitis/ Chronic Fatigue Syndrome and Healthy People. *Pain Physician* 20 (3): E389-E399. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/28339438>
- Vos-Vromans D et al.** (2017) Economic evaluation of multidisciplinary rehabilitation treatment versus cognitive behavioural therapy for patients with chronic fatigue syndrome: A randomized controlled trial. *PLoS One* 12 (6): e0177260. **Link:** <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5456034/>
- Whitehead L and Campion P.** (2002) Can General Practitioners Manage Chronic Fatigue Syndrome? A Controlled Trial. *Journal of Chronic Fatigue Syndrome* 10(1): 55-64. **Link:** http://www.tandfonline.com/doi/abs/10.1300/J092v10n01_05

9.6. Immunoabsorption/ Apheresis

Bornstein SR et al. (2021) Chronic post-COVID-19 syndrome and chronic fatigue syndrome: Is there a role for extracorporeal apheresis? *Molecular Psychiatry* 27 (1): 34-37. **Link:** doi.org/10.1038/s41380-021-01148-4

Scheibenbogen C et al. (2018) Immunoabsorption to remove β_2 adrenergic receptor antibodies in Chronic Fatigue Syndrome CFS/ME. *PLoS One* 13 (3): e0193672. **Link:** <https://pubmed.ncbi.nlm.nih.gov/29543914/>

Tölle M et al. (2020) Myalgic Encephalomyelitis/Chronic Fatigue Syndrome: Efficacy of Repeat Immunoabsorption. *Journal of Clinical Medicine* 9 (8): 2443. **Link:** <https://pubmed.ncbi.nlm.nih.gov/32751659/>

9.7. PACE trial

Agardy S. (2017) Chronic fatigue syndrome patients have no reason to accept the PACE trial results: Response to Keith J Petrie and John Weinman. *Journal of Health Psychology* 22 (9): 1206-1208. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/28805512>

Carr E et al. (2021) Discernment of mediator and outcome measurement in the PACE trial. *Journal of Psychosomatic Research* 149: 110595. **Link:** doi.org/10.1016/j.jpsychores.2021.110595

Edwards J. (2017) PACE team response shows a disregard for the principles of science. *Journal of Health Psychology* 22 (9): 1155-1158. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/28805520>

Friedberg F et al. (2019) Rethinking the Standard of Care for Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Journal of General Internal Medicine* pp 1-4. **Link:** <https://tinyurl.com/vc4wujm>

Geraghty KJ. (2017) Further commentary on the PACE trial: Biased methods and unreliable outcomes. *Journal of Health Psychology* 22 (9): 1209-1216. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/28805517>

Goudsmit E and Howes S. (2017) Bias, misleading information and lack of respect for alternative views have distorted perceptions of myalgic encephalomyelitis/chronic fatigue syndrome and its treatment. *Journal of Health Psychology* 22 (9): 1159-1167. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/28805527>

Jason LA. (2017) The PACE trial missteps on pacing and patient selection. *Journal of Health Psychology* 22 (9): 1141-1145. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/28805518>

Krike KD. (2017) PACE investigators' response is misleading regarding patient survey results. *Journal of Health Psychology* 22 (9): 1168-1176. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/28805528>

- Lubet S.** (2017) Defense of the PACE trial is based on argumentation fallacies. *Journal of Health Psychology* 22 (9): 1201-1205. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/28805515>
- Lubet S.** (2017) Investigator bias and the PACE trial. *Journal of Health Psychology* 22 (9): 1123-1127. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/28805514>
- Petrie KJ and Weinman J.** (2017) The PACE trial: It's time to broaden perceptions and move on. *Journal of Health Psychology* 22 (9): 1198-1200. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/28805523>
- PLOS ONE Editors, The** (2017) Expression of Concern: Adaptive Pacing, Cognitive Behaviour Therapy, Graded Exercise, and Specialist Medical Care for Chronic Fatigue Syndrome: A Cost-Effectiveness Analysis. *PLoS One* 12 (5): e01777037. **Link:** <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5412692/>
- Sharpe M et al.** (2015) Rehabilitative treatments for chronic fatigue syndrome: long- term follow-up from the PACE trial. *The Lancet Psychiatry* 2(12): 1067-1074. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/26521770>
- Sharpe M et al.** (2019) The PACE trial of treatments for chronic fatigue syndrome: a response to WILSHIRE et al. *BMC Psychology* 7 (1): 15. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/30871632>
- Shepherd CB.** (2013) Comments on 'Recovery from chronic fatigue syndrome after treatments given in the PACE trial' [Letter to the editor]. *Psychological Medicine* 43(8): 1790-1791. **Link:** <https://tinyurl.com/y3y7nn88>
- Shepherd CB.** (2016) Patient reaction to the PACE trial [Correspondence]. *The Lancet Psychiatry* 3(2): e7-e8. **Link:** [http://www.thelancet.com/pdfs/journals/lanpsy/PIIS2215-0366\(15\)00546-5.pdf](http://www.thelancet.com/pdfs/journals/lanpsy/PIIS2215-0366(15)00546-5.pdf)
- Shepherd CB.** (2017) PACE trial claims for recovery in myalgic encephalomyelitis/chronic fatigue syndrome - true or false? It's time for an independent review of the methodology and results. *Journal of Health Psychology* 22 (9): 1187-1191. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/28805522>
- Stouten B et al.** (2011) The PACE trial in chronic fatigue syndrome [Correspondence]. *The Lancet* 377(9780): 1832-1833. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/21592559>
- Stouten B.** (2017) PACE-GATE: An alternative view on a study with a poor trial protocol. *Journal of Health Psychology* 22 (9): 1192-1197. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/28805525>
- Tuller D.** (2017) Once again, the PACE authors respond to concerns with empty answers. *Journal of Health Psychology* 22 (9): 1118-1122. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/28805521>

Vink M. PACE trial authors continue to ignore their own null effect. *Journal of Health Psychology* 22 (9): 1134-1140. **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/28805519>

White PD et al. (2011) Comparison of adaptive pacing therapy, cognitive behaviour therapy, graded exercise therapy, and specialist medical care for chronic fatigue syndrome (PACE): a randomised trial. *The Lancet* 377(9768): 823-836. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/21334061>

White PD et al. (2013) Recovery from chronic fatigue syndrome after treatments given in the PACE trial. *Psychological Medicine* 43(10): 2227-2235. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/23363640>

Wilshire C et al. (2017) Can patients with chronic fatigue syndrome really recover after graded exercise or cognitive behavior therapy? A critical commentary and preliminary re-analysis of the PACE trial. *Fatigue: Biomedicine, Health and Behaviour* 5 (1): 43-56. **Link:** <http://www.tandfonline.com/doi/abs/10.1080/21641846.2017.1259724>

Wilshire C. (2017) The problem of bias in behavioural intervention studies: Lessons from the PACE trial. *Journal of Health Psychology* 22 (9): 1128-1133. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/28805526>

Wilshire CE et al. (2018) Rethinking the treatment of chronic fatigue syndrome-a reanalysis and evaluation of findings from a recent major trial of graded exercise and CBT. *BMC Psychology* 6 (1): 6. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/29562932>

9.8. Pharmacological treatment

Almenar-Perez E et al. (2019) Impact of Polypharmacy on Candidate Biomarker miRNomes for the Diagnosis of Fibromyalgia and Myalgic Encephalomyelitis/Chronic Fatigue Syndrome: Striking Back on Treatments. *Pharmaceutics* 11 (3). **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/30889846>

Amsterdam JD et al. (2008) Open-label study of s-citalopram therapy of chronic fatigue syndrome and co-morbid major depressive disorder. *Progress in Neuro- Psychopharmacology and Biological Psychiatry* 32(1): 100-106. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/17804135>

Arnold LM et al. (2007) Gabapentin in the treatment of fibromyalgia: A randomized, double-blind, placebo-controlled, multicentre trial. *Arthritis & Rheumatology* 56(4): 1336-1344. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/17393438>

Arnold LM et al. (2015) A Randomized, Placebo-Controlled, Double-Blinded Trial of Duloxetine in the Treatment of General Fatigue in Patients with Chronic Fatigue Syndrome. *Psychosomatics* 56(3): 242-253. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/25660434>

- Behan PO et al.** (1994) A Pilot Study of Sertraline for the Treatment of Chronic Fatigue Syndrome. *Clinical Infectious Diseases* 18: S111. **Link:** https://academic.oup.com/cid/article-abstract/18/Supplement_1/S111/316909
- Blacker C et al.** (2004) Effect of galantamine hydrobromide in chronic fatigue syndrome: A randomized controlled trial. *JAMA* 292(10): 1195-1204. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/15353532>
- Blockmans D et al.** (2003) Combination therapy with hydrocortisone and fludrocortisone does not improve symptoms in chronic fatigue syndrome: a randomized, placebo-controlled, double-blind, crossover study. *The American Journal of Medicine* 114(9): 736-741. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/12829200>
- Blockmans D et al.** (2006) Does Methylphenidate Reduce the Symptoms of Chronic Fatigue Syndrome? *The American Journal of Medicine* 119(2): 167. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/16443425>
- Bolton MJ et al.** (2020) Low-dose naltrexone as a treatment for chronic fatigue syndrome. *BMJ Case Reports* 13 (1). **Link:** <https://casereports.bmj.com/content/13/1/e232502>
- Bowman MA et al.** (1997) Use of amantadine for chronic fatigue syndrome. *Archives of Internal Medicine* 157(11): 1264-1265. **Link:** <https://jamanetwork.com/journals/jamainternalmedicine/article-abstract/623398>
- Brook M et al.** (1993) Interferon- α therapy for patients with chronic fatigue syndrome [Correspondence]. *Journal of Infectious Diseases* 168(3): 791-792. **Link:** <https://academic.oup.com/jid/article-abstract/168/3/791/870716>
- Brownlie H & Speight N** (2021) Back to the Future? Immunoglobulin Therapy for Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Healthcare* 9 (11): 1546. **Link:** <https://www.mdpi.com/2227-9032/9/11/1546>
- Bvorob'eva OV** and Rusaya VV. (2017) Efficacy and safety of noophen in the treatment of CFS in patients with cerebrovascular insufficiency. *Zh Nevrol Psikhiatr Im S Korsakova* 117 (11): 31-36. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/29265084> (Article in Russian)
- Cabanas H et al.** (2019) Naltrexone Restores Impaired Transient Receptor Potential Melastatin 3 Ion Channel Function in Natural Killer Cells From Myalgic Encephalomyelitis/Chronic Fatigue Syndrome Patients. *Frontiers in Immunology* 10: 2545. **Link:** doi.org/10.3389/fimmu.2019.02545
- Cabanas H et al.** (2021) Potential Therapeutic Benefit of Low Dose Naltrexone in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome: Role of Transient Receptor Potential Melastatin 3 Ion Channels in Pathophysiology and Treatment. *Frontiers in Immunology* 12: 687806. **Link:** <https://pubmed.ncbi.nlm.nih.gov/34326841/>

Cash A and Kaufman DL (2022) Oxaloacetate Treatment For Mental And Physical Fatigue In Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS) and Long-COVID fatigue patients: a non-randomized controlled clinical trial. *Journal of Translational Medicine* 20: 295. **Link:** doi.org/10.1186/s12967-022-03488-3 (*NEW)

Campen CL et al. (2019) Open Trial of Vitamin B12 Nasal Drops in Adults With Myalgic Encephalomyelitis/Chronic Fatigue Syndrome: Comparison of Responders and Non-Responders. *Frontiers in Pharmacology* [Epub ahead of print]. **Link:** <https://tinyurl.com/ugd8om5>

van Campen LMC and Visser FC (2019) The Effect of Curcumin in Patients with Chronic Fatigue Syndrome/Myalgic Encephalomyelitis Disparate Responses in Different Disease Severities. *Pharmacovigilance and Pharmacoepidemiology* 2 (1). **Link:** <https://tinyurl.com/qpvhgdm>

Cleare AJ et al. (1999) Low-dose hydrocortisone in chronic fatigue syndrome: a randomised crossover trial. *The Lancet* 353(9151): 455-458. Correspondence: see *The Lancet* 1999, Vol 353, No. 9164. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/9989716>

Cleare AJ et al. (2004) Levels of DHEA and DHEAS and responses to CRH stimulation and hydrocortisone treatment in chronic fatigue syndrome. *Psychoneuroendocrinology* 29(6): 724-732. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/15110921>

Comhaire F (2018a) Treating patients suffering from myalgic encephalopathy/chronic fatigue syndrome (ME/CFS) with sodium dichloroacetate: An open-label, proof-of-principle pilot trial. *Medical Hypotheses* 114: 45-48. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/29602463>

Comhaire F (2018b) Why do some ME/CFS patients benefit from treatment with sodium dichloroacetate, but others do not? *Medical Hypotheses* 120: 65-67. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/30220343>

Comhaire F (2022) The Role of Immunity and Inflammation in ME/ CFS and Post-COVID Syndrome: Implications for Treatment. *MedLife Clinics* Volume 4 (2): 1043. **Link:** <https://www.medtextpublications.com/open-access/the-role-of-immunity-and-inflammation-in-me-cfs-and-1254.pdf> (*NEW)

Comment

Comhaire F and Deslypere JP et al. (2019) News and views in myalgic encephalomyelitis/chronic fatigue syndrome (ME/CFS): The role of co-morbidity and novel treatments. *Medical Hypotheses* 134: 109444. **Link:** <https://tinyurl.com/y3o583vb>

Cox IM et al. (1991) Red blood cell magnesium and chronic fatigue syndrome. *The Lancet* 337(8744): 757-760. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/1672392>

- Crosby, LD et al.** (2021) Off label use of Aripiprazole shows promise as a treatment for Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS): a retrospective study of 101 patients treated with a low dose of Aripiprazole. *Journal of Translational Medicine* 19: 50. **Link:** <https://translational-medicine.biomedcentral.com/articles/10.1186/s12967-021-02721-9>
- de Jong JC et al.** (2003) Combined use of SSRIs and NSAIDs increases the risk of gastrointestinal adverse effects. *British Journal of Clinical Pharmacology* 55(6): 591-595. **Link:** <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1884264/>
- Diaz-Mitoma F et al.** (2003) Clinical Improvement in Chronic Fatigue Syndrome Is Associated with Enhanced Natural Killer Cell-Mediated Cytotoxicity: The Results of a Pilot Study with Isoprinosine®. *Journal of Chronic Fatigue Syndrome* 11(2): 71-95. **Link:** http://www.tandfonline.com/doi/abs/10.1300/j092v11n02_06
- Dismukes WE et al.** (1990) A Randomized, Double-Blind Trial of Nystatin Therapy for the Candidiasis Hypersensitivity Syndrome. *New England Journal of Medicine* 323(25): 1717-1723. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/2247104>
- Doyle JF et al.** (2012) Midodrine: use and current status in the treatment of hypotension. *British Journal of Cardiology* 19(1): 34. **Link:** <https://bjcardio.co.uk/2012/03/midodrine-use-and-current-status-in-the-treatment-of-hypotension/>
- DuBois R.** (1986) Gamma globulin therapy for chronic mononucleosis syndrome. *AIDS Research* 2: S191-195. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/2435296>
- Dunn KM and Hay EM.** (2010) Opioids for chronic musculoskeletal pain. *BMJ* 341: 467-468. **Link:** <http://www.bmj.com/content/341/bmj.c3533>
- Fluge Ø and Mella O.** (2009) Clinical impact of B-cell depletion with the anti-CD20 antibody rituximab in chronic fatigue syndrome: a preliminary case series. *BMC Neurology* 9: 28. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/19566965>
- Fluge Ø et al.** (2011) Benefit from B-Lymphocyte Depletion Using the Anti-CD20 Antibody Rituximab in Chronic Fatigue Syndrome. A Double-Blind and Placebo- Controlled Study. *PLoS ONE* 6(10): e26358. **Link:** <http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0026358>
- Fluge Ø et al.** (2015) B-Lymphocyte Depletion in Myalgic Encephalopathy/Chronic Fatigue Syndrome. An Open-Label Phase II Study with Rituximab Maintenance Treatment. *PLoS ONE* 10(7): e0129898. **Link:** <http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0129898>

- Fluge Ø et al.** (2019) B-Lymphocyte Depletion in Patients With Myalgic Encephalomyelitis/Chronic Fatigue Syndrome: A Randomized, Double-Blind, Placebo-Controlled Trial. *Annual of International Medicine* [Epub ahead of print]. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/30934066>
- Forsyth LM et al.** (1999) Therapeutic effects of oral NADH on the symptoms of patients with chronic fatigue syndrome. *Annals of Allergy, Asthma & Immunology* 82(2): 185-191. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/10071523>
- Fragkos et al.** (2018) Severe eosinophilic colitis caused by neuropathic agents in a patient with chronic fatigue syndrome and functional abdominal pain: case report and review of the literature. *Z Gastroenterology* 56 (6): 573-577. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/29890559>
- Fukuda S et al.** (2016) Ubiquinol-10 supplementation improves autonomic nervous system function and cognitive function in chronic fatigue syndrome. *Biofactors* 42 (4): 431-440. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/27125909>
- GKH, The et al.** (2003) The Effect of Granisetron, a 5-HT3 receptor antagonist, in the treatment of chronic fatigue syndrome patients – a pilot study. *The Netherlands Journal of Medicine* 61(9): 285. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/14692441>
- GKH, The et al.** (2010) The Effect of Ondansetron, a 5-HT3 Receptor Antagonist, in Chronic Fatigue Syndrome: A Randomized Controlled Trial. *The Journal of Clinical Psychiatry* 71(5): 528-533. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/20122367>
- Gottfries C-G, et al.** (2006) Long-Term Treatment with a Staphylococcus Toxoid Vaccine in Patients with Fibromyalgia and Chronic Fatigue Syndrome. *Journal of Chronic Fatigue Syndrome* 13(4): 29-40. **Link:** http://www.tandfonline.com/doi/abs/10.1300/J092v13n04_04
- Henderson T.** (2014) Valacyclovir treatment of chronic fatigue in adolescents. *Advances in Mind-Body Medicine* 28(1): 4-14. **Link:** <http://europepmc.org/abstract/med/24445302>
- Hermans L et al.** (2017) Influence of Morphine and Naloxone on Pain Modulation in Rheumatoid Arthritis, Chronic Fatigue Syndrome/Fibromyalgia, and Controls: A Double-Blind, Randomized, Placebo-Controlled, Cross-Over Study. *Pain Practice*. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/28722815>
- Hickie I et al.** (2000) A randomized, double-blind, placebo-controlled trial of moclobemide in patients with chronic fatigue syndrome. *The Journal of Clinical Psychiatry* 61(9): 643-648. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/11030484>

- Higgins N et al.** (2013a) Looking for idiopathic intracranial hypertension in patients with chronic fatigue syndrome. *Journal of Observational Pain Medicine* 1(2): 28-35. **Link:** https://www.researchgate.net/publication/281742803_Looking_for_idiopathic_intracranial_hypertension_in_patients_with_chronic_fatigue_syndrome
- Higgins N et al.** (2013b) Lumbar puncture, chronic fatigue syndrome and idiopathic intracranial hypertension: a cross-sectional study. *JRSM Short Reports* 4(12). **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/24475346>
- Jeffrey M et al.** (2019) Treatment Avenues in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome: A Split-gender Pharmacogenomic Study of Gene-expression Modules. *Clinical Therapeutics* [Epub ahead of print]. **Link:** <https://www.sciencedirect.com/science/article/abs/pii/S0149291819300475>
- Jones EA.** (1999) Relief from profound fatigue associated with chronic liver disease by long-term ondansetron therapy. *The Lancet* 354(9176): 397. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/10437877>
- Jones MG et al.** (2005) Plasma and urinary carnitine and acylcarnitines in chronic fatigue syndrome. *Clinica Chimica Acta* 360(1-2): 173-177. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/15967423>
- Joseph P et al.** (2022) Neurovascular Dysregulation and Acute Exercise Intolerance in ME/CFS: A Randomized, Placebo-Controlled Trial of Pyridostigmine. *Chest*: S0012-3692(22)00890-X. [Epub ahead of Print]. **Link:** [doi: 10.1016/j.chest.2022.04.146](https://doi.org/10.1016/j.chest.2022.04.146) (*NEW)
- Joung JY et al.** (2019) The Efficacy and Safety of Myelophil, an Ethanol Extract Mixture of Astragali Radix and Salviae Radix, for Chronic Fatigue Syndrome: A Randomized Clinical Trial. *Frontiers in Pharmacology* 10: 991. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/31551788>
- Kaslow JE et al.** (1989) Liver extract-folic acid-cyanocobalamin vs placebo for chronic fatigue syndrome. *Archives of Internal Medicine* 149(11): 2501-2503. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/2684076>
- Kavi L et al.** (2016) A profile of patients with postural tachycardia syndrome and their experience of healthcare in the UK. *The British Journal of Cardiology* 23(1): 33. **Link:** <https://bjcardio.co.uk/2016/03/a-profile-of-patients-with-postural-tachycardia-syndrome-and-their-experience-of-healthcare-in-the-uk/>
- Kawamura Y et al.** (2003) Efficacy of a half dose of oral pyridostigmine in the treatment of chronic fatigue syndrome: three case reports. *Pathophysiology* 9(3): 189-194. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/14567934>
- Kerr JR et al.** (2003) Successful Intravenous Immunoglobulin Therapy in 3 Cases of Parvovirus B19-Associated Chronic Fatigue Syndrome. *Clinical Infectious Diseases* 36(9): e100-e106. **Link:** <https://academic.oup.com/cid/article/36/9/e100/313942>

Kogelnik AM et al. (2006) Use of valganciclovir in patients with elevated antibody titers against Human Herpesvirus-6 (HHV-6) and Epstein-Barr Virus (EBV) who were experiencing central nervous system dysfunction including long-standing fatigue. *Journal of Clinical Virology* 37(Supplement 1): S33-S38. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/17276366>

Lane RJM et al. (1986) A double-blind, placebo-controlled, crossover study of verapamil in exertional muscle pain. *Muscle & Nerve* 9(7): 635-641. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/3531845>

Leong KH et al. (2022) Treatments of chronic fatigue syndrome and its debilitating comorbidities: a 12-year population-based study. *Journal of Translational Medicine* 20: 268. **Link:** doi.org/10.1186/s12967-022-03461-0 (*NEW)

Lerner AM et al. (1997) New cardiomyopathy: Pilot study of intravenous ganciclovir in a subset of the chronic fatigue syndrome. *Infectious Diseases in Clinical Practice* 6(2): 110-117. **Link:** <http://www.ncf-net.org/library/ganciclovir.htm>

Lerner AM et al. (2002) A six-month trial of valacyclovir in the Epstein-Barr virus subset of chronic fatigue syndrome: improvement in left ventricular function. *Drugs Today* 38(8): 549-561. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/12582420>

Levine PH et al. (2022) Individualizing medical treatment in chronic fatigue syndrome/ myalgic encephalomyelitis: Evidence for effective medications and possible relevance to “Long-Hauler Syndrome” in Covid-19 affected patients. *Journal of Clinical Images and Medical Case Reports* 3 (1): 1681. **Link:** <https://jcimcr.org/pdfs/JCIMCR-v3-1681.pdf>

Lloyd A et al. (1990) A double-blind, placebo-controlled trial of intravenous immunoglobulin therapy in patients with chronic fatigue syndrome. *The American Journal of Medicine* 89(5): 561-568. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/2146875>

Lloyd A et al. (1993) Immunologic and psychologic therapy for patients with chronic fatigue syndrome: A double-blind, placebo-controlled trial. *The American Journal of Medicine* 94(2): 197-203. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/8430715>

Loebel M et al. (2016) Antibodies to β adrenergic and muscarinic cholinergic receptors in patients with Chronic Fatigue Syndrome. *Brain, Behaviour, and Immunity* 52: 32-39. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/26399744>

Majeed T et al. (1995) Abnormalities of carnitine metabolism in chronic fatigue syndrome. *European Journal of Neurology* 2(5): 425-428. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/24283722>

Maltsev D (2022) A comparative study of valaciclovir, valganciclovir, and artesunate efficacy in reactivated HHV-6 and HHV-7 infections associated with chronic fatigue syndrome/myalgic encephalomyelitis. *Microbiology and Immunology* 66 (4): 193-199. **Link:** doi.org/10.1111/1348-0421.12966

McKenzie R et al. (1998) Low-dose hydrocortisone for treatment of chronic fatigue syndrome: A randomized controlled trial. *JAMA* 280(12): 1061-1066. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/9757853>

Medicines and Healthcare Products Regulatory Agency. (2008) Modafinil: serious skin reactions, hypersensitivity, and psychiatric symptoms. *Drug Safety Update* 1(8): 5. **Link:** http://www.sefap.it/farmacovigilanza_news_200803/Drug-Safety-Update-March-2008.pdf

Medicines and Healthcare Products Regulatory Agency. (2015) 4.15 Cardiac rhythm disorders–QT interval prolongation. *Selective serotonin reuptake inhibitors (SSRIs) learning module*. **Link:** <http://www.mhra.gov.uk/ssri-learning-module/con146583?usessecondary=&showpage=20>

Mitchell W. (2006) 60: Review of Ampligen clinical trials in chronic fatigue syndrome. *Journal of Clinical Virology* 37 (Supplement 1): S113. **Link:** [http://www.journalofclinicalvirology.com/article/S1386-6532\(06\)70079-8/abstract](http://www.journalofclinicalvirology.com/article/S1386-6532(06)70079-8/abstract)

Mitchell WM. (2016) Efficacy of rintaolimod (Ampligen) in the treatment of chronic fatigue syndrome/myalgic encephalomyelitis (CFS/ME). *Expert Reviews Clinical Pharmacology* 9 (6): 755 – 770. **Link:** <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4917909/>

Miwa K. (2021) Oral Minocycline Therapy Improves Symptoms of Myalgic Encephalomyelitis, Especially in the Initial Disease Stage. *Internal Medicine* 60 (16): 2577-2584. **Link:** doi.org/10.2169/internalmedicine.6082-20

Miwa K. (2022) Oral Minocycline Challenge as a Potential First-Line Therapy for Myalgic Encephalomyelitis and Long Covid-19 Syndrome. *Annals of Clinical Medicine- Case Reports* 8 (7): 1-4. **Link:** <https://acmcasereport.com/wp-content/uploads/2022/01/ACMCR-v8-1710.pdf>

Montoya JG et al. (2013) Randomized clinical trial to evaluate the efficacy and safety of valganciclovir in a subset of patients with chronic fatigue syndrome. *Journal of Medical Virology* 85(12): 2101-2109. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/23959519>

Moore RA, et al. (2015) Amitriptyline for neuropathic pain in adults. *Cochrane Database of Systematic Reviews* 7. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/26146793>

Morriss RK et al. (2002) Neuropsychological performance and noradrenaline function in chronic fatigue syndrome under conditions of high arousal. *Psychopharmacology* 163(2): 166-173. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/12202963>

- Morris G et al.** (2019) Myalgic encephalomyelitis/chronic fatigue syndrome: From pathophysiological insights to novel therapeutic opportunities. *Pharmacological Research* [Epub ahead of print]. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/31509764>
- Murakami M et al.** (2015) A randomized, double-blind, placebo-controlled phase III trial of duloxetine in Japanese fibromyalgia patients. *Arthritis Research & Therapy* 17: 224. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/26296539>
- Naschitz J et al.** (2004) Midodrine treatment for chronic fatigue syndrome. *Postgraduate Medical Journal* 80(942): 230-232. **Link:** <http://pmj.bmj.com/content/80/942/230.info>
- Natelson BH et al.** (1996) Randomized, double blind, controlled placebo-phase in trial of low dose phenelzine in the chronic fatigue syndrome. *Psychopharmacology* 124(3): 226-230. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/8740043>
- Natelson BH et al.** (1998) Single-Blind, Placebo Phase-in Trial of Two Escalating Doses of Selegiline in the Chronic Fatigue Syndrome. *Neuropsychobiology* 37(3): 150-154. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/9597672>
- Neary JP et al.** (2008) Prefrontal cortex oxygenation during incremental exercise in chronic fatigue syndrome. *Clinical Physiology and Functional Imaging* 28(6): 364-372. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/18671793>
- Nijs J et al.** (2012) Pain in patients with chronic fatigue syndrome: time for specific pain treatment? *Pain Physician* 15(5): E677-E686. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/22996861>
- Nilsson MKL et al.** (2017) A randomised controlled trial of the monoaminergic stabiliser (-)-OSU6162 in treatment of myalgic encephalomyelitis/chronic fatigue syndrome. *Acta Neuropsychiatry* 7: 1-10. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/29212562>
- Numata T.** (2021) Could Minocycline be a "Magic Bullet" for the Treatment of Myalgic Encephalomyelitis/Chronic Fatigue Syndrome? *Internal Medicine* 60 (16): 2527-2528. **Link:** doi.org/10.2169/internalmedicine.7182-21
- Ottman A, Warner CB and Brown JN** (2018) The role of mirtazapine in patients with fibromyalgia: a systematic review. *Rheumatology International* 28 (12): 2217-2224. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/29860538>
- Peterson PK et al.** (1990) A controlled trial of intravenous immunoglobulin G in chronic fatigue syndrome. *The American Journal of Medicine* 89(5): 554-560. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/2239975>
- Peterson PK et al.** (1998) A preliminary placebo-controlled crossover trial of fludrocortisone for chronic fatigue syndrome. *Archives of Internal Medicine* 158(8): 908-914. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/9570178>

- Plioplys AV and Plioplys S.** (1997) Amantadine and L-Carnitine Treatment of Chronic Fatigue Syndrome. *Neuropsychobiology* 35(1): 16-23. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/9018019>
- Polo O et al.** (2019) Low-dose naltrexone in the treatment of myalgic encephalomyelitis/chronic fatigue syndrome (ME/CFS). *Fatigue: Biomedicine, Helath and Behaviour*. **Link:** <https://www.tandfonline.com/doi/abs/10.1080/21641846.2019.1692770>
- Puri BK.** (2004) The use of eicosapentaenoic acid in the treatment of chronic fatigue syndrome. *Prostaglandins, Leukotrienes and Essential Fatty Acids* 70(4): 399-401. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/15041033>
- Putilina MV** (2021) Asthenic disorders as a manifestation of chronic fatigue syndrome]. *Zhurnal Nevrologii i Psikiatrii Imeni S.S. Korsakova* 121 (8): 125-130. Article in Russian. **Link:** <https://pubmed.ncbi.nlm.nih.gov/34481448/>
- Rahman MM et al.** (2022) Exploring the management approaches of cytokines including viral infection and neuroinflammation for neurological disorders. *Cytokine* 157: 155962. **Link:** doi.org/10.1016/j.cyto.2022.155962 (*NEW)
- Randall DC et al.** (2005) Chronic treatment with modafinil may not be beneficial in patients with chronic fatigue syndrome. *Journal of Psychopharmacology* 19(6): 647-660. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/16272188>
- Regland B et al.** (2015) Response to Vitamin B12 and Folic Acid in Myalgic Encephalomyelitis and Fibromyalgia. *PLoS ONE* 10(4): e0124648. **Link:** <http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0124648>
- Rekeland IG et al.** (2019) Rituximab Serum Concentrations and Anti-Rituximab Antibodies During B-Cell Depletion Therapy for Myalgic Encephalopathy/Chronic Fatigue Syndrome. *Clinical Therapeutics* 41 (5): 806-814. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/30502905>
- Rekeland IG et al.** (2020) Intravenous Cyclophosphamide in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. An Open-Label Phase II Study. *Frontiers in Medicine* 7: 162. **Link:** <https://www.frontiersin.org/articles/10.3389/fmed.2020.00162/full>
- Reuter SE and Evans AM.** (2011) Long-chain acylcarnitine deficiency in patients with chronic fatigue syndrome. Potential involvement of altered carnitine palmitoyltransferase-I activity. *Journal of Internal Medicine* 270(1): 76-84. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/21205027>
- Richman S et al.** (2019) Pharmaceutical Interventions in Chronic Fatigue Syndrome: A Literature-based Commentary. *Clinical Therapeutics* 41 (5): 798-805. **Link:** <https://www.sciencedirect.com/science/article/abs/pii/S0149291819300712#!>

- Roerink ME et al.** (2015) Cytokine inhibition in chronic fatigue syndrome patients: study protocol for a randomized controlled trial. *Trials* 16: 439. **Link:** <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4595002/>
- Roerink ME et al.** (2017) Cytokine signatures in chronic fatigue syndrome patients: a Case Control Study and the effect of anakinra treatment. *Journal of Translational Medicine* 15: 267. **Link:** <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5747240/>
- Rowe KS.** (1997) Double-blind randomized controlled trial to assess the efficacy of intravenous gammaglobulin for the management of chronic fatigue syndrome in adolescents. *Journal of Psychiatric Research* 31(1): 133-147. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/9201655>
- Rowe PC et al.** (2001) Fludrocortisone acetate to treat neurally mediated hypotension in chronic fatigue syndrome: A randomized controlled trial. *JAMA* 285(1): 52-59. **Link:** <https://jamanetwork.com/journals/jama/fullarticle/193426>
- Royds J et al.** (2019) An investigation into the modulation of T cell phenotypes by amitriptyline and nortriptyline. *European Neuropsychopharmacology* [Epub ahead of print]. **Link:** <https://www.sciencedirect.com/science/article/abs/pii/S0924977X1931870X>
- Santaella ML et al.** (2004) Comparison of oral nicotinamide adenine dinucleotide (NADH) versus conventional therapy for chronic fatigue syndrome. *Puerto Rico Health Sciences Journal* 23(2): 89. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/15377055>
- Saqlain S et al.** (2022) Olmesartan alleviates symptoms of chronic fatigue syndrome in mice. *ResearchSquare* [preprint]. **Link:** doi.org/10.21203/rs.3.rs-1823147/v1 (*NEW)
- See DM and Tilles JG.** (1996) Alpha Interferon Treatment of Patients with Chronic Fatigue Syndrome. *Immunological Investigations* 25(1-2): 153-164. **Link:** <http://www.tandfonline.com/doi/abs/10.3109/08820139609059298>
- Shepherd C.** (1997) Long-term treatment is being used. Letter to the editor in response to 'Giving thyroid hormones to clinically hypothyroid but biochemically euthyroid patients'. *BMJ* 315(7111): 814. **Link:** <http://www.bmj.com/content/315/7111/813>
- Späth M et al.** (2000) Treatment of chronic fatigue syndrome with 5-HT3 receptor antagonists – preliminary results. *Scandinavian Journal of Rheumatology* 29(113): 72-77. **Link:** <http://www.tandfonline.com/doi/abs/10.1080/030097400750001851-1>
- Stanculescu D et al.** (2021) Hypothesis: Mechanisms That Prevent Recovery in Prolonged ICU Patients Also Underlie Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS). *Frontiers in Medicine (Lausanne)* 8: 628029. **Link:** <https://pubmed.ncbi.nlm.nih.gov/33585528/>

- Staud R, et al.** (2017) Muscle injections with lidocaine improve resting fatigue and pain in patients with chronic fatigue syndrome. *Journal of Pain Research* 10: 1477-1486. **Link:**
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5499959/>
- St. Clair EW et al.** (2013) Rituximab Therapy for Primary Sjögren's Syndrome: An Open-Label Clinical Trial and Mechanistic Analysis. *Arthritis & Rheumatology* 65(4): 1097-1106. **Link:**
<https://www.ncbi.nlm.nih.gov/pubmed/23334994>
- Steinberg P et al.** (1996) Double-blind placebo-controlled study of the efficacy of oral terfenadine in the treatment of chronic fatigue syndrome. *Journal of Allergy and Clinical Immunology* 97(1): 119-126. **Link:**
[http://www.jacionline.org/article/S0091-6749\(96\)70290-7/fulltext](http://www.jacionline.org/article/S0091-6749(96)70290-7/fulltext)
- Strayer DR et al.** (1994) A Controlled Clinical Trial with a Specifically Configured RNA Drug, Poly(I). Poly(C12U), in Chronic Fatigue Syndrome. *Clinical Infectious Diseases* 18(Supplement 1): S88-S95. **Link:**
<https://www.ncbi.nlm.nih.gov/pubmed/8148460>
- Strayer DR et al.** (2012) A Double-Blind, Placebo-Controlled, Randomized, Clinical Trial of the TLR-3 Agonist Rintatolimod in Severe Cases of Chronic Fatigue Syndrome. *PLoS ONE* 7(3): e31334. **Link:**
<http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0031334>
- Strayer Dr et al.** (2020). Effect of disease duration in a randomized Phase III trial of rintatolimod, an immune modulator for Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *PLoS One*. **Link:**
<https://pubmed.ncbi.nlm.nih.gov/33119613/>
- Straus SE et al.** (1988) Acyclovir Treatment of the Chronic Fatigue Syndrome. Lack of efficacy in a placebo-controlled trial. *New England Journal of Medicine* 319(26): 1692-1698. **Link:**
<https://www.ncbi.nlm.nih.gov/pubmed/2849717>
- Sulaimon LA et al.** (2022) Pharmacological significance of MitoQ in ameliorating mitochondria-related diseases. *Advances in Redox Research*: 100037. [In Press, Journal pre-proof]. **Link:**
doi.org/10.1016/j.arres.2022.100037 (*NEW)
- Tan T et al.** (2010) Pharmacological management of neuropathic pain in non-specialist settings: summary of NICE guidance. *BMJ* 340: c1079. **Link:**
<https://www.ncbi.nlm.nih.gov/pubmed/20335333>
- Teitelbaum JE et al.** (2006) The Use of D-Ribose in Chronic Fatigue Syndrome and Fibromyalgia: A Pilot Study. *The Journal of Alternative and Complementary Medicine* 12(9): 857-862. **Link:**
<https://www.ncbi.nlm.nih.gov/pubmed/17109576>
- Turkington D et al.** (2004) Recovery from chronic fatigue syndrome with modafinil. *Human Psychopharmacology: Clinical and Experimental* 19(1): 63-64. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/14716715>

van Heukelom RO et al. (2006) Influence of melatonin on fatigue severity in patients with chronic fatigue syndrome and late melatonin secretion.

European Journal of Neurology 13(1): 55-60. **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/16420393>

Vaucher P et al. (2012) Effect of iron supplementation on fatigue in nonanemic menstruating women with low ferritin: a randomized controlled trial. *Canadian Medical Association Journal* 184(11): 1247-1254. **Link:**

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3414597/>

Vercoulen JH et al. (1996a) Randomised, double-blind, placebo-controlled study of fluoxetine in chronic fatigue syndrome. *The Lancet* 347(9005): 858-861. Correspondence: see *The Lancet* 1996, Vol 347, No. 9017. **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/8622391>

Venturini L et al. (2019) Modification of Immunological Parameters, Oxidative Stress Markers, Mood Symptoms, and Well-Being Status in CFS Patients after Probiotic Intake: Observations from a Pilot Study. *Oxidative Medicine and Cellular Longevity*. **Link:**

<https://www.hindawi.com/journals/omcl/2019/1684198/>

Vermeulen RCW and Scholte HR. (2004) Exploratory Open Label, Randomized Study of Acetyl- and Propionylcarnitine in Chronic Fatigue Syndrome. *Psychosomatic Medicine* 66(2): 276-282. **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/15039515>

Vollmer-Conna U et al. (1997) Intravenous Immunoglobulin is Ineffective in the Treatment of Patients with Chronic Fatigue Syndrome. *The American Journal of Medicine* 103(1): 38-43. **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/9236484>

Watt T et al. (2012) Response to Valganciclovir in Chronic Fatigue Syndrome Patients with Human Herpesvirus 6 and Epstein-Barr virus IgG Antibody Titers. *Journal of Medical Virology* 84(12): 1967-1974. **Link:**

https://deepblue.lib.umich.edu/bitstream/handle/2027.42/94236/23411_ftf.pdf

Wearden AJ et al. (1998) Randomised, double-blind, placebo-controlled treatment trial of fluoxetine and graded exercise for chronic fatigue syndrome. *The British Journal of Psychiatry* 172(6): 485-490. **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/9828987>

Williams G et al. (2002) Therapy of circadian rhythm disorders in chronic fatigue syndrome: no symptomatic improvement with melatonin or phototherapy. *European Journal of Clinical Investigation* 32(11): 831-837. **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/12423324>

Young JL. (2013) Use of lisdexamfetamine dimesylate in treatment of executive functioning deficits and chronic fatigue syndrome: A double blind, placebo-controlled study. *Psychiatry Research* 207(1-2): 127-133. **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/23062791>

Younger J et al. (2013) Low-dose naltrexone for the treatment of fibromyalgia: Findings of a small, randomized, double-blind, placebo-controlled, counterbalanced, crossover trial assessing daily pain levels. *Arthritis & Rheumatology* 65(2): 529-538. **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/23359310>

Younger J et al. (2014) The use of low-dose naltrexone (LDN) as a novel anti-inflammatory treatment for chronic pain. *Clinical Rheumatology* 33 (4): 451 – 459. **Link:** <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3962576/>

Zachrisson O et al. (2002) Treatment with staphylococcus toxoid in fibromyalgia/ chronic fatigue syndrome—a randomised controlled trial. *European Journal of Pain* 6(6): 455-466. **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/12413434>

9.9. Pregnancy

Allen PR (2008) Chronic fatigue syndrome: implications for women and their health care providers during the childbearing years. *Journal of Midwifery & Women's Health* 53 (4): 289-301; quiz 399. **Link:**

<https://pubmed.ncbi.nlm.nih.gov/18586181/>

Baschetti R. (2004) Chronic fatigue syndrome, pregnancy, and Addison disease. *Archives of Internal Medicine* 164 (18): 2065. **Link:**

<https://pubmed.ncbi.nlm.nih.gov/15477445/>

Boneva RS et al. (2011) Gynecological history in chronic fatigue syndrome: a population-based case-control study. *Journal of Women's Health (Larchmt)* 20 (1): 21-8. **Link:** <https://pubmed.ncbi.nlm.nih.gov/21091051/>

Christley Y et al. (2021) Perinatal perspectives on chronic fatigue syndrome. *British Journal of Midwifery* 20 (6): 389-393. **Link:**

https://www.researchgate.net/publication/235349788_Perinatal_perspectives_on_chronic_fatigue_syndrome

Chu L et al. (2019) Onset Patterns and Course of Myalgic Encephalomyelitis/ Chronic Fatigue Syndrome. *Frontiers in Pediatrics* 7:12. **Link:**

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6370741/>

Jha RR et al. (1999) Detailed description of a pregnancy associated with severe chronic fatigue syndrome. *Journal of obstetrics and gynaecology* 19 (3): 306-7. **Link:** <https://pubmed.ncbi.nlm.nih.gov/15512306/>

Schacterle RS and Komaroff AL. (2004) A comparison of pregnancies that occur before and after the onset of chronic fatigue syndrome. *Archives of Internal Medicine* 164(4): 401-404. **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/14980991>

Studd J and Panay N (1996) Chronic Fatigue Syndrome. *The Lancet* 348 (9038): 1384. **Link:** [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(05\)65448-7/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(05)65448-7/fulltext)

Underhill R (2009) Pregnancy in Women with Chronic Fatigue Syndrome (ME/CFS). *NJCFS*. **Link:** <http://www.njcfsa.org/wp-content/uploads/2010/09/Pregnancy-in-Women-with-ME-CFS.pdf>

Zhao H et al. (2021) Oxidative stress caused by a dysregulated Wnt/ β -catenin signalling pathway is involved in abnormal placenta formation in pregnant mice with chronic fatigue syndrome. *Zygote* 29 (2): 122-129. **Link:** <https://pubmed.ncbi.nlm.nih.gov/33054899/>

10. PROGNOSIS AND QUALITY OF LIFE

10.1. Age

Kidd E et al. (2016) The Relationship between Age and Illness Duration in Chronic Fatigue Syndrome. *Diagnostics* 6(2): 16. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/27110826>

Norris T et al. (2017) Natural course of chronic fatigue syndrome/myalgic encephalomyelitis in adolescents. *Archives of Disease in Childhood* 102 (6): 522-528. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/28104625>

10.2. Carers

Also see our [leaflets](#) on Carers & Social Care.

Baken DM et al. (2022) Experiences of carers of youth, adult children and spouses with ME/CFS. *Chronic Illness* 0 (0). **Link:** doi.org/10.1177/17423953221121696 (*NEW)

Torp E (2022) Understanding the experiences of caring for a partner with myalgic encephalopathy: a qualitative study of men in Norway. [Masters dissertation, Inland Norway University] **Link:** <https://brage.inn.no/inn-xmloi/handle/11250/3019314> (*NEW)

10.3. Mortality

Ahn S-H et al. (2021) Association between chronic fatigue syndrome and suicidality among survivors of Middle East respiratory syndrome over a 2-year follow-up period. *Journal of Psychiatric Research* 137:1-6. **Link:** <https://pubmed.ncbi.nlm.nih.gov/33631632/>

- Chu L et al. (2021)** Identifying and Managing Suicidality in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Healthcare* 9: 629. **Link:** <https://www.mdpi.com/2227-9032/9/6/629>
- Devendorf AR et al. (2020)** Suicidal ideation in non-depressed individuals: The effects of a chronic, misunderstood illness. *Journal of Health Psychology* 25(13-14):2106-2117. **Link:** <https://pubmed.ncbi.nlm.nih.gov/29992837/>
- Johnson ML et al. (2020)** Risk Factors for Suicide in Chronic Fatigue Syndrome. *Death Studies* 46 (3): 738-744. **Link:** doi.org/10.1080/07481187.2020.1776789
- McManimen SL et al. (2016)** Mortality in patients with Myalgic Encephalomyelitis and Chronic Fatigue Syndrome. *Fatigue: Biomedicine, Health & Behavior* 4 (4): 195-206. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/28070451>
- Roberts E et al. (2016)** Mortality of people with chronic fatigue syndrome: a retrospective cohort study in England and Wales from the South London and Maudsley NHS Foundation Trust Biomedical Research Centre (SLaM BRC) Clinical Record Interactive Search (CRIS) Register. *The Lancet*, 387 (10028): 1638-43. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/26873808>

10.4. Prognosis and recovery

- Bombardier CH and Buchwald D. (1995)** Outcome and prognosis of patients with chronic fatigue vs chronic fatigue syndrome. *Archives of Internal Medicine* 155(19): 2105-2110. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/7575071>
- Brown B et al. (2017)** 'Betwixt and between': liminality in recovery stories from people with myalgic encephalomyelitis (ME) or chronic fatigue syndrome (CFS). *Sociology, Health and Illness* 39 (5): 696-710. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/28239872>
- Brown MM et al. (2012)** Understanding Long-Term Outcomes of Chronic Fatigue Syndrome. *Journal of Clinical Psychology* 68(9): 1028-1035. **Link:** <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3940158/>
- Cairns R and Hotopf M. (2005)** A systematic review describing the prognosis of chronic fatigue syndrome. *Occupational Medicine* 55(1): 20-31. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/15699087>
- Devendorf AR et al. (2017)** Defining and measuring recovery from myalgic encephalomyelitis and chronic fatigue syndrome: the physician perspective. *Disability and Rehabilitation* 5: 1-8. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/28982247>

- Devendorf A et al.** (2020) Patients' hopes for recovery from myalgic encephalomyelitis and chronic fatigue syndrome: Toward a "recovery in" framework. *Chronic Illness* 16 (4): 307-321. **Link:** <https://pubmed.ncbi.nlm.nih.gov/32772569/>
- Friedberg F et al.** (2022) Non-improvement in chronic fatigue syndrome: relation to activity patterns, uplifts and hassles, and autonomic dysfunction. *Psychosomatic Medicine*: 10.1097/PSY.0000000000001082. **Link:** doi.org/10.1097/PSY.0000000000001082
- Ghali A et al.** (2022) Factors Influencing the Prognosis of Patients with Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Diagnostics* 12 (10): 2540. **Link:** doi.org/10.3390/diagnostics12102540 (*NEW)
- Hiremath S et al.** (2022) Key Features of a Multi-Disciplinary Hospital-Based Rehabilitation Program for Children and Adolescents with Moderate to Severe Myalgic Encephalomyelitis/Chronic Fatigue Syndrome ME/CFS. *International Journal of Environmental Research and Public Health* 19 (20): 13608. **Link:** doi.org/10.3390/ijerph192013608 (*NEW)
- Moore Y et al.** (2021) Recovery from chronic fatigue syndrome: a systematic review-heterogeneity of definition limits study comparison. *Archives of Disease in Childhood* 106 (11): 1087-1094. **Link:** doi.org/10.1136/archdischild-2020-320196
- O'Boyle S et al.** (2022) A Natural History of Disease Framework for Improving the Prevention, Management, and Research on Post-viral Fatigue Syndrome and Other Forms of Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Frontiers in Medicine* 8: 688159. **Link:** <https://www.frontiersin.org/articles/10.3389/fmed.2021.688159/full>
- Sharpe M et al.** (1992) Follow up of patients presenting with fatigue to an infectious diseases clinic. *BMJ* 305(6846): 147-152. **Link:** <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1883193/>
- Stevellink S et al.** (2021) Chronic Fatigue Syndrome and Occupational Status: A Retrospective Longitudinal Study. *Occupational Medicine* 72 (3): 177-183. **Link:** doi.org/10.1093/occmed/kqab170
- Stormorken E et al.** (2017) Factors impacting the illness trajectory of post-infectious fatigue syndrome: a qualitative study of adults' experiences. *BMC Public Health* 17 (1): 952. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/29237442>
- Thomas et al.** (2019), Measurements of Recovery and Predictors of Outcome in an Untreated Chronic Fatigue Syndrome Sample. *Journal of Health and Medical Sciences* 2 (2): 167-178. **Link:** <https://tinyurl.com/yxj4jcjg>
- Vercoulen JH et al.** (1996b) Prognosis in chronic fatigue syndrome: a prospective study on the natural course. *Journal of Neurology, Neurosurgery & Psychiatry* 60(5): 489-494. **Link:** <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC486359/>

Vink M and Vink-Niese (2022) Is It Useful to Question the Recovery Behaviour of Patients with ME/CFS or Long COVID? *Healthcare*: 10: 392. **Link:** doi.org/10.3390/healthcare10020392

Wilson A et al. (1994) Longitudinal study of outcome of chronic fatigue syndrome. *BMJ* 308(6931): 756-759. **Link:** <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2539669/>

10.5. Quality of life and physical functioning

Alameda Cuesta A et al. (2021) Fibromyalgia, Chronic Fatigue Syndrome, and Multiple Chemical Sensitivity: Illness Experiences. *Clinical Nursing Research* 30 (1): 32-41. **Link:** <https://pubmed.ncbi.nlm.nih.gov/30917692/>

Araja D et al. (2021) Shadow Burden of Undiagnosed Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS) on Society: Retrospective and Prospective-In Light of COVID-19. *Journal of Clinical Medicine* 10 (14): 3017. **Link:** <https://pubmed.ncbi.nlm.nih.gov/34300183/>

Bartlett C et al. (2021) Living with myalgic encephalomyelitis/chronic fatigue syndrome: Experiences of occupational disruption for adults in Australia. *British Journal of Occupational Therapy* May 2021. **Link:** <https://journals.sagepub.com/doi/abs/10.1177/03080226211020656>

Berardi G et al. (2022) The Relation of Pain, Fatigue, Disease Impact, and Psychological Factors with Physical Function in post-COVID-19 Syndrome, Fibromyalgia, and Chronic Fatigue Syndrome. *The Journal of Pain* 23 (3): 47. **Link:** doi.org/10.1016/j.jpain.2022.03.180 (*NEW)

Bileviciute-Ljungar I et al. (2020) Preliminary ICF core set for patients with myalgic encephalomyelitis/chronic fatigue syndrome in rehabilitation medicine. *Journal of Rehabilitation* 52: 6. **Link:** <https://www.medicaljournals.se/jrm/content/abstract/10.2340/16501977-2697>

Brenna E et al. (2021) Comparative Survey of People with ME/CFS in Italy, Latvia, and the UK: A Report on Behalf of the Socioeconomics Working Group of the European ME/CFS Research Network (EUROMENE). *Medicina (Kaunas, Lithuania)* 57 (3): 300. **Link:** <https://pubmed.ncbi.nlm.nih.gov/33806902/>

Brittain E et al. (2021) Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS): Major Impact on Lives of Both Patients and Family Members. *Medicina (Kaunas, Lithuania)* 57 (1): 43. **Link:** <https://pubmed.ncbi.nlm.nih.gov/33430175/>

Buchwald D et al. (1996) Functional status in patients with chronic fatigue syndrome, other fatiguing illnesses, and healthy individuals. *The American Journal of Medicine* 101(4): 364-370. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/8873506>

van Campen CM et al. (2020) Physical Activity Measures in Patients With Myalgic Encephalomyelitis/Chronic Fatigue Syndrome: Correlations Between Peak Oxygen Consumption, the Physical Functioning Scale of the SF-36 Questionnaire, and the Number of Steps From an Activity Meter. *Journal of Translational Medicine* 18 (1): 228. **Link:**

<https://tinyurl.com/ybywkd2h>

Cheshire A et al. (2021) Sick of the Sick Role: Narratives of What "Recovery" Means to People With CFS/ME. *Qualitative Health Research* 31 (2): 298-308.

Link: <https://pubmed.ncbi.nlm.nih.gov/33176575/>

Comerford B and Podell R (2019) Medically Documenting Disability in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS) Cases. *Frontiers in Paediatrics* 7: 231. **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/31334205>

Conroy K et al. (2021) Homebound versus Bedridden Status among Those with Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Healthcare (Basel, Switzerland)* 9 (2): 106. **Link:**

<https://pubmed.ncbi.nlm.nih.gov/33498489/>

Eaton-Fitch N et al. (2020) Health-related quality of life in patients with myalgic encephalomyelitis/chronic fatigue syndrome: an Australian cross-sectional study. *Quality of Life Research* 29 (6): 1521-1531. **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/31970624>

Gotaas ME, et al. (2023) Characteristics associated with physical functioning and fatigue in patients with chronic fatigue syndrome (CFS): secondary analyses of a randomized controlled trial. *Fatigue: Biomedicine, Health & Behavior*. **Link:** doi.org/10.1080/21641846.2023.2175521 (*NEW)

Hvidberg MF et al. (2015) The Health-Related Quality of Life for Patients with Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS). *PLoS ONE* 10(7): e0132421. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/26147503>

Jones B et al. (2023) Evaluating the ability of patient reported outcome measures to represent the functional limitation of people living with myalgic encephalomyelitis/chronic fatigue syndrome. *Fatigue: Biomedicine, Health & Behavior*. **Link:** doi.org/10.1080/21641846.2023.2175579 (*NEW)

Kingdon C et al. (2018) Functional Status and Well-Being in People with Myalgic Encephalomyelitis/Chronic Fatigue Syndrome Compared with People with Multiple Sclerosis and Healthy Controls. *Pharmacoecon Open* 2 (4): 381-392 **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/29536371>

Komaroff AL et al. (1996) Health status in patients with chronic fatigue syndrome and in general population and disease comparison groups. *The American Journal of Medicine* 101(3): 281-290. **Link:**

[http://www.amjmed.com/article/S0002-9343\(96\)00174-X/fulltext](http://www.amjmed.com/article/S0002-9343(96)00174-X/fulltext)

Komaroff AL (2021) Myalgic Encephalomyelitis/Chronic Fatigue Syndrome: When Suffering Is Multiplied. *Healthcare* 2021, 9: 919. **Link:**

<https://www.mdpi.com/2227-9032/9/7/919/html>

- Kroll C** (2021) Questioning Biomedicine's Privileging of Disease and Measurability. *AMA Journal of Ethics* 23 (7): E537-541. **Link:** <https://pubmed.ncbi.nlm.nih.gov/34351263/>
- Morehouse S et al.** (2021) Impacts of online support groups on quality of life, and perceived anxiety and depression in those with ME/CFS: a survey. *Fatigue: Biomedicine, Health & Behavior*. **Link:** <https://www.tandfonline.com/doi/abs/10.1080/21641846.2021.1950406?journalCode=rftg20>
- Nacul LC et al.** (2011) The functional status and wellbeing of people with myalgic encephalomyelitis/chronic fatigue syndrome and their carers. *BMC Public Health* 11: 402. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/21619607>
- Oter-Quintana C et al.** (2021) Chronic fatigue syndrome: Patients' experiences, clinical practice and epistemic justice. *Enfermeria Clinica (English Edition)* 31 (3): 198-199. (Article in Spanish.) **Link:** <https://pubmed.ncbi.nlm.nih.gov/33785285/>
- Saman H et al.** (2022) A comparison of pain, fatigue, and function between post-COVID-19 condition, fibromyalgia, and chronic fatigue syndrome: a survey study. *PAIN* 10.1097/j.pain.000000000000271. **Link:** doi.org/10.1097/j.pain.000000000000271 (*NEW)
- Schweitzer R et al.** (1995) Quality of life in chronic fatigue syndrome. *Social Science & Medicine* 41(10): 1367-1372. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/8560304>
- Shepherd C.** (1999) *Living with M.E.: the chronic/post-viral fatigue syndrome*, London: Vermilion. **Link:** <http://www.meassociation.org.uk/shop/books/living-with-me/>
- Simila W et al.** (2020) Health-related Quality of Life in Norwegian Adolescents Living With Chronic Fatigue Syndrome. *Health Quality Life Outcomes* 18(1):170. **Link:** <https://tinyurl.com/yc9e2z9x>
- Strand EB et al.** (2018) Pain is associated with reduced quality of life and functional status in patients with Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Scandinavian Journal of pain* 19 (1): 61-72 **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/30325738>
- Vergauwen K et al.** (2021) An exploratory study of discrepancies between objective and subjective measurement of the physical activity level in female patients with chronic fatigue syndrome. *Journal of Psychosomatic Research* 144: 110417. **Link:** <https://pubmed.ncbi.nlm.nih.gov/33773330/>
- Vyas J et al.** (2022) Impact of myalgic encephalomyelitis/ chronic fatigue syndrome (ME/CFS) on the quality of life of people with ME/CFS and their partners and family members: an online crosssectional survey. *BMJ Open* 12: e058128. **Link:** doi.org/10.1136/bmjopen-2021-058128

Weigel B et al. (2022). Dietary supplements, daily nutrient intake, and health-related quality of life among people with myalgic encephalomyelitis/chronic fatigue syndrome. *Proceedings of the Nutrition Society* 81 (OCE3): E80. **Link:** doi.org/10.1017/S0029665122001057 (*NEW)

Wiedbusch E and Jason LA (2022) Comparing Operationalized Approaches for Substantial Reduction of Functioning in Chronic Fatigue Syndrome and Myalgic Encephalomyelitis. *Archives of Community Medicine* 4 (1): 59-63. **Link:** doi.org/10.36959/547/653

Winger A et al. (2015) Health related quality of life in adolescents with chronic fatigue syndrome: a cross-sectional study. *Health and Quality of Life Outcomes* 13: 96. **Link:** <https://hqlo.biomedcentral.com/articles/10.1186/s12955-015-0288-3>

10.6. Severe ME

Also see our [leaflets](#) on severe ME in [adults](#) and in Children.

Baxter H et al. (2021) Life-Threatening Malnutrition in Very Severe ME/CFS. *Healthcare (Basel, Switzerland)* 9 (4): 459. **Link:** <https://pubmed.ncbi.nlm.nih.gov/33919671/>

Baxter H (2022) Ensuring the Voice of the Very Severely Affected Myalgic Encephalomyelitis/Chronic Fatigue Syndrome Patient Is Heard in Research—A Research Model. *Healthcare* 10: 1278. **Link:** doi.org/10.3390/healthcare10071278 (*NEW)

Chang C-J et al. (2021) Comprehensive Examination of Severely Ill ME/CFS Patients. *Healthcare* 9: 1290. **Link:** <https://www.mdpi.com/2227-9032/9/10/1290>

Dafoe W (2021) Extremely Severe ME/CFS- A Personal Account. *Healthcare* 2021, 9, 504. **Link:** <https://pubmed.ncbi.nlm.nih.gov/33925566/>

Fennell, PA et al. (2021) Elements of Suffering in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome: The Experience of Loss, Grief, Stigma, and Trauma in the Severely and Very Severely Affected. *Healthcare* 9: 553. **Link:** <https://www.mdpi.com/2227-9032/9/5/553>

Hiremath S et al. (2022) Key Features of a Multi-Disciplinary Hospital-Based Rehabilitation Program for Children and Adolescents with Moderate to Severe Myalgic Encephalomyelitis/Chronic Fatigue Syndrome ME/CFS. *International Journal of Environmental Research and Public Health* 19 (20): 13608. **Link:** doi.org/10.3390/ijerph192013608 (*NEW)

Jason LA et al. (2021) Saliva fatigue biomarker index as a marker for severe myalgic encephalomyelitis/chronic fatigue syndrome in a community based sample. *Fatigue: Biomedicine, Health & Behavior*. **Link:** <https://www.tandfonline.com/doi/abs/10.1080/21641846.2021.1994222>

- Kingdon C et al.** (2020) Health Care Responsibility and Compassion-Visiting the Housebound Patient Severely Affected by ME/CFS. *Healthcare* 8 (3): 197. Link: <https://www.mdpi.com/2227-9032/8/3/197/htm>
- Krabbe SH et al.** (2022) Bodies in lockdown: Young women's narratives of falling severely ill with ME/CFS during childhood and adolescence, *Health Care for Women International*. Link: doi.org/10.1080/07399332.2022.2043862
- Krabbe SH et al.** (2023) The fragile process of Homecoming - Young women in recovery from severe ME/CFS. *International Journal of Qualitative Studies on Health and Well-being* 18:1. Link: doi.org/10.1080/17482631.2022.2146244 (*NEW) Comment
- McDermott C et al.** (2014) What is the current NHS service provision for patients severely affected by chronic fatigue syndrome/myalgic encephalomyelitis? A national scoping exercise. *BMJ Open* 4(6): e005083. Link: <http://bmjopen.bmj.com/content/4/6/e005083>
- Montoya JG et al.** (2021) Caring for the Patient with Severe or Very Severe Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Healthcare* 9: 1331. Link: <https://www.mdpi.com/2227-9032/9/10/1331/htm>
- Pendergrast T et al.** (2016) Housebound versus nonhousebound patients with myalgic encephalomyelitis and chronic fatigue syndrome. *Chronic Illness*. (Epub ahead of print). Link: <https://www.ncbi.nlm.nih.gov/pubmed/27127189>
- Pheby D and Saffron L.** (2009) Risk factors for severe ME/CFS. *Biology and Medicine* 1(4): 50-74. Link: http://www.meassociation.org.uk/wp-content/uploads/2013/04/Biology-and-Medicine_Published-paper_vol1_4_50-74.pdf
- Royston AP et al.** (2022) Severe myalgic encephalomyelitis/chronic fatigue syndrome in children and young people: a British Paediatric Surveillance Unit study. *Archives of Diseases in Childhood: archdischild-2022-324319*. [Epub ahead of print] Link: doi.org/10.1136/archdischild-2022-324319 (*NEW)
- Sommerfelt K, et al.** (2023) Severe and Very Severe Myalgic Encephalopathy/Chronic Fatigue Syndrome ME/CFS in Norway: Symptom Burden and Access to Care. *Journal of Clinical Medicine* 12 (4): 1487. doi.org/10.3390/jcm12041487 (*NEW)
- Strassheim V et al.** (2021) Experiences of Living with Severe Chronic Fatigue Syndrome/Myalgic Encephalomyelitis. *Healthcare (Basel, Switzerland)* 9 (2): 168. Link: <https://pubmed.ncbi.nlm.nih.gov/33562474/>
- Williams LR and Isaacson-Brash C.** (2021) Three Cases of Severe ME/CFS in Adults. *Healthcare (Basel, Switzerland)* 9 (2): 215. Link: <https://pubmed.ncbi.nlm.nih.gov/33669438/>

10.7. Technology- Wearables and activity monitoring

van Campen CM et al. (2020) Physical Activity Measures in Patients With Myalgic Encephalomyelitis/Chronic Fatigue Syndrome: Correlations Between Peak Oxygen Consumption, the Physical Functioning Scale of the SF-36 Questionnaire, and the Number of Steps From an Activity Meter. *Journal of Translational Medicine* 18 (1): 228. **Link:** <https://tinyurl.com/ybywkd2h>

Redfield S et al. (2022) Assistive Robots for Long COVID and ME/CFS Support: Challenges and Opportunities. 2022 *IEEE Canadian Conference on Electrical and Computer Engineering (CCECE)*: 18-20 September 2022. **Link:** doi.org/10.1109/CCECE49351.2022.9918211 (*NEW)

Rekeland IG, et al. (2022) Activity monitoring and patient-reported outcome measures in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome patients. *PLOS ONE* 17(9): e0274472. **Link:** doi.org/10.1371/journal.pone.0274472 (*NEW) **Comment**

11. VACCINATION

Also see our [leaflets](#) on Vaccination.

Andersson L. (2017) Conflicting results in article describing "HPV-vaccination and risk of chronic fatigue syndrome/myalgic encephalomyelitis". *Vaccine* 35 (51): 7081. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/29195610>

Appel S et al. (2007) Infection and vaccination in chronic fatigue syndrome: Myth or reality? *Autoimmunity* 40(1): 48-53. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/17364497>

Barboi A et al. (2020) Human papillomavirus (HPV) vaccine and autonomic disorders: a position statement from the American Autonomic Society. *Clinical Autonomic Research* 30 (1): 13-18. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/31475305>

Behrman A. and Offley W. (2013) Re: Should influenza vaccination be mandatory for healthcare workers? [Letter to the editor]. *BMJ* 347: f6705. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/24222482>

Blitshetyn S et al. (2018) Autonomic dysfunction and HPV immunization: an overview, *Immunological Research* [Epub ahead of print]. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/30478703>

Brenu EW et al. (2012) The Effects of Influenza Vaccination on Immune Function in Patients with Chronic Fatigue Syndrome/Myalgic Encephalomyelitis. *International Journal of Clinical Medicine* 3(6): 544-551. **Link:** https://file.scirp.org/pdf/IJCM20120600017_29918208.pdf

- Feiring B et al.** (2017) HPV vaccination and risk of chronic fatigue syndrome/myalgic encephalomyelitis: A nationwide register-based study from Norway. *Vaccine* 35(33): 4203-4212. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/28648542>
- Feiring B et al.** (2017) No conflicting results in the article "HPV vaccination and risk of chronic fatigue syndrome/myalgic encephalomyelitis: A nationwide register-based study from Norway". *Vaccine* 35 (51): 7082-7083. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/29195611>
- Gherardi RK et al.** (2019) Myalgia and chronic fatigue syndrome following immunization: macrophagic myofasciitis and animal studies support linkage to aluminum adjuvant persistency and diffusion in the immune system. *Autoimmune Reviews* 18 (7): 691-705. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/31059838>
- Hviid A et al.** (2020) Association between quadrivalent human papillomavirus vaccination and selected syndromes with autonomic dysfunction in Danish females: population based, self-controlled, case series analysis. *BMJ* 370: m2930. **Link:** <https://www.bmj.com/node/1033205.full>
- Jara LJ et al.** (2017) Is the immune neuroendocrine system the connection between epipharyngitis and chronic fatigue syndrome induced by HPV vaccine? Editorial. *Immunology Research* 65 (1): 5-7. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/27605126>
- Magnus P et al.** (2009) Vaccination as teenagers against meningococcal disease and the risk of the chronic fatigue syndrome. *Vaccine* 27(1): 23-27. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/18984023>
- Magnus P et al.** (2015) Chronic fatigue syndrome/myalgic encephalomyelitis (CFS/ ME) is associated with pandemic influenza infection, but not with an adjuvanted pandemic influenza vaccine. *Vaccine* 33(46): 6173-6177. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/26475444>
- Manysheva K et al.** (2022) Myalgic Encephalomyelitis/Chronic Fatigue Syndrome: First Described Complication after Gam-COVID-Vac Vaccine. *Psychiatria Danubina* 34 (8):189-190. **Link:** https://www.psychiatria-danubina.com/UserDocImages/pdf/dnb_vol34_noSuppl%208/dnb_vol34_noSuppl%208_189.pdf (*NEW)
- Medicines and Healthcare Products Regulatory Agency.** (2012) Cervarix HPV vaccine: safety update at end of 4 years routine use in HPV immunisation programme. *MHRA Public Assessment Report*. **Link:** <http://www.mhra.gov.uk/safety-public-assessment-reports/CON221607>
- Phelan J et al.** (2020) A potential antigenic mimicry between viral and human proteins linking Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS) with autoimmunity: The case of HPV immunization. *Autoimmunity Reviews* 19 (4): 102487. **Link:** <https://www.sciencedirect.com/science/article/abs/pii/S1568997220300355>

Prinsen H et al. (2012) Humoral and cellular immune responses after influenza vaccination in patients with chronic fatigue syndrome. *BMC Immunology* 13: 71. **Link:** <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3534525/>

Rigolet M et al. (2014) Clinical features in patients with long-lasting macrophagic myofasciitis. *Frontiers in Neurology* doi.org/10.3389/fneur.2014.00230. **Link:** <https://www.frontiersin.org/articles/10.3389/fneur.2014.00230/full>

Ryabkova VA et al. (2019) Neuroimmunology: What Role for Autoimmunity, Neuroinflammation, and Small Fiber Neuropathy in Fibromyalgia, Chronic Fatigue Syndrome, and Adverse Events after Human Papillomavirus Vaccination? *International Journal of Molecular Science* 20 (20) 5164. **Link:** <https://www.mdpi.com/1422-0067/20/20/5164/htm>

Schurink-van't Klooster TM et al. (2018) No evidence found for an increased risk of long-term fatigue following human papillomavirus vaccination of adolescent girls, *Vaccine* 36 (45): 6796-6802 **Link:** <https://www.sciencedirect.com/science/article/pii/S0264410X18312684>

Shepherd CB. (2001a) Is CFS linked to vaccinations? *The CFS Research Reviews* 2. **Link:** <http://www.vaccinationcouncil.org/2009/06/04/is-cfs-linked-to-vaccinations/>

Skufca J et al. (2017) Incidence rates of Guillain Barré (GBS), chronic fatigue/systemic exertion intolerance disease (CFS/SEID) and postural orthostatic tachycardia syndrome (POTS) prior to introduction of human papilloma virus (HPV) vaccination among adolescent girls in Finland, 2002-2012. *Papillomavirus Research* 3: 91-96. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/28720463>

Smith AP and Thomas M (2021) Polio Vaccination and Chronic Fatigue Syndrome. *Asian Journal of Research in Infectious Diseases* 8(4): 43-49. **Link:** https://orca.cardiff.ac.uk/146095/1/polio_cfs.pdf

Tuuminen T et al. (2018) Dampness and mold hypersensitivity syndrome and vaccination as risk factors for chronic fatigue syndrome, *Autoimmune Reviews* [Epub ahead of print] **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/30408578>

Vedhara K et al. (1997) Consequences of live poliovirus vaccine administration in chronic fatigue syndrome. *Journal of Neuroimmunology* 75(1-2): 183-195. **Link:** <http://www.sciencedirect.com/science/article/pii/S0165572897000325>

12. CHILDREN AND ADOLESCENTS

Also see our [leaflets](#) on Children and Adolescents.

Albers E et al. (2021) Effectiveness of Internet-Based Cognitive Behavior Therapy (Fatigue in Teenagers on the Internet) for Adolescents With Chronic Fatigue Syndrome in Routine Clinical Care: Observational Study. *Journal of Medical Internet Research* 23 (8): e24839. **Link:** <https://pubmed.ncbi.nlm.nih.gov/34397389/>

Ali S et al. (2019) Psychological and demographic factors associated with fatigue and social adjustment in young people with severe chronic fatigue syndrome/myalgic encephalomyelitis: a preliminary mixed-methods study. *Journal of Behavioural Medicine* 42 (5): 898-910 **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/30684123>

Anderson E et al. (2020) Recruiting Adolescents With Chronic Fatigue Syndrome/Myalgic Encephalomyelitis to Internet-Delivered Therapy: Internal Pilot Within a Randomized Controlled Trial. *Journal of Medical Internet Research* 22 (8): e17768. **Link:** <https://pubmed.ncbi.nlm.nih.gov/32784188/>

Antiel RM et al. (2011) Iron insufficiency and hypovitaminosis D in adolescents with chronic fatigue and orthostatic intolerance. *Southern Medical Journal* 104(8): 609-611. **Link:** <https://sma.org/southern-medical-journal/article/iron-insufficiency-and-hypovitaminosis-d-in-adolescents-with-chronic-fatigue-and-orthostatic-intolerance/>

Ascough C et al. (2020) Interventions to treat pain in paediatric CFS/ME: a systematic review. *BMJ Paediatrics Open* 4 (1). **Link:** <https://bmjpaedsopen.bmj.com/content/4/1/e000617>

Bell DS et al. (2001) Thirteen-year follow-up of children and adolescents with chronic fatigue syndrome. *Pediatrics* 107(5): 994-998. **Link:** <http://pediatrics.aappublications.org/content/107/5/994>

Bierre KL (2022) Support Experiences of Children and Youth with Myalgic Encephalomyelitis/Chronic Fatigue Syndrome and Epilepsy in New Zealand Schools: A Parental Perspective. [Master dissertation, Massey University] **Link:** <https://mro.massey.ac.nz/bitstream/handle/10179/17655/BierreMScThesis.pdf?sequence=1&isAllowed=y> (*NEW)

Brigden A et al. (2017) Practical management of chronic fatigue syndrome or myalgic encephalomyelitis in childhood. *Archives of Disease in Childhood* 102 (10): 981-986. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/28659269>

Brigden A et al. (2018) Using the internet to cope with chronic fatigue syndrome/myalgic encephalomyelitis in adolescence: a qualitative study. *BMJ Paediatrics Open* 2 (1). **Link:** <https://bmjpaedsopen.bmj.com/content/2/1/e000299>

Brigden A et al. (2018) Defining the minimally clinically important difference of the SF-36 physical function subscale for paediatric CFS/ME: triangulation using three different methods, *Health and Quality of Life Outcomes* 16 (1): 202. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/30340599>

- Brigden A et al.** (2019) Results of the feasibility phase of the managed activity graded exercise in teenagers and pre-adolescents (MAGENTA) randomised controlled trial of treatments for chronic fatigue syndrome/myalgic encephalomyelitis. *Pilot and Feasibility Studies* 5: 151. **Link:** <https://pilotfeasibilitystudies.biomedcentral.com/articles/10.1186/s40814-019-0525-3>
- Brigden A et al.** (2020) "The child's got a complete circle around him". The care of younger children (5–11 years) with CFS/ME. A qualitative study comparing families', teachers' and clinicians' perspectives. *Health and Social Care in the community* 28: 2179-2189. **Link:** doi.org/10.1111/hsc.13029
- Brigden A et al.** (2021) "It's a medical condition ... you need to support as much as possible": a qualitative analysis of teachers' experiences of chronic fatigue syndrome / myalgic encephalomyelitis (CFS/ME). *BMC Pediatrics* 21 (1): 6. **Link:** <https://pubmed.ncbi.nlm.nih.gov/33397331/>
- Brigden A et al.** (2021) Chronic fatigue syndrome/myalgic encephalomyelitis in children aged 5 to 11 years: A qualitative study. *Clinical Child Psychology and Psychiatry* 26 (1): 18-32. **Link:** <https://pubmed.ncbi.nlm.nih.gov/33092395/>
- Brodwall E et al.** (2020) Pain in adolescent chronic fatigue following Epstein-Barr virus infection. *Scandinavian Journal of Pain* 20 (4): 765-775. **Link:** doi.org/10.1515/sjpain-2020-0031
- Carroll S et al.** (2018) Adolescent and parent factors related to fatigue in paediatric multiple sclerosis and chronic fatigue syndrome: A comparative study. *European Journal of Paediatric Neurology* 23 (1): 70-80 **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/30455131>
- Carruthers BM and van de Sande MI (eds).** (2012) Myalgic Encephalomyelitis – Adult and Paediatric: International Consensus Primer for Medical Practitioners. Available at: http://sacfs.asn.au/download/me_international_consensus_primer_for_medical_practitioners.pdf
- Chalder T et al.** (2019) However CFS is operationalised young people's perspectives are important. *Journal of Behavioural Medicine* [Epub ahead of print]. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/30937681>
- Clery P et al.** (2021) Qualitative study of the acceptability and feasibility of acceptance and commitment therapy for adolescents with chronic fatigue syndrome. *BMJ Paediatrics Open* 5 (1): e001139. **Link:** <https://pubmed.ncbi.nlm.nih.gov/34660913/>
- Clery P et al.** (2022) What treatments work for anxiety and depression in children and adolescents with chronic fatigue syndrome? An updated systematic review. *BMJ Open*. 12 (1): e051358. **Link:** <https://pubmed.ncbi.nlm.nih.gov/35105619/>

- Clery P et al.** (2022) The importance of school in the management of Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS): issues identified by adolescents and their families. *Health and Social Care Community* 00: 1–11. **Link:** doi.org/10.1111/hsc.13942 (*NEW)
- Collard S and Murphy J** (2019) Management of chronic fatigue syndrome/myalgic encephalomyelitis in a pediatric population: A scoping review. *Journal of Child and Health Care* [Epub ahead of print]. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/31379194>
- Collin SM et al.** (2015) Chronic fatigue syndrome (CFS) or myalgic encephalomyelitis (ME) is different in children compared to in adults: a study of UK and Dutch clinical cohorts. *BMJ Open* 5(10): e008830. **Link:** <http://bmjopen.bmj.com/content/5/10/e008830>
- Collin SM et al.** (2018) Childhood sleep and adolescent chronic fatigue syndrome (CFS/ME): evidence of associations in a UK birth cohort. *Sleep Medicine* 46: 26–36. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/29773208>
- Collin S et al.** (2019) Depressive symptoms at age 9–13 and chronic disabling fatigue at age 16: A longitudinal study. *Journal of Adolescence* 75: 123–129. **Link:** <https://www.sciencedirect.com/science/article/pii/S0140197119301289>
- Crawley E and Sterne JAC.** (2009) Association between school absence and physical function in paediatric chronic fatigue syndrome/myalgic encephalopathy. *Archives of Disease in Childhood* 94(10): 752–756. **Link:** <http://adc.bmj.com/content/94/10/752.info>
- Crawley E et al.** (2011) Unidentified Chronic Fatigue Syndrome/myalgic encephalomyelitis (CFS/ME) is a major cause of school absence: surveillance outcomes from school-based clinics. *BMJ Open* 1(2): e000252. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/22155938>
- Crawley EM et al.** (2017) Clinical and cost-effectiveness of the Lightning Process in addition to specialist medical care for paediatric chronic fatigue syndrome: randomised controlled trial. *Archives of Disease in Childhood*, 103 (2): 155–164. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/28931531>
- Dowsett EG and Colby J.** (1997) Long-Term Sickness Absence Due to ME/CFS in UK Schools. *Journal of Chronic Fatigue Syndrome* 3(2): 29–42. **Link:** <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.1023.966&rep=rep1&type=pdf>
- Van Deuren S et al.** (2021) Fatigue-Related Cognitive Behavioral Factors in Survivors of Childhood Cancer: Comparison with Chronic Fatigue Syndrome and Survivors of Adult-Onset Cancer. *Journal of Adolescent and Young Adult Oncology* 10 (1): 92–99. **Link:** <https://pubmed.ncbi.nlm.nih.gov/32857640/>

- Ekberg KM et al.** (2021) Parent-child discrepancies in health-related quality of life of children and adolescents with myalgic encephalomyelitis/chronic fatigue syndrome. *Quality of Life Research*. **Link:**
<https://link.springer.com/article/10.1007/s11136-021-02919-w>
- Feder HM and Wormser GP.** (2021) Studying College Students for the Development of Infectious Mononucleosis and ME/CFS. *Clinical Infectious Diseases: an official publication of the Infectious Diseases Society of America* 73 (11): e3747-e3749. **Link:** doi.org/10.1093/cid/ciab075
- Fennema M** (2021) Language as a Predictor of Anxiety, Depression, and Self-Efficacy Scores and Recovery Rate in Teenagers with Chronic Fatigue Syndrome. [Master Dissertation, Utrecht University] **Link:**
<https://studenttheses.uu.nl/bitstream/handle/20.500.12932/43311/Thesis%20Mara%20Fennema%20Final%20Version.pdf?sequence=1&isAllowed=y>
(*NEW)
- Friedman KJ et al.** (2018) School Nurses Can Improve the Lives of Students With Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *National Association of School Nurses* 33 (6): 372-379. **Link:**
doi.org/10.1177/1942602X18795299
- Geraghty KJ and Adeniji C** (2019) The importance of accurate diagnosis of Myalgic Encephalomyelitis in children and adolescents: a commentary. *Frontiers in Pediatrics* 6: 435. **Link:**
<https://www.frontiersin.org/articles/10.3389/fped.2018.00435/full>
- Ghatineh S and Vink M.** (2017) FITNET's Internet-Based Cognitive Behavioural Therapy Is Ineffective and May Impede Natural Recovery in Adolescents with Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. A Review. *Behavioural Science* 7 (3). **Link:**
<https://www.ncbi.nlm.nih.gov/pubmed/28800089>
- Gregorowski A et al.** (2019) Child and adolescent chronic fatigue syndrome/myalgic encephalomyelitis: where are we now? *Current Opinion in Pediatrics* 31 (4): 462-468. **Link:** <https://tinyurl.com/yxhgyupg>
- Haig-Ferguson A et al.** (2009) Memory and attention problems in children with chronic fatigue syndrome or myalgic encephalopathy. *Archives of Disease in Childhood* 94(10): 757-762. **Link:**
<http://adc.bmj.com/content/94/10/757.info>
- Haig-Ferguson A et al.** (2018) "It's not one size fits all"; the use of videoconferencing for delivering therapy in a Specialist Paediatric Chronic Fatigue Service. *Internet Interventions* [Epub ahead of print]. **Link:**
<https://www.sciencedirect.com/science/article/pii/S2214782918300642>
- Haines C, Loades M and Davis C** (2019) Illness perceptions in adolescents with chronic fatigue syndrome and other physical health conditions: Application of the common-sense model. *Clinical Child Psychology and Psychiatry* 24 (3): 546-563. **Link:**
<https://www.ncbi.nlm.nih.gov/pubmed/30770020>

- Harris S et al.** (2017) A qualitative investigation of eating difficulties in adolescents with chronic fatigue syndrome/myalgic encephalomyelitis. *Clinical Child Psychology and Psychiatry* 22 (1): 128-139. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/27215228>
- Harland MR et al.** (2019) Paediatric chronic fatigue syndrome patients' and parents' perceptions of recovery. *BMJ Paediatrics Open* 3 (1). **Link:** <https://bmjpaedsopen.bmj.com/content/3/1/e000525>
- Henderson T.** (2014) Valacyclovir treatment of chronic fatigue in adolescents. *Advances in Mind-Body Medicine* 28(1): 4-14. **Link:** <http://europepmc.org/abstract/med/24445302>
- Hiremath S et al.** (2022) Key Features of a Multi-Disciplinary Hospital-Based Rehabilitation Program for Children and Adolescents with Moderate to Severe Myalgic Encephalomyelitis/Chronic Fatigue Syndrome ME/CFS. *International Journal of Environmental Research and Public Health* 19 (20): 13608. **Link:** doi.org/10.3390/ijerph192013608 (*NEW)
- Jason LA et al.** (2020) The Prevalence of Pediatric Myalgic Encephalomyelitis/Chronic Fatigue Syndrome in a Community-Based Sample. *Child Youth Care Forum* 49 (4): 563-579. **Link:** <https://pubmed.ncbi.nlm.nih.gov/34113066/>
- Jason LA et al.** (2022) Cytokine network analysis in a community-based pediatric sample of patients with myalgic encephalomyelitis/chronic fatigue syndrome. *Chronic Illness*. **Link:** doi.org/10.1177/17423953221101606 (*NEW)
- Josev EK et al.** (2017) Sleep Quality in Adolescents with Chronic Fatigue Syndrome/Myalgic Encephalomyelitis (CFS/ME). *Journal of Clinical Sleep Medicine* 13 (9): 1057-1066. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/28760189>
- Josev EK et al.** (2019) Resting-state functional connectivity, cognition, and fatigue in response to cognitive exertion: a novel study in adolescents with chronic fatigue syndrome. *Brain Imaging and Behaviour* [Epub ahead of print]. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/31102168>
- Kallesoe K et al.** (2020) Feasibility of group-based acceptance and commitment therapy for adolescents (AHEAD) with multiple functional somatic syndromes: a pilot study. *BMC Psychiatry* 20 (457). **Link:** <https://bmcpsy psychiatry.biomedcentral.com/articles/10.1186/s12888-020-02862-z>
- Katz BZ and Jason LA.** (2013) Chronic fatigue syndrome following infections in adolescents. *Current Opinion in Pediatrics* 25(1): 95-102. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/23263024>
- Kennedy G et al.** (2010a) Biochemical and vascular aspects of pediatric chronic fatigue syndrome. *Archives of Pediatrics & Adolescent Medicine* 164(9): 817-823. **Link:** <https://jamanetwork.com/journals/jamapediatrics/fullarticle/383727>

Kennedy G et al. (2010b) Physical and functional impact of chronic fatigue syndrome/ myalgic encephalomyelitis in childhood. *Pediatrics* 125(6): e1324-e1330. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/20478937>

Knight SJ et al. (2013a) Paediatric chronic fatigue syndrome: Complex presentations and protracted time to diagnosis. *Journal of Paediatrics and Child Health* 49(11): 919-924. **Link:** <https://research.monash.edu/en/publications/paediatric-chronic-fatigue-syndrome-complex-presentations-and-pro>

Knight SJ et al. (2013b) Interventions in Pediatric Chronic Fatigue Syndrome/Myalgic Encephalomyelitis: A Systematic Review. *Journal of Adolescent Health* 53(2): 154-165. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/23643337>

Knight SJ et al. (2018) School Functioning in Adolescents With Chronic Fatigue Syndrome, *Frontiers in Paediatrics* 6. **Link:** <https://www.frontiersin.org/articles/10.3389/fped.2018.00302/full>

Knight S., et al. (2019) Epidemiology of paediatric chronic fatigue syndrome in Australia. *Archives of Disease in Childhood* 104 (8): 733-738. **Link:** <https://adc.bmj.com/content/early/2019/02/23/archdischild-2018-316450>

Krabbe SH et al. (2022) Bodies in lockdown: Young women's narratives of falling severely ill with ME/CFS during childhood and adolescence, *Health Care for Women International*. **Link:** doi.org/10.1080/07399332.2022.2043862

Krabbe SH et al. (2023) The fragile process of Homecoming - Young women in recovery from severe ME/CFS. *International Journal of Qualitative Studies on Health and Well-being* 18:1. **Link:** doi.org/10.1080/17482631.2022.2146244
(*NEW) Comment

Kristiansen MS et al. (2019) Clinical symptoms and markers of disease mechanisms in adolescent chronic fatigue following Epstein-Barr virus infection: An exploratory cross-sectional study. *Brain, Behaviour and Immunity* [Epub ahead of print]. **Link:** <https://www.sciencedirect.com/science/article/pii/S0889159119301333>

Leonard AJ et al. (2020) The Prevalence of Pediatric Myalgic Encephalomyelitis/Chronic Fatigue Syndrome in a Community-Based Sample. *Child and Youth Care Forum* 1-17. **Link:** <https://link.springer.com/article/10.1007/s10566-019-09543-3>

Leong A et al. (2021) Chronic Fatigue Syndrome in Childhood Revisited: Not Common, But Not Unknown- Case Study and Literature Review. *BioPsychoSocial Medicine BMC* (ResearchSquare) [Epub ahead of print.] **Link:** <https://www.researchsquare.com/article/rs-962672/v1>

Lewis ML (2023) A narrative inquiry into the school experiences of teenagers living with Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS). [DEdPsy Thesis, University of Bristol.] **Link:** https://research-information.bris.ac.uk/ws/portalfiles/portal/349168131/Final_Copy_2022_12_06_Lewis_M_L_DEdPsy.pdf (*NEW)

Loades M (2022) Improving the identification and treatment of co-morbid depression and/or anxiety in adolescents with Chronic Fatigue Syndrome (CFS/ME). [Doctoral dissertation, University of Bristol] **Link:**

<https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.852541> (*NEW)

Loades ME and Chalder T. (2017) Same, Same but Different? Cognitive Behavioural Treatment Approaches for Paediatric CFS/ME and Depression - CORRIGENDUM. *Behavioural Cognition and Psychotherapy* 45 (4): 432. **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/28436348>

Loades ME et al. (2017) The presence of co-morbid mental health problems in a cohort of adolescents with chronic fatigue syndrome. *Clinical Childhood Psychology and Psychiatry* 1: 1359104517736357. **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/29096528>

Loades ME et al. (2018a) Illness beliefs of adolescents with CFS and their parents: the perceived causes of illness and beliefs about recovery. *International Journal of Adolescent Medicine and Health* [Epub ahead of print]. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/30118437>

Loades ME et al. (2018b) Does fatigue and distress in a clinical cohort of adolescents with CFS correlate with fatigue and distress in their parents? *Child Care, Health Development* 45 (1): 129-137 **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/30342433>

Loades ME et al. (2019) Obstacles to recruitment in paediatric studies focusing on mental health in a physical health context: the experiences of clinical gatekeepers in an observational cohort study. *BMC Medical Research Methodology* 19: 89. **Link:**

<https://bmcmmedresmethodol.biomedcentral.com/articles/10.1186/s12874-019-0730-z>

Loades ME et al. (2019) Perfectionism and beliefs about emotions in adolescents with chronic fatigue syndrome and their parents: a preliminary investigation in a case control study nested within a cohort. *Psychological Health* 34 (7): 850-866. **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/30821511>

Loades ME et al. (2019) Cognitive and behavioural responses to symptoms in adolescents with chronic fatigue syndrome: A case-control study nested within a cohort. *Clinical Child Psychology and Psychiatry* 24 (3): 564-579. **Link:** <https://journals.sagepub.com/doi/abs/10.1177/1359104519835583>

Loades ME et al. (2019) Depressive symptoms in adolescents with chronic fatigue syndrome (CFS): Are rates higher than in controls and do depressive symptoms affect outcome? *Clinical Child Psychology and Psychiatry* 24 (3): 580-592. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/30945566>

Loades ME et al. (2019) Psychometric properties of the Cognitive and Behavioural Responses Questionnaire (CBRQ) in adolescents with chronic fatigue syndrome. *Behavioural and Cognitive Psychotherapy* 22: 1-12. **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/31113527>

- Loades M et al.** (2020) How common are depression and anxiety in adolescents with chronic fatigue syndrome (CFS) and how should we screen for these mental health co-morbidities? A clinical cohort study. *European Child and Adolescent Psychiatry* [Epub ahead of print]. **Link:** <https://pubmed.ncbi.nlm.nih.gov/32964335/>
- Loades ME et al.** (2020) Do adolescents with Chronic Fatigue Syndrome (CFS/ME) and co-morbid anxiety and/or depressive symptoms think differently to those who do not have co-morbid psychopathology? *Journal of Affective Disorders* 30 (11): 1733-1743. **Link:** doi.org/10.1007/s00787-020-01646-w
- Loades ME et al.** (2020) Sleep Problems in Adolescents With CFS: A Case-Control Study Nested Within a Prospective Clinical Cohort. *Clinical Child Psychology and Psychiatry* [Epub ahead of print]. **Link:** <https://tinyurl.com/ybmsmyvd>
- Loades ME et al.** (2020) Assessing functioning in adolescents with chronic fatigue syndrome: psychometric properties and factor structure of the School and Social Adjustment Scale and the Physical Functioning Subscale of the SF36. *Behavioural and Cognitive Psychotherapy* 48(5):546-556. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/32234097>
- Loades ME et al.** (2021) Paediatric chronic fatigue syndrome: 25 year perspective. *Clinical Child Psychology and Psychiatry* 26 (1): 8-17. **Link:** <https://pubmed.ncbi.nlm.nih.gov/33300388/>
- Loades ME et al.** (2022) Mental health screening in adolescents with CFS/ME. *European Child and Adolescent Psychiatry* 31 (6): 1003-1005. **Link:** doi.org/10.1007/s00787-021-01734-5 (*NEW)
- Loiacono B et al.** (2020) Activity measurement in pediatric chronic fatigue syndrome. *Chronic Illness* [Epub ahead of print]. **Link:** <https://pubmed.ncbi.nlm.nih.gov/32806955/>
- Moore Y et al.** (2021) Recovery from chronic fatigue syndrome: a systematic review-heterogeneity of definition limits study comparison. *Archives of Disease in Childhood* 18 (2): 268-276. **Link:** doi.org/10.1177/1742395320949613
- Morey A and Loades ME** (2021) Review: How has cognitive behaviour therapy been adapted for adolescents with comorbid depression and chronic illness? A scoping review. *Child and Adolescent Mental Health* 26 (3): 252-264. **Link:** <https://pubmed.ncbi.nlm.nih.gov/32951336/>
- Nap-van der Vlist MM, et al.** (2022) Paediatric short fatigue questionnaire, a 4-item fatigue questionnaire for children. *Journal of Psychosomatic Research* 165: 111130. [Epub ahead of print.] **Link:** doi.org/10.1016/j.jpsychores.2022.111130 (*NEW)

Neale FK et al. (2019) Illness duration, mood and symptom impact in adolescents with chronic fatigue syndrome/myalgic encephalomyelitis? *Archives of Disease in Childhood* 105 (9): 911-912. **Link:**

<https://adc.bmj.com/content/early/2019/06/13/archdischild-2018-316720.long>

Newton F (2019) Meeting the Educational Needs of Young, ME/CFS Patients: Role of the Treating Physician. *Frontiers in Paediatrics* 7:104. **Link:**

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6455006/>

Newton FR (2021) The Impact of Severe ME/CFS on Student Learning and K-12 Educational Limitations. *Healthcare* 9, 627. **Link:**

<https://www.mdpi.com/2227-9032/9/6/627>

Nijhof L, et al. (2023). Internet-delivered cognitive behavioural therapy for chronic fatigue among adolescents with a chronic medical condition: A single case study. *Behavioural and Cognitive Psychotherapy*: 1-6. **Link:**

doi.org/10.1017/S1352465822000716 (*NEW)

Nguyen CB et al. (2017) Whole blood gene expression in adolescent chronic fatigue syndrome: an exploratory cross-sectional study suggesting altered B cell differentiation and survival. *Journal Translational Medicine* 15:102. **Link:**

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5426002/>

Nguyen CB et al. (2018) Associations between clinical symptoms, plasma norepinephrine and deregulated immune gene networks in subgroups of adolescent with Chronic Fatigue Syndrome, *Brain Behaviour and Immunity* 889-1591 (18): 30796-30797. **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/30419269>

Njølstad BW et al. (2018) 'It's like being a slave to your own body in a way': a qualitative study of adolescents with chronic fatigue syndrome. *Scandinavian Journal of Occupational Therapy* 26 (7): 505-514 **Link:**

<https://www.ncbi.nlm.nih.gov/pubmed/29607759>

Norris T et al. (2017) Chronic Fatigue Syndrome and Chronic Widespread Pain in Adolescence: Population Birth Cohort Study. *Journal of Pain* 18 (3): 285-294. **Link:** <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5340566/>

Norris T et al. (2017) Natural course of chronic fatigue syndrome/myalgic encephalomyelitis in adolescents. *Archives of Diseases in Childhood* doi: 10.1136/archdischild-2016-311198. **Link:**

<http://adc.bmj.com/content/early/2017/01/19/archdischild-2016-311198>

Norris T et al. (2017) Natural course of chronic fatigue syndrome/myalgic encephalomyelitis in adolescents. *Archives of Disease in Childhood* 102 (6): 522-528. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/28104625>

Øie MG et al. (2022) Subjective and objective cognitive function in adolescent with chronic fatigue following Epstein-Barr virus infection. *Journal of Psychosomatic Research* 163:111063. **Link:**

doi.org/10.1016/j.jpsychores.2022.111063 (*NEW)

- Oliver L and Patel K.** (2012) Co-morbid conditions in children with chronic fatigue syndrome/myalgic encephalomyelitis (CFS/ME) – a retrospective case note review of a large cohort. *Archives of Disease in Childhood* 97(Supplement 1): A105. **Link:**
http://adc.bmj.com/content/97/Suppl_1/A105.1
- Parslow RM et al.** (2019) Developing and pretesting a new patient reported outcome measure for paediatric Chronic Fatigue Syndrome/ Myalgic Encephalopathy (CFS/ME): cognitive interviews with children. *Journal of Patient Rep Outcomes* 3 (1): 67. **Link:**
<https://www.ncbi.nlm.nih.gov/pubmed/31707635>
- Parslow RM et al.** (2020) Development of a conceptual framework to underpin a health-related quality of life outcome measure in paediatric chronic fatigue syndrome/myalgic encephalopathy (CFS/ME): prioritisation through card ranking. *Quality of Life Research* 29 (5): 1169-1181. **Link:**
<https://link.springer.com/article/10.1007/s11136-019-02399-z?shared-article-renderer#citeas>
- Pedersen M et al.** (2017) Sleep-wake rhythm disturbances and perceived sleep in adolescent chronic fatigue syndrome. *Journal of Sleep Research* 26 (5): 595-601. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/28470767>
- Rimes KA et al.** (2017) Stress vulnerability in adolescents with chronic fatigue syndrome: experimental study investigating heart rate variability and skin conductance responses. *Journal of Child Psychology and Psychiatry* 58 (7): 851-858. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/28276066>
- Roma M et al.** (2019) Impaired Health-Related Quality of Life in Adolescent Myalgic Encephalomyelitis/Chronic Fatigue Syndrome: The Impact of Core Symptoms. *Frontiers in Pediatrics* 7:26. **Link:**
<https://www.frontiersin.org/articles/10.3389/fped.2019.00026/full>
- Rowe PC et al.** (2017) Myalgic Encephalomyelitis/Chronic Fatigue Syndrome Diagnosis and Management in Young People: A Primer. *Frontiers in Pediatrics* 5: 121. **Link:**
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5474682/>
- Rowe KS.** (2019) Long Term Follow up of Young People With Chronic Fatigue Syndrome Attending a Pediatric Outpatient Service. *Frontiers in Pediatrics*. **Link:** <https://www.frontiersin.org/articles/10.3389/fped.2019.00021/full>
- Rowe K** (2019) Paediatric patients with myalgic encephalomyelitis/chronic fatigue syndrome value understanding and help to move on with their lives. *Acta Paediatrica* 109 (4): 790-800.. **Link:**
<https://onlinelibrary.wiley.com/doi/full/10.1111/apa.15054>
- Rowe K** (2022) Chronic Fatigue Syndrome/Myalgic Encephalomyelitis (CFS/ME) in Adolescents: Practical Guidance and Management Challenges. *Adolescent Health, Medicine and Therapeutics* 14: 13-26. **Link:**
doi.org/10.2147/AHMT.S317314 (*NEW) **Comment**

- Royal College of Paediatrics and Child Health.** (2004) *Evidence Based Guideline for the Management of CFS/ME (Chronic Fatigue Syndrome/Myalgic Encephalopathy) in Children and Young People*. **Link:** <https://www.rcpch.ac.uk/system/files/protected/page/RCPCH%20CFS.pdf>
- Royston AP et al.** (2022) Severe myalgic encephalomyelitis/chronic fatigue syndrome in children and young people: a British Paediatric Surveillance Unit study. *Archives of Diseases in Childhood: archdischild-2022-324319*. [Epub ahead of print] **Link:** doi.org/10.1136/archdischild-2022-324319 (*NEW)
- Saugstad OD** (2019) Myalgic Encephalomyelitis (ME) in the Young. Time to Repent. *Acta Paediatrica* [Epub ahead of print]. **Link:** <https://onlinelibrary.wiley.com/doi/full/10.1111/apa.15084>
- Serafimova T et al.** (2021) Who should we ask about mental health symptoms in adolescents with CFS/ME? Parent-child agreement on the revised children's anxiety and depression scale. *Clinical Child Psychology and Psychiatry* 26 (2): 367-380. **Link:** <https://pubmed.ncbi.nlm.nih.gov/33586480/>
- Serafimova T et al.** (2022) Experiences of pain in paediatric chronic fatigue syndrome/myalgic encephalomyelitis: a single-centre qualitative study. *BMJ Paediatrics Open* 6: e001201. **Link:** doi.org/10.1136/bmjpo-2021-001201
- Similä WA et al.** (2021) Factors related to educational adaptations and social life at school experienced by young people with CFS/ME: a qualitative study. *BMJ Open* 11 (11): e051094. **Link:** <https://pubmed.ncbi.nlm.nih.gov/34794992/>
- Similä WA et al.** (2021) Experiences Among School Personnel and School Nurses on Educational Adaptations for Students With CFS/ME: A Qualitative Interview Study. *Frontiers in Paediatrics* 9: 756963. **Link:** <https://pubmed.ncbi.nlm.nih.gov/34858906/>
- Similä WA et al.** (2022) Health-related quality of life in Young People with Chronic fatigue syndrome/ Myalgic encephalomyelitis. [Doctoral dissertation, NTNU Norwegian University of Science and Technology]. **Link:** <https://ntnuopen.ntnu.no/ntnu-xmlui/bitstream/handle/11250/2991015/Wenche%20Ann%20Simil%20c3%a4%20Phd.pdf?sequence=1&isAllowed=y>
- Smith L et al.** (2021) Exploring anhedonia in adolescents with Chronic Fatigue Syndrome (CFS): A mixed-methods study. *Clinical Child Psychology and Psychiatry* 26 (3): 855-869. **Link:** <https://pubmed.ncbi.nlm.nih.gov/33863235/>
- Solomon-Moore E et al.** (2019) Physical activity patterns among children and adolescents with mild-to-moderate chronic fatigue syndrome/myalgic encephalomyelitis. *BMJ Paediatrics Open* 3 (1). **Link:** <https://bmjpaedsopen.bmj.com/content/3/1/e000425>
- Speight N** (2020) Severe ME in Children. *Healthcare* 8 (3). **Link:** <https://www.mdpi.com/2227-9032/8/3/211/htm>

- Staples A et al.** (2020) Pediatric-Onset Postural Orthostatic Tachycardia Syndrome in a Single Tertiary Care Center. *Journal of Child Neurology* [Epub ahead of print]. **Link:**
<https://www.ncbi.nlm.nih.gov/pubmed/32314650>
- Stoll SVE et al.** (2017) What treatments work for anxiety in children with chronic fatigue syndrome/myalgic encephalomyelitis (CFS/ME)? Systematic review. *BMJ Open* 7 (9): e015481. **Link:**
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5588976/>
- Taylor AK et al.** (2017) 'It's personal to me': A qualitative study of depression in young people with CFS/ME. *Clinical Child Psychology and Psychiatry* 22 (2): 326-340. **Link:** <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5405821/>
- Thadchanamoorthy V and Dayasiri K (2021)** Postdengue chronic fatigue syndrome in an adolescent boy. *BMJ Case Reports* 14 (6): e238605. **Link:**
<https://pubmed.ncbi.nlm.nih.gov/34099442/>
- Tollit M et al.** (2018) Measuring School Functioning in Students with Chronic Fatigue Syndrome: A Systematic Review. *Journal of School Health* 88 (1): 74-89. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/29224219>
- Tucker P et al.** (2011) What to do about attention and memory problems in children with CFS/ME: A neuropsychological approach. *Clinical Child Psychology and Psychiatry* 16(2): 215-223. **Link:**
<http://journals.sagepub.com/doi/abs/10.1177/1359104511403585>
- Vroegindeweij A et al.** (2022) Identifying disrupted biological factors and patient-tailored interventions for chronic fatigue in adolescents and young adults with Q-Fever Fatigue Syndrome, Chronic Fatigue Syndrome and Juvenile Idiopathic Arthritis (QFS-study): study protocol for a randomized controlled trial with single-subject experimental case series design. *Trials* 23: 683. **Link:** doi.org/10.1186/s13063-022-06620-2 (*NEW)
- Webb CM et al.** (2011) What stops children with a chronic illness accessing health care: a mixed methods study in children with Chronic Fatigue Syndrome/Myalgic Encephalomyelitis (CFS/ME). *BMC Health Services Research* 11: 308. **Link:**
<https://bmchealthservres.biomedcentral.com/articles/10.1186/1472-6963-11-308>
- Wortinger LA et al.** (2017) Altered right anterior insular connectivity and loss of associated functions in adolescent chronic fatigue syndrome. *PLoS One* 12 (9): e0184325. **Link:**
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5589232/>
- Wortinger LA et al.** (2017) Emotional conflict processing in adolescent chronic fatigue syndrome: A pilot study using functional magnetic resonance imaging. *Journal of Clinical and Experimental Neuropsychology* 39 (4): 355-368. **Link:**
<https://www.ncbi.nlm.nih.gov/pubmed/27647312>

Wyller VB and Helland IB. (2013) Relationship between autonomic cardiovascular control, case definition, clinical symptoms, and functional disability in adolescent chronic fatigue syndrome: an exploratory study. *BioPsychoSocial Medicine* 7: 5. **Link:**

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3570350/>

Wyller VB et al. (2017) Transforming growth factor beta (TGF- β) in adolescent chronic fatigue syndrome. *Journal of Translational Medicine* 15: 245. **Link:**

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5716371/>

Wyller VB et al. (2017) Erratum to: Altered neuroendocrine control and association to clinical symptoms in adolescent chronic fatigue syndrome: a cross-sectional study. *Journal of Translational Medicine* 15: 157. **Link:**

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5514483/>

13. GOVERNMENT DOCUMENTS

Also see our [leaflets](#) on
Education & Employment.

13.1. Disability support

Department for Work & Pensions. (2013) *Evidence Based Review of the Work Capability Assessment: A study of assessments for Employment and Support Allowance*. **Link:**

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/331582/wca-evidence-based-review.pdf

Disability Discrimination Act 1995. **Link:**

<http://www.legislation.gov.uk/ukpga/1995/50/contents>

Driver & Vehicle Licensing Agency. (2014) For medical practitioners: At a glance guide to the current medical standards of fitness to drive. Swansea: Drivers Medical Group. **Link:** <http://193.62.68.17/wp-content/uploads/2016/02/DVLA-fitness-to-drive.pdf>

Equality Act 2010. **Link:**

<https://www.legislation.gov.uk/ukpga/2010/15/contents>

MS Society et al. (2011) *Employment and Support Allowance Work Capability Assessment review: Making it work for fluctuating conditions*. **Link:**

http://www.meassociation.org.uk/wp-content/uploads/Fluctuating_conditions_report_FINAL.pdf

Office for Disability Issues. (2011) *Equality Act 2010 Guidance: Guidance on matters to be taken into account in determining questions relating to the definition of disability*. **Link:**

<https://www.equalityhumanrights.com/en/publication-download/equality-act-2010-guidance-matters-be-taken-account-determining-questions>

Podell R et al. (2020) Documenting disability in myalgic encephalomyelitis/chronic fatigue syndrome (ME/CFS). *Work* 66 (2): 339-352. **Link:** doi.org/10.3233/WOR-203178

13.2. Economic cost to the UK

2020Health and The OHCF (September 2017) CFS/ME Counting the cost. 'The total cost to the UK economy of CFS/ME in 2014/15 was at least £3.3 billion.'

Link: <http://www.theoptimumhealthclinic.com/wp-content/uploads/2017/09/Counting-the-Cost.pdf>

Araja D et al. (2020) PSY44 Economic burden of Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (me/cfs) to patients: comparative study. *Value in Health* 22 (3): s909. **Link:**

<https://www.sciencedirect.com/science/article/pii/S1098301519350491>

Bibby J and Kershaw A. (2003) *How much is ME costing the country?* Report prepared by the Survey and Statistical Research Centre, Sheffield Hallam University for Action for ME, 2003, and Action for ME and The ME Association, 1996. *Not available.*

Castro-Marrero J et al. (2019) Unemployment and work disability in individuals with chronic fatigue syndrome/myalgic encephalomyelitis: a community-based cross-sectional study from Spain. *BMC Public Health* 19: 840. **Link:**

<https://bmcpublichealth.biomedcentral.com/articles/10.1186/s12889-019-7225-z>

CFS/ME Working Group. (2002) *Report to the Chief Medical Officer of an Independent Working Group.* **Link:** <http://www.meassociation.org.uk/wp-content/uploads/CMO-Report-2002.pdf>

Close S et al. (2020) The Economic Impacts of Myalgic Encephalomyelitis/Chronic Fatigue Syndrome in an Australian Cohort. *Frontiers in Public Health* 8: 420. **Link:**

<https://www.frontiersin.org/articles/10.3389/fpubh.2020.00420/full>

Collin SM et al. (2011) The impact of CFS/ME on employment and productivity in the UK: a cross-sectional study based on the CFS/ME national outcomes database. *BMC Health Services Research* 11: 217. **Link:**

<https://bmchealthservres.biomedcentral.com/articles/10.1186/1472-6963-11-217>

Cochrane M et al. (2021) Cost-effectiveness of Interventions for Chronic Fatigue Syndrome or Myalgic Encephalomyelitis: A Systematic Review of Economic Evaluations. *Applied Health Economics and Health Policy* 1–14. **Link:** <https://pubmed.ncbi.nlm.nih.gov/33646528/>

Cullinan J et al. (2020) Understanding the economic impact of myalgic encephalomyelitis/chronic fatigue syndrome in Ireland: a qualitative study. *HRB Open Research* 3: 88. **Link:** <https://pubmed.ncbi.nlm.nih.gov/33659857/>

- Pheby D et al.** (2020) The Development of a Consistent Europe-Wide Approach to Investigating the Economic Impact of Myalgic Encephalomyelitis (ME/CFS): A Report from the European Network on ME/CFS (EUROMENE). *Healthcare* 8 (2). **Link:** <https://www.mdpi.com/2227-9032/8/2/88>
- Pheby DFH et al.** (2021) The Role of Prevention in Reducing the Economic Impact of ME/CFS in Europe: A Report from the Socioeconomics Working Group of the European Network on ME/CFS (EUROMENE). *Medicina* 2021 57 (4): 388. **Link:** <https://pubmed.ncbi.nlm.nih.gov/33923830/>
- Stevellink S et al.** (2019) Factors associated with work status in chronic fatigue syndrome. *Occupational Medicine* [Epub ahead of print]. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/31375832>
- Mirin AA et al.** (2022) Updated ME/CFS prevalence estimates reflecting post-COVID increases and associated economic costs and funding implications. *Fatigue: Biomedicine, Health & Behavior*. **Link:** doi.org/10.1080/21641846.2022.2062169
- Ūstūnkaya T and Machin R** (2021) Hidden from Sight: Why the complexity of ME/CFS needs to be recognised by policy makers. *People, Place and Policy* 15 (2): 91-99. **Link:** <https://extra.shu.ac.uk/ppp-online/hidden-from-sight-why-the-complexity-of-me-cfs-needs-to-be-recognised-by-policy-makers/>
- Vink M and Vink-Niese F** (2019) Work Rehabilitation and Medical Retirement for Myalgic Encephalomyelitis/Chronic Fatigue Syndrome Patients. A Review and Appraisal of Diagnostic Strategies. *Diagnostics* 9 (4). **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/31547009>

13.3. General reports, debates and statements

- All-Party Parliamentary Group on ME.** (2020) Inaugural meeting to re-establish APPG led by Carol Monaghan MP with Dr Charles Shepherd and the MEA providing secretariat. **Link:** <https://www.meassociation.org.uk/2020/01/the-all-party-parliamentary-group-on-me-to-re-convene-please-invite-your-mp-to-attend-09-january-2020/>
- All-Party Parliamentary Group on ME.** (2010) Inquiry into NHS Service Provision for ME/CFS. **Link:** <http://www.meassociation.org.uk/wp-content/uploads/2013/02/APPG-Report-v3.pdf>
- Araja D et al.** (2021) Shadow Burden of Undiagnosed Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS) on Society: Retrospective and Prospective-In Light of COVID-19. *Journal of Clinical Medicine* 10 (14): 3017. **Link:** <https://pubmed.ncbi.nlm.nih.gov/34300183/>

Chief Medical Officer. (January 2002) *A Report of the CFS/ME Working group: Report to the Chief Medical Officer of an Independent Working Group.* Link: <http://www.meassociation.org.uk/wp-content/uploads/CMO-Report-2002.pdf>

House of Commons (2019) Debate. 24 January. Appropriate ME Treatment. Led by Carol Monaghan, MP. Hansard transcript: <https://hansard.parliament.uk/commons/2019-01-24/debates/FA1BBC27-37A7-4BFD-A2C0-A58B57F41D4D/AppropriateMETreatment>

House of Commons (2013) Debate. 11 February col. 517W. Secretary of State re: ME/CFS WHO classification. Link: <https://publications.parliament.uk/pa/cm201213/cmhansrd/cm130211/text/130211w0003.htm#13021150000045>

House of Commons (2013). Written evidence to Health Select Committee from the ME Association. Link: <https://publications.parliament.uk/pa/cm201415/cmselect/cmhealth/401/401vw11.htm>

House of Lords (2007) Debate. 28 February Volume No. 689 col. GC198. Countess of Mar re: ESA and CBT/GET: Link: <https://publications.parliament.uk/pa/ld200607/ldhansrd/text/70228-gc0004.htm#07022867000280>

House of Lords (2013) Debate. 6 February col. GC65. Countess of Mar re: The PACE Trial. Link: <https://publications.parliament.uk/pa/ld201213/ldhansrd/text/130206-gc0001.htm#130206114000195>

House of Lords (2014) Debate. 24 June Volume No. 754 col. WA149. NHS Patient Choice. Link: <https://publications.parliament.uk/pa/ld201415/ldhansrd/text/140624w0001.htm#14062444000241>

Joint Formulary Committee (2015). British National Formulary 70: *British Medical Association and Royal Pharmaceutical Society of Great Britain.* '...authoritative, independent guidance on best practice with clinically validated drug information...' Link: <https://pharm.reviews/images/statyi/british-national-formulary-2015.pdf>

Üstümkaya T and Machin R (2021) Hidden from Sight: Why the complexity of ME/CFS needs to be recognised by policy makers. *People, Place and Policy* 15 (2): 91-99. Link: <https://extra.shu.ac.uk/ppp-online/hidden-from-sight-why-the-complexity-of-me-cfs-needs-to-be-recognised-by-policy-makers/>

Westminster Hall (2018) Debate. 20 February. PACE Trial: People with ME. Led by Carol Monaghan, MP. Hansard transcript: <https://hansard.parliament.uk/commons/2018-02-20/debates/990746C7-9010-4566-940D-249F5026FF73/PACETrialPeopleWithME>

Westminster Hall (2018) Debate. 21 June. Volume 643. ME: Treatment and Research. Led by Carol Monaghan, MP. Hansard transcript: <https://hansard.parliament.uk/Commons/2018-06-21/debates/A49A6117-B23B-4E35-A83B-49FEF0D6074F/METreatmentAndResearch>

14. HEALTHCARE

Araja D et al. (2022) The Advantages of an Integrative Approach in the Primary Healthcare of Post-COVID-19 and ME/CFS Patients. *COVID-19 Pandemic, Mental Health and Neuroscience - New Scenarios for Understanding and Treatment*, IntechOpen, London. **Link:** doi.org/10.5772/intechopen.106013 (*NEW)

Bae J and Lin JS (2019) Healthcare Utilization in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS): Analysis of US Ambulatory Healthcare Data, 2000-2009. *Frontiers in Pediatrics* 7: 185. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/31139604>

Blease C et al. (2017) Epistemic injustice in healthcare encounters: evidence from chronic fatigue syndrome. *Journal of Medical Ethics* 43 (8): 549-557. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/27920164>

Broughton J et al. (2017) Adult patients' experiences of NHS specialist services for chronic fatigue syndrome (CFS/ME): a qualitative study in England. *BMC Health Services Research* 17:384. **Link:** <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5457632/>

Bush M (2020) Chronic fatigue syndrome: what nurses need to know. *Nursing* 50 (4): 50-54. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/32195878>

Byrne EA (2020) Striking the balance with epistemic injustice in healthcare: the case of Chronic Fatigue Syndrome/Myalgic Encephalomyelitis. *Medical Health Care Philosophy* 23 (3): 371-379. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/32170570>

Collin SM et al. (2017) Health care resource use by patients before and after a diagnosis of chronic fatigue syndrome (CFS/ME): a clinical practice research datalink study. *BMC Family Practice* 18: 60. **Link:** <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5420108/>

Cuesta A et al. (2019) Fibromyalgia, Chronic Fatigue Syndrome, and Multiple Chemical Sensitivity: Illness Experiences. *Clinical Nursing Research* [Epub ahead of print]. **Link:** <https://tinyurl.com/y68aa9ak>

Cullinan J et al. (2021) Perceptions of European ME/CFS Experts Concerning Knowledge and Understanding of ME/CFS among Primary Care Physicians in Europe: A Report from the European ME/CFS Research Network (EUROMENE). *Medicina (Kaunas, Lithuania)* 57 (3): 208. **Link:** <https://pubmed.ncbi.nlm.nih.gov/33652747/>

- Dana J et al.** (2018) Evaluation of myalgic encephalomyelitis/chronic fatigue syndrome (ME/CFS) education materials in local health departments, *Fatigue: Biomedicine, Health and Behaviour* 6 (4). **Link:** <https://tinyurl.com/y3kb7gwo>
- De Boor ML.** (2021) Epistemic in/justice in patient participation. A discourse analysis of the Dutch ME/CFS Health Council advisory process. *Sociology of Health & Illness* 43 (6): 1335-1354. **Link:** doi.org/10.1111/1467-9566.13301
- Hng KN et al.** (2021) An Audit of UK Hospital Doctors' Knowledge and Experience of Myalgic Encephalomyelitis. *Medicina* 57: 885. **Link:** <https://www.mdpi.com/1648-9144/57/9/885>
- Janse A et al.** (2019) Implementation of stepped care for patients with chronic fatigue syndrome in community-based mental health care: outcomes at post-treatment and long-term follow-up. *Behavioural Cognition and Psychotherapy* 47 (5): 548-558. **Link:** <https://tinyurl.com/y6sowztg>
- Kingdon C et al.** (2020) Health Care Responsibility and Compassion-Visiting the Housebound Patient Severely Affected by ME/CFS. *Healthcare* 8 (3): 197. **Link:** <https://www.mdpi.com/2227-9032/8/3/197/htm>
- Lapp CW** (2019) Initiating Care of a Patient with Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Frontiers in Pediatrics* 6: 415 **Link:** <https://tinyurl.com/y3fnnyh>
- Martin-Martinez E and Martin-Martinez M** (2019) Varied Presentation of Myalgic Encephalomyelitis/Chronic Fatigue Syndrome and the Needs for Classification and Clinician Education: A Case Series. *Clinical Therapeutics* 41 (4): 619-624. **Link:** [https://www.clinicaltherapeutics.com/article/S0149-2918\(19\)30114-6/fulltext](https://www.clinicaltherapeutics.com/article/S0149-2918(19)30114-6/fulltext)
- McKay PG et al.** (2021) Chronic fatigue syndrome (CFS)/Myalgic Encephalomyelitis (ME) and Fibromyalgia (FM): the foundation of a relationship. *British Journal of Pain* 15 (1): 26-39. **Link:** <https://pubmed.ncbi.nlm.nih.gov/33633851/>
- McPhee G et al.** (2019) Monitoring treatment harm in myalgic encephalomyelitis/chronic fatigue syndrome: A freedom-of-information study of National Health Service specialist centres in England. *Journal of Health Psychology* [Epub ahead of print]. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/31234662>
- Merone L et al.** (2022) "I Just Want to Feel Safe Going to a Doctor": Experiences of Female Patients with Chronic Conditions in Australia. *Women's Health Reports* 3(1): 1016-1028. **Link:** doi.org/10.1089/whr.2022.0052 (*NEW)
- Muller AE et al.** (2021) Can Remote Patient Monitoring Be the New Standard in Primary Care of Chronic Diseases, Post-COVID-19? *Telemed Journal and e-Health*. [Epub ahead of print.] **Link:** <https://pubmed.ncbi.nlm.nih.gov/34665645/>

- Newton F** (2019) Meeting the Educational Needs of Young, ME/CFS Patients: Role of the Treating Physician. *Frontiers in Paediatrics* 7:104. **Link:** <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6455006/>
- Oter-Quintana C, et al.** (2022) Nursing Diagnoses of Individuals with Myalgic Encephalomyelitis/Chronic Fatigue Syndrome: Research Protocol for a Qualitative Synthesis. *Healthcare* 10 (12): 2506. **Link:** doi.org/10.3390/healthcare10122506 (*NEW)
- Pheby DFH et al. (2020)** A Literature Review of GP Knowledge and Understanding of ME/CFS: A Report from the Socioeconomic Working Group of the European Network on ME/CFS (EUROMENE). *Medicina (Kaunas)* 57 (1): 7. **Link:** <https://pubmed.ncbi.nlm.nih.gov/33374291/>
- Reid VA and Muirhead N** (2022) Investigating undergraduate medical education on myalgic encephalomyelitis/chronic fatigue syndrome. *The British Student Doctor* 6 (1): 35-40. **Link:** doi.org/10.18573/issn.2514-3174 (*NEW)
- Ryckeghem H et al.** (2017) Exploring the potential role of the advanced nurse practitioner within a care path for patients with chronic fatigue syndrome. *Journal of Advanced Nursing* 73 (7): 1610-1619. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/28000331>
- Sharpe M et al.** (2021) Evidence based care for people with chronic fatigue syndrome and myalgic encephalomyelitis. *Journal of General Internal Medicine*. **Link:** [https://kclpure.kcl.ac.uk/portal/en/publications/evidence-based-care-for-people-with-chronic-fatigue-syndrome-and-myalgic-encephalomyelitis\(536398c9-3ebe-4faf-b3bc-e01257e82c65\).html](https://kclpure.kcl.ac.uk/portal/en/publications/evidence-based-care-for-people-with-chronic-fatigue-syndrome-and-myalgic-encephalomyelitis(536398c9-3ebe-4faf-b3bc-e01257e82c65).html)
- Strand EB et al.** (2019) Myalgic encephalomyelitis/chronic fatigue Syndrome (ME/CFS): Investigating care practices pointed out to disparities in diagnosis and treatment across European Union. *PLoS One* [Epub ahead of print]. **Link:** <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0225995>
- Sunnquist M et al.** (2017) Access to Medical Care for Individuals with Myalgic Encephalomyelitis and Chronic Fatigue Syndrome: A Call for Centers of Excellence. *Modern Clinical Medicine Research* 1 (1): 28-35. **Link:** <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5510655/>
- Richardson R** (2021) Improving awareness of myalgic encephalomyelitis among healthcare professionals. *British Journal of Healthcare Management* 27 (8): 1-3. **Link:** <https://www.magonlinelibrary.com/doi/abs/10.12968/bjhc.2021.0095>
- Timbol CR and Baraniuk JN** (2019) Chronic fatigue syndrome in the emergency department. *Open Access Emergency Medicine* 11: 15-28. **Link:** <https://www.ncbi.nlm.nih.gov/pubmed/30666170>

Vink M and Vink-Niese A (2023) The Draft Report by the Institute for Quality and Efficiency in Healthcare Does Not Provide Any Evidence That Graded Exercise Therapy and Cognitive Behavioral Therapy Are Safe and Effective Treatments for Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Diseases* 11(1): 11. **Link:** doi.org/10.3390/diseases11010011 (*NEW)

Walsh RS et al. (2020) Predicting GP Visits: A Multinomial Logistic Regression Investigating GP Visits Amongst a Cohort of UK Patients Living With Myalgic Encephalomyelitis. *BMC Family Practise* 21 (1): 105. **Link:** <https://tinyurl.com/y8tbfokl>

14.1. NICE Guidelines

Brown SI (2021) Graded exercise therapy for ME/CFS: finding consensus between the royal colleges, patients, and researchers. *BMJ* 2021 375: n3026. **Link:** <https://pubmed.ncbi.nlm.nih.gov/34880053/>

Flottorp SA et al. (2022) New NICE guideline on chronic fatigue syndrome: more ideology than science? *Lancet* 399 (10325): 611-613. **Link:** [doi.org/10.1016/S0140-6736\(22\)00183-0](https://doi.org/10.1016/S0140-6736(22)00183-0)

Kingdon CC et al. (2022) What Primary Care Practitioners Need to Know about the New NICE Guideline for Myalgic Encephalomyelitis/Chronic Fatigue Syndrome in Adults. *Preprints* 2022: 2022110016. **Link:** doi.org/10.20944/preprints202211.0016.v1 (*NEW)

Kmietowicz Z (2021) NICE understates role of exercise and CBT in managing ME/CFS, say medical leaders. *BMJ* 375: n2647. **Link:** <https://pubmed.ncbi.nlm.nih.gov/34716184/>

NICE Draft Guideline ME/CFS (10 November 2020). **Link:** <https://www.nice.org.uk/guidance/gid-ng10091/documents/draft-guideline>

NICE Clinical Guideline ME/CFS (NG206) (October 2021): <https://www.nice.org.uk/guidance/ng206>

Palmer SJ (2021) New guidance for ME and CFS to improve understanding of these largely misunderstood conditions. *Practice Nursing* 33 (1): 34-36. **Link:** <https://www.magonlinelibrary.com/doi/abs/10.12968/pnur.2022.33.1.34>

Vink M and Vink-Niese A. (2021) The draft updated NICE guidance for ME/CFS highlights the unreliability of subjective outcome measures in non-blinded trials. *Journal of Health Psychology* 27 (1): 9-12. **Link:** doi.org/10.1177/1359105321990810

Vink M and Vink-Niese A. (2022) The Updated NICE Guidance Exposed the Serious Flaws in CBT and Graded Exercise Therapy Trials for ME/CFS. *Healthcare* 10: 898. **Link:** doi.org/10.3390/healthcare10050898 (*NEW)

15. CASE STUDIES AND CASE REPORTS

Hohberger B et al. (2021) Case Report: Neutralization of Autoantibodies Targeting G-Protein-Coupled Receptors Improves Capillary Impairment and Fatigue Symptoms After COVID-19 Infection. *Frontiers in Medicine* (Lausanne) 8: 754667. **Link:** <https://pubmed.ncbi.nlm.nih.gov/34869451/>

López-Amador N (2022) Systemic exertion intolerance disease associated to neuroendocrine dysfunction and cortical atrophy: a case report. *Family Practice: cmac060* [Epub ahead of print]. **Link:** doi.org/10.1093/fampra/cmac060 (*NEW)

Poleggi C et al. (2021) Small heart and single coronary artery in a young patient with chronic fatigue syndrome: a case report. *European Heart Journal Supplements* 23 (G): suab133.018. **Link:** https://academic.oup.com/eurheartjsupp/article/23/Supplement_G/suab133.018/6456631?login=true

Soejima Y et al. (2022) Late-Onset Hypogonadism in a Male Patient with Long COVID Diagnosed by Exclusion of ME/CFS. *Medicina* 58: 536. **Link:** doi.org/10.3390/medicina58040536

Straub RK & Powers CM (2021) Chronic Fatigue Syndrome: A Case Report Highlighting Diagnosing and Treatment Challenges and the Possibility of Jarisch–Herxheimer Reactions If High Infectious Loads Are Present. *Healthcare* 9 (11): 1537. **Link:** <https://www.mdpi.com/2227-9032/9/11/1537/htm>

NB. This section on Long Covid research is not in its entirety, and only contains research which is relevant or has reference to ME/CFS.

Also see our [leaflets](#) on Covid-19, Long Covid & ME/CFS.

16. LONG COVID (with links to ME/CFS)

16.1. Biomedical research and mechanisms

16.1.1. Endothelial cells

Flaskamp L et al. (2022) Serum of Post-COVID-19 Syndrome Patients with or without ME/CFS Differentially Affects Endothelial Cell Function In Vitro. *Cells* 11 (15): 2376. **Link:** doi.org/10.3390/cells11152376 (*NEW)

Haffke M et al. (2022) Endothelial dysfunction and altered endothelial biomarkers in patients with post-COVID-19 syndrome and chronic fatigue syndrome (ME/CFS). *Journal of Translational Medicine* 20: 138. **Link:** doi.org/10.1186/s12967-022-03346-2

Sfera A et al. (2021) Endothelial Senescence and Chronic Fatigue Syndrome, a COVID-19 Based Hypothesis. *Frontiers in Cellular Neuroscience* 15: 673217. **Link:** <https://pubmed.ncbi.nlm.nih.gov/34248502/>

Xu SW et al. (2022) Endothelial dysfunction in COVID-19: an overview of evidence, biomarkers, mechanisms and potential therapies. *Acta Pharmacologica Sinica* [Epub ahead of print]. **Link:** doi.org/10.1038/s41401-022-00998-0 (*NEW)

16.1.2. Gene expression

Tziastoudi M et al. (2022) Genetics of COVID-19 and myalgic encephalomyelitis/chronic fatigue syndrome: a systematic review. *Annals of Clinical and Translational Neurology*. **Link:** doi.org/10.1002/acn3.51631 (*NEW) **Comment**

Malato J et al. (2021) The SARS-CoV-2 receptor angiotensin-converting enzyme 2 (ACE2) in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome: a meta-analysis of public DNA methylation and gene expression data. *Heliyon* 7 (8): e07665. **Link:** doi.org/10.1016/j.heliyon.2021.e07665

16.1.3. General reviews of illness mechanisms

Gottschalk, CG et al. (2023) Potential molecular mechanisms of chronic fatigue in long haul COVID and other viral diseases. *Infectious Agents and Cancer* 18: 7. Link: doi.org/10.1186/s13027-023-00485-z (*NEW)

Wostyn P (2021) COVID-19 and chronic fatigue syndrome: Is the worst yet to come? *Medical Hypotheses* 146: 110469. Link: <https://pubmed.ncbi.nlm.nih.gov/33401106/>

Wood E et al. (2020) Role of mitochondria, oxidative stress and the response to antioxidants in myalgic encephalomyelitis/chronic fatigue syndrome: A possible approach to SARS-CoV-2 'long-haulers'? *Chronic Diseases and Translational Medicine* 7 (1): 14-26. Link: <https://pubmed.ncbi.nlm.nih.gov/33251031/>

16.1.4. Immunology

Al-Hakeim HK et al. (2023) Chronic Fatigue, Depression and Anxiety Symptoms in Long COVID Are Strongly Predicted by Neuroimmune and Neuro-Oxidative Pathways Which Are Caused by the Inflammation during Acute Infection. *Journal of Clinical Medicine* 12 (2): 511. Link: doi.org/10.3390/jcm12020511 (*NEW)

16.1.5. Microclots

Kell DB and Pretorius E (2022) The potential role of ischaemia-reperfusion injury in chronic, relapsing diseases such as rheumatoid arthritis, Long COVID, and ME/CFS: evidence, mechanisms, and therapeutic implications. *The Biochemical Journal* 479 (16): 1653-1708. Link: doi.org/10.1042/BCJ20220154 (*NEW)

16.1.6. Miscellaneous

Paul BD,, et al. (2021) Redox imbalance links COVID-19 and myalgic encephalomyelitis/chronic fatigue syndrome. *Proceedings of the National Academy of Sciences of the United States of America* 118 (34): e2024358118. Link: <https://pubmed.ncbi.nlm.nih.gov/34400495/>

16.2. Case reports

Jinushi R et al. (2022) A case of post-COVID-19 myalgic encephalomyelitis/chronic fatigue syndrome characterized by post-exertional malaise and low serum acylcarnitine level. *Authorea*. **Link:** doi.org/10.22541/au.166970885.57585536/v1 (*NEW)

Soejima Y et al. (2022) Late-Onset Hypogonadism in a Male Patient with Long COVID Diagnosed by Exclusion of ME/CFS. *Medicina* 58 (4): 536. **Link:** doi.org/10.3390/medicina58040536

16.3. Children and adolescents

Sorg A et al. (2022) Association of SARS-CoV-2 Seropositivity With Myalgic Encephalomyelitis and/or Chronic Fatigue Syndrome Among Children and Adolescents in Germany. *JAMA Netw Open* 5 (9): e2233454. **Link:** doi.org/10.1001/jamanetworkopen.2022.33454 (*NEW)

16.4. Covid-19 effects on ME/CFS

Mohabbat et al. (2020) Fibromyalgia and Chronic Fatigue Syndrome in the Age of COVID-19. *Mayo Clinic Proceedings Innovations Quality and Outcomes* 4 (6): 764-766. **Link:** <https://pubmed.ncbi.nlm.nih.gov/33204998/>

Nikitina AJ and Levin OS (2021) Chronic fatigue syndrome against the background of the COVID-19 pandemic. *Zhurnal Nevrologii i Psikiatrii Imeni S.S. Korsakova* 121 (10. Vyp. 2): 92-98. [Article in Russian.] **Link:** <https://pubmed.ncbi.nlm.nih.gov/34870921/>

Simani L et al. (2021) Prevalence and correlates of chronic fatigue syndrome and post-traumatic stress disorder after the outbreak of the COVID-19. *Journal of Neurovirology* 27 (1): 154-159. **Link:** <https://pubmed.ncbi.nlm.nih.gov/33528827/>

16.5. Diagnosis and classification

Breach J, et al. (2022) Evaluation of a training programme to enable MSK physiotherapists to identify individuals with CFS symptoms post-COVID19. *Physiotherapy* 114 (1 E178): 145. **Link:** doi.org/10.1016/j.physio.2021.12.151

Jinushi R, et al. (2023) A case of post-COVID-19 myalgic encephalomyelitis/chronic fatigue syndrome characterized by post-exertional malaise and low serum acylcarnitine level. *Clinical Case Reports* 11 (2): e6930. **Link:** doi.org/10.1002/ccr3.6930 (*NEW) **Comment**

Patterson BK, et al. (2022) Cytokine Hub Classification of PASC, ME-CFS and other PASC-like Conditions. ResearchSquare [Preprint]. **Link:** doi.org/10.21203/rs.3.rs-1598634/v1 (*NEW)

16.6. Evidence for the overlap with ME/CFS

Aly MA and Saber HG (2021) Long COVID and Chronic Fatigue Syndrome: A survey of elderly female survivors in Egypt. *International Journal of Clinical Practice* 75 (12): e14886. **Link:** doi.org/10.1111/ijcp.14886

Arāja D et al. (2021) Shadow Burden of Undiagnosed Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS) on Society: Retrospective and Prospective-In Light of COVID-19. *Journal of Clinical Medicine* 10 (14): 3017. **Link:** <https://pubmed.ncbi.nlm.nih.gov/34300183/>

Arāja D et al. (2021) Severity of COVID-19: Causes and Consequences — From Obesity to Chronic Fatigue Syndrome. *Proceedings of the Latvian Academy of Sciences Section B- Natural, Exact, and Applied Sciences* 75(6): 411-416. **Link:** <https://sciendo.com/article/10.2478/prolas-2021-0061>

Azcue, N et al. (2022) Brain fog of post-COVID-19 condition and Chronic Fatigue Syndrome, same medical disorder?. *Journal of Translational Medicine* 20: 569. **Link:** doi.org/10.1186/s12967-022-03764-2 (*NEW)

Bansal R et al. (2021) COVID-19 and Chronic Fatigue Syndrome: An Endocrine Perspective. *Journal of Clinical Translational & Endocrinology*:100284. [Epub ahead of print.] **Link:** <https://pubmed.ncbi.nlm.nih.gov/34877261/>

Berardi G et al. (2022) The Relation of Pain, Fatigue, Disease Impact, and Psychological Factors with Physical Function in post-COVID-19 Syndrome, Fibromyalgia, and Chronic Fatigue Syndrome. *The Journal of Pain* 23 (3): 47. **Link:** doi.org/10.1016/j.jpain.2022.03.180 (*NEW)

Bonilla H et al. (2022) Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS) is common in post-acute sequelae of SARS-CoV-2 infection (PASC): Results from a post-COVID-19 multidisciplinary clinic. *medRxiv* 2022.08.03.22278363 [Preprint]. **Link:** doi.org/10.1101/2022.08.03.22278363 (*NEW)

van Campen C et al. (2021) Orthostatic Symptoms and Reductions in Cerebral Blood Flow in Long-Haul COVID-19 Patients: Similarities with Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Medicina* 58: 28. **Link:** <https://www.mdpi.com/1648-9144/58/1/28>

van Campen CMC and Visser FC (2022) Orthostatic Intolerance in Long-Haul COVID after SARS-CoV-2: A Case-Control Comparison with Post-EBV and Insidious-Onset Myalgic Encephalomyelitis/Chronic Fatigue Syndrome Patients. *Healthcare* 10 (10): 2058. **Link:** doi.org/10.3390/healthcare10102058 (*NEW) **Comment**

Choutka J et al. (2022) Unexplained post-acute infection syndromes. *Nature Medicine* 28 (5): 911-923. **Link:** doi.org/10.1038/s41591-022-01810-6 (*NEW)

Comella PH et al. (2021) A Molecular network approach reveals shared cellular and molecular signatures between chronic fatigue syndrome and other fatiguing illnesses. *medRxiv* [Preprint] 01.29.21250755. **Link:** <https://pubmed.ncbi.nlm.nih.gov/33564792/>

Davenport TE et al. (2022) Lessons from Myalgic Encephalomyelitis/Chronic Fatigue Syndrome for Long COVID: Postexertional Symptom Exacerbation is an Abnormal Response to Exercise/Activity. *JOSPT*. **Link:** doi.org/10.2519/jospt.blog.20220202

Davenport TE et al. (2022) Lessons from Myalgic Encephalomyelitis/Chronic Fatigue Syndrome for Long COVID Part 2: Physiological Characteristics During Acute Exercise Are Abnormal in People With Postexertional Symptom Exacerbation. *JOSPT*. **Link:** doi.org/10.2519/jospt.blog.20220209

Davenport TE et al. (2022) Lessons from Myalgic Encephalomyelitis/Chronic Fatigue Syndrome for Long COVID Part 3: "Energy System First Aid" for People With Postexertional Symptom Exacerbation. *JOSPT*. **Link:** <https://www.jospt.org/do/10.2519/jospt.blog.20220216>

Davenport TE et al. (2022) Lessons from Myalgic Encephalomyelitis/Chronic Fatigue Syndrome for Long COVID Part 4: Heart Rate Monitoring to Manage Postexertional Symptom Exacerbation. *JOSPT*. **Link:** <https://www.jospt.org/do/10.2519/jospt.blog.20220223>

Espinosa Rodríguez P et al. (2021) Long COVID: Is it really myalgic encephalomyelitis? Bibliographic review and considerations. [Article in Spanish COVID persistente: ¿es en realidad una encefalomiélitis miálgica? Revisión bibliográfica y consideraciones.] *Semergen* 48 (1): 63-69. **Link:** doi.org/10.1016/j.semerg.2021.03.006

Friedman KJ et al. (2021) Our Evolving Understanding of ME/CFS. *Medicina* (Kaunas, Lithuania) 57 (3): 200. **Link:** <https://pubmed.ncbi.nlm.nih.gov/33652622/>

González-Hermosillo JA et al. (2021) Post-Acute COVID-19 Symptoms, a Potential Link with Myalgic Encephalomyelitis/Chronic Fatigue Syndrome: A 6-Month Survey in a Mexican Cohort. *Brain Science* 11: 760. **Link:** <https://pubmed.ncbi.nlm.nih.gov/34201087/>

Haider S et al. (2022) A comparison of pain, fatigue, and function between post-COVID-19 condition, fibromyalgia, and chronic fatigue syndrome: a survey study. *Pain* [Epub ahead of print]. **Link:** doi.org/10.1097/j.pain.0000000000002711 (*NEW)

Hunt J et al. (2022) Long Covid at the crossroads: Comparisons and lessons from the treatment of patients with myalgic encephalomyelitis/chronic fatigue syndrome (ME/CFS). *Journal of Health Psychology*. **Link:** doi.org/10.1177/13591053221084494

- Jinushi R et al.** (2022) A case of post-COVID-19 myalgic encephalomyelitis/chronic fatigue syndrome characterized by post-exertional malaise and low serum acylcarnitine level. *Authorea*. **Link:** doi.org/10.22541/au.166970885.57585536/v1 (*NEW)
- Kedor C et al.** (2022) A prospective observational study of post-COVID-19 chronic fatigue syndrome following the first pandemic wave in Germany and biomarkers associated with symptom severity. *Nature Communications* 13: 5104. **Link:** doi.org/10.1038/s41467-022-32507-6 (*NEW)
- Jason LA et al.** (2021). COVID-19 symptoms over time: comparing long-haulers to ME/CFS. *Biomedicine, Health & Behavior*. **Link:** <https://www.tandfonline.com/doi/full/10.1080/21641846.2021.1922140>
- Kazis L et al.** (2022) Appraisal of Long COVID: Lessons to be Learned from Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS). *Archives of Physical Medicine and Rehabilitation* 103 (3): e3. **Link:** doi.org/10.1016/j.apmr.2022.01.008
- Komaroff AL and Bateman L.** (2021) Will COVID-19 Lead to Myalgic Encephalomyelitis/Chronic Fatigue Syndrome? *Frontiers in Medicine* (Lausanne) 7: 606824. **Link:** <https://pubmed.ncbi.nlm.nih.gov/33537329/>
- Komaroff AL and Lipkin WI** (2021) Insights from myalgic encephalomyelitis/chronic fatigue syndrome may help unravel the pathogenesis of postacute COVID-19 syndrome. *Trends in Molecular Medicine* 27 (9): 895-906. **Link:** doi.org/10.1016/j.molmed.2021.06.002
- Kusama Y et al.** (2022) Myalgic encephalomyelitis/chronic fatigue syndrome post coronavirus disease 2019. *Pediatrics International* 64: e14976. **Link:** doi.org/10.1111/ped.14976
- Leonard JA and Dorri JA** (2023) ME/CFS and Post-Exertional Malaise among Patients with Long COVID. *Neurology International* 15 (1): 1-11. **Link:** doi.org/10.3390/neurolint15010001 (*NEW)
- Ludwig B et al.** (2023) Myalgic encephalomyelitis/chronic fatigue syndrome: a review of the current evidence. *Neurologist*. [Article in German] **Link:** doi.org/10.1007/s00115-022-01431-x (*NEW)
- Lv Y et al.** (2022) Bioinformatics and systems biology approach to identify the pathogenetic link of Long COVID and Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Frontiers in Immunology* 13: 952987. **Link:** doi.org/10.3389/fimmu.2022.952987 (*NEW) **Comment**
- Mackay A** (2021) A Paradigm for Post-Covid-19 Fatigue Syndrome Analogous to ME/CFS. *Frontiers in Neurology* 12: 701419. **Link:** <https://pubmed.ncbi.nlm.nih.gov/34408721/>
- Malcolm RS** (2021) Chronic fatigue syndrome and long covid: individualisation, not compartmentalisation. *BMJ* 374: n1863. **Link:** <https://pubmed.ncbi.nlm.nih.gov/34321226/>

Malkova AM and Shoenfeld Y (2022) Autoimmune autonomic nervous system imbalance and conditions: Chronic fatigue syndrome, fibromyalgia, silicone breast implants, COVID and post-COVID syndrome, sick building syndrome, post-orthostatic tachycardia syndrome, autoimmune diseases and autoimmune/inflammatory syndrome induced by adjuvants. *Autoimmunity Reviews*: 103230. [In press, Journal Pre-proof] **Link:**

doi.org/10.1016/j.autrev.2022.103230 (*NEW) **Comment**

Marks DF (2023) Converging Evidence of Similar Symptomatology of ME/CFS and PASC Indicating Multisystemic Dyshomeostasis. *Biomedicine* 11(1): 180.

Link: doi.org/10.3390/biomedicines11010180 (*NEW)

Mantovani E et al. (2021) Chronic fatigue syndrome: an emerging sequela in COVID-19 survivors? *Journal of Neurovirology* 27 (4): 631-637. **Link:**

doi.org/10.1007/s13365-021-01002-x

McCarthy MJ (2022) Circadian rhythm disruption in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome: Implications for the post-acute sequelae of COVID-19. *Brain, Behavior, & Immunity – Health* 20: 100412. **Link:**

<https://www.sciencedirect.com/science/article/pii/S2666354622000023>

Mirfazeli FS et al. (2022) Chronic fatigue syndrome and cognitive deficit are associated with acute-phase neuropsychiatric manifestations of COVID-19: A 9-month follow-up study. *Neurological Science*. **Link:**

<https://link.springer.com/article/10.1007/s10072-021-05786-y>

Morrow AK et al. (2022) Long-Term COVID 19 Sequelae in Adolescents: the Overlap with Orthostatic Intolerance and ME/CFS. *Current Paediatric Reports*. **Link:** doi.org/10.1007/s40124-022-00261-4

Murga I et al. (2021) Clinical Heterogeneity in ME/CFS. A Way to Understand Long-COVID19 Fatigue. *Frontiers in Psychiatry* 12 :735784. **Link:**

<https://pubmed.ncbi.nlm.nih.gov/34707521/>

Newman M (2021) Chronic fatigue syndrome and long covid: moving beyond the controversy. *BMJ* 373: n1559. **Link:**

<https://pubmed.ncbi.nlm.nih.gov/34162532/>

Nehme M et al. (2022) The Prevalence, Severity, and Impact of Post-COVID Persistent Fatigue, Post-Exertional Malaise, and Chronic Fatigue Syndrome. *Journal of general internal medicine*. **Link:**

doi.org/10.1007/s11606-022-07882-x (*NEW)

Paul BD,, et al. (2021) Redox imbalance links COVID-19 and myalgic encephalomyelitis/chronic fatigue syndrome. *Proceedings of the National Academy of Sciences of the United States of America* 118 (34): e2024358118. **Link:** <https://pubmed.ncbi.nlm.nih.gov/34400495/>

Poenaru S et al. (2021) COVID-19 and post-infectious myalgic encephalomyelitis/chronic fatigue syndrome: A narrative review. *Therapeutic advances in infectious disease* 8: 20499361211009385.

Link: doi.org/10.1177/20499361211009385

Ray A et al. (2021) Post-COVID Chronic Fatigue Syndrome: New Challenge Ahead. *International Journal of Science and Healthcare Research* 6 (3): 472. **Link:**

https://www.academia.edu/57770300/Post_COVID_Chronic_Fatigue_Syndrome_New_Challenge_Ahead

Retornaz F et al. (2022) Long-term neuromuscular consequences of SARS-Cov-2 and their similarities with myalgic encephalomyelitis/chronic fatigue syndrome: results of the retrospective CoLGEM study. *Journal of Translational Medicine* 20: 429. **Link:** doi.org/10.1186/s12967-022-03638-7 (*NEW)

Ryabkova VA et al. (2022) Myalgic Encephalomyelitis/Chronic Fatigue Syndrome and Post-COVID Syndrome: A Common Neuroimmune Ground?. *Diagnostics* 13(1): 66. **Link:** doi.org/10.3390/diagnostics13010066 (*NEW)

Saman H et al. (2022) A comparison of pain, fatigue, and function between post-COVID-19 condition, fibromyalgia, and chronic fatigue syndrome: a survey study. *PAIN* 10.1097/j.pain.000000000000271. **Link:** doi.org/10.1097/j.pain.0000000000002711 (*NEW)

Salari N et al. (2022) Global prevalence of chronic fatigue syndrome among long COVID-19 patients: A systematic review and meta-analysis. *BioPsychoSocial Medicine* 16: 21. **Link:** doi.org/10.1186/s13030-022-00250-5 (*NEW)

Sorg A et al. (2022) Association of SARS-CoV-2 Seropositivity With Myalgic Encephalomyelitis and/or Chronic Fatigue Syndrome Among Children and Adolescents in Germany. *JAMA Netw Open* 5 (9): e2233454. **Link:** doi.org/10.1001/jamanetworkopen.2022.33454 (*NEW)

Sukocheva OL et al. (2021) Analysis of post COVID-19 condition and its overlap with myalgic encephalomyelitis/chronic fatigue syndrome. *Journal of Advance Research* 40: 179-196. **Link:** doi.org/10.1016/j.jare.2021.11.013

Thomas M (2022) The Fatigue-Related Symptoms Post-Acute SARS-CoV-2: A Preliminary Comparative Study. *International Journal of Environmental Research and Public Health* 19 (18): 11662. **Link:** doi.org/10.3390/ijerph191811662 (*NEW)

Tokumasu K et al. (2022) Clinical Characteristics of Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS) Diagnosed in Patients with Long COVID. *Medicina* 58: 850. **Link:** doi.org/10.3390/medicina58070850 (*NEW)

Walker MOM et al. (2022) The significance of oxidative stress in the pathophysiology of Long COVID and Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS). *Medical Research Archives* 10 (9). **Link:** doi.org/10.18103/mra.v10i9.3050 (*NEW)

16.6.1. Evidence against the link

Xu W et al. (2023) No Causal Effects Detected in COVID-19 and Myalgic Encephalomyelitis/Chronic Fatigue Syndrome: A Two Sample Mendelian Randomization Study. *International Journal of Environmental Research and Public Health* 20 (3): 2437. Link: doi.org/10.3390/ijerph20032437 (*NEW)

16.7. Miscellaneous

Al-Jassas HK et al. (2021) Intersections between pneumonia, lowered oxygen saturation percentage and immune activation mediate depression, anxiety and chronic fatigue syndrome-like symptoms due to COVID-19: a nomothetic network approach. *Journal of Affective Disorders*: S0165-0327(21)01123-X. [Epub ahead of print.] Link: <https://pubmed.ncbi.nlm.nih.gov/34699853/>

Comhaire F (2022) The Role of Immunity and Inflammation in ME/ CFS and Post-COVID Syndrome: Implications for Treatment. *MedLife Clinics* Volume 4 (2): 1043. Link: <https://www.medtextpublications.com/open-access/the-role-of-immunity-and-inflammation-in-me-cfs-and-1254.pdf> (*NEW)
Comment

Holder KG et al. (2022) Post-COVID myalgic encephalomyelitis in chronic heart disease patient: A case series. *Journal of Investigative Medicine* 70 (2): 475. Link: <https://pesquisa.bvsalud.org/global-literature-on-novel-coronavirus-2019-ncov/resource/pt/covidwho-1705710> (*NEW)

Shaheen N and Shaheen A (2022) Long-term sequelae of COVID-19 (myalgic encephalomyelitis): An international cross-sectional study. *Medicine* 101 (45): e31819. Link: doi.org/10.1097/MD.00000000000031819 (*NEW) Comment

16.8. Predictors

Al-Hadrawi DS et al. (2022) Lowered oxygen saturation and increased body temperature in acute COVID-19 largely predict chronic fatigue syndrome and affective symptoms due to Long COVID: A precision nomothetic approach. *Acta Neuropsychiatrica*:1-12 [Epub ahead of print]. Link: doi.org/10.1017/neu.2022.21 (*NEW)

Arāja D et al. (2021) Severity of COVID-19: Causes and Consequences — From Obesity to Chronic Fatigue Syndrome. *Proceedings of the Latvian Academy of Sciences Section B- Natural, Exact, and Applied Sciences* 75(6): 411-416. Link: <https://sciendo.com/article/10.2478/prolas-2021-0061>

Chang GA and Figueredo ANT (2023) Decolonization of staphylococcus aureus and therapeutic test to assist the diagnosis in me/cfs, long covid, post-vaccine covid syndrome and other diseases with fatigue and/or chronic pain. ResearchGate [Preprint]. **Link:** https://www.researchgate.net/publication/368646387_DECOLONIZATION_OF_STAPHYLOCOCCUS_AUREUS_AND_THERAPEUTIC_TEST_TO_ASSIST_THE_DIAGNOSIS_IN_MECFS_LONG_COVID_POST-VACCINE_COVID_SYNDROME_AND_OTHER_DISEASES_WITH_FATIGUE_ANDOR_CHRONIC_PAIN (*NEW)

16.9. Prevalence

Mirin AA et al. (2022) Updated ME/CFS prevalence estimates reflecting post-COVID increases and associated economic costs and funding implications. *Fatigue: Biomedicine, Health & Behavior*. **Link:** doi.org/10.1080/21641846.2022.2062169

Nehme M et al. (2022) The Prevalence, Severity, and Impact of Post-COVID Persistent Fatigue, Post-Exertional Malaise, and Chronic Fatigue Syndrome. *Journal of general internal medicine*. **Link:** doi.org/10.1007/s11606-022-07882-x (*NEW)

16.10. Prognosis and quality of life

Maes M et al. (2022) Lowered Quality of Life in Long COVID Is Predicted by Affective Symptoms, Chronic Fatigue Syndrome, Inflammation and Neuroimmunotoxic Pathways. *International Journal of Environmental Research and Public Health* 19 (16): 10362. **Link:** doi.org/10.3390/ijerph191610362 (*NEW)

16.11. Symptoms and comparisons to ME/CFS

Azcue, N et al. (2022) Brain fog of post-COVID-19 condition and Chronic Fatigue Syndrome, same medical disorder?. *Journal of Translational Medicine* 20: 569. **Link:** doi.org/10.1186/s12967-022-03764-2 (*NEW)

Berardi G et al. (2022) The Relation of Pain, Fatigue, Disease Impact, and Psychological Factors with Physical Function in post-COVID-19 Syndrome, Fibromyalgia, and Chronic Fatigue Syndrome. *The Journal of Pain* 23 (3): 47. **Link:** doi.org/10.1016/j.jpain.2022.03.180 (*NEW)

Davenport TE et al. (2022) Lessons from Myalgic Encephalomyelitis/Chronic Fatigue Syndrome for Long COVID: Postexertional Symptom Exacerbation is an Abnormal Response to Exercise/Activity. *JOSPT*. **Link:** doi.org/10.2519/jospt.blog.20220202

Davenport TE et al. (2022) Lessons from Myalgic Encephalomyelitis/Chronic Fatigue Syndrome for Long COVID Part 2: Physiological Characteristics During Acute Exercise Are Abnormal in People With Postexertional Symptom Exacerbation. *JOSPT*. Link: doi.org/10.2519/jospt.blog.20220209

Davenport TE et al. (2022) Lessons from Myalgic Encephalomyelitis/Chronic Fatigue Syndrome for Long COVID Part 3: "Energy System First Aid" for People With Postexertional Symptom Exacerbation. *JOSPT*. Link: <https://www.jospt.org/do/10.2519/jospt.blog.20220216>

Davenport TE et al. (2022) Lessons from Myalgic Encephalomyelitis/Chronic Fatigue Syndrome for Long COVID Part 4: Heart Rate Monitoring to Manage Postexertional Symptom Exacerbation. *JOSPT*. Link: <https://www.jospt.org/do/10.2519/jospt.blog.20220223>

Haider S et al. (2022) A comparison of pain, fatigue, and function between post-COVID-19 condition, fibromyalgia, and chronic fatigue syndrome: a survey study. *Pain* [Epub ahead of print]. Link: doi.org/10.1097/j.pain.0000000000002711 (*NEW)

Hussein K et al. (2022) Long-COVID post-viral chronic fatigue syndrome and affective symptoms are associated with oxidative damage, lowered antioxidant defenses and inflammation: a proof of concept and mechanism study. *medRxiv* [preprint]. Link: <https://www.medrxiv.org/content/10.1101/2022.04.25.22274251v1.article-metrics>

Kedor C et al. (2022) A prospective observational study of post-COVID-19 chronic fatigue syndrome following the first pandemic wave in Germany and biomarkers associated with symptom severity. *Nature Communications* 13: 5104. Link: doi.org/10.1038/s41467-022-32507-6 (*NEW)

Jason LA et al. (2021). COVID-19 symptoms over time: comparing long-haulers to ME/CFS. *Biomedicine, Health & Behavior*. Link: <https://www.tandfonline.com/doi/full/10.1080/21641846.2021.1922140>

Mancini DM et al. (2021) Use of Cardiopulmonary Stress Testing for Patients With Unexplained Dyspnea Post–Coronavirus Disease. *JACC: Heart Failure* 9 (12): 927-937. Link: <https://www.jacc.org/doi/abs/10.1016/j.jchf.2021.10.002>

McCarthy MJ (2022) Circadian rhythm disruption in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome: Implications for the post-acute sequelae of COVID-19. *Brain, Behavior, & Immunity – Health* 20: 100412. Link: <https://www.sciencedirect.com/science/article/pii/S2666354622000023>

Morrow AK et al. (2022) Long-Term COVID 19 Sequelae in Adolescents: the Overlap with Orthostatic Intolerance and ME/CFS. *Current Paediatric Reports*. Link: doi.org/10.1007/s40124-022-00261-4

Saman H et al. (2022) A comparison of pain, fatigue, and function between post-COVID-19 condition, fibromyalgia, and chronic fatigue syndrome: a survey study. *PAIN* 10.1097/j.pain.000000000000271. **Link:** doi.org/10.1097/j.pain.000000000000271 (*NEW)

Al-Hakeim HK et al. (2023) Chronic Fatigue, Depression and Anxiety Symptoms in Long COVID Are Strongly Predicted by Neuroimmune and Neuro-Oxidative Pathways Which Are Caused by the Inflammation during Acute Infection. *Journal of Clinical Medicine* 12 (2): 511. **Link:** doi.org/10.3390/jcm12020511 (*NEW)

Renz-Polster H and Scheibenbogen C. (2022) Post-COVID syndrome with fatigue and exercise intolerance: myalgic encephalomyelitis/chronic fatigue syndrome. *Innere Medizin* 63 (8): 830-839. [Article in German.] **Link:** doi.org/10.1007/s00108-022-01369-x (*NEW)

Twomey R et al. (2022) Chronic Fatigue and Postexertional Malaise in People Living with Long COVID: An Observational Study. *Physical Therapy*: pzac005. **Link:** <https://academic.oup.com/ptj/advance-article-abstract/doi/10.1093/ptj/pzac005/6506311>

Vernon SD et al. (2022) Orthostatic Challenge Causes Distinctive Symptomatic, Hemodynamic and Cognitive Responses in Long COVID and Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Frontiers in Medicine* 9: 917019. **Link:** doi.org/10.3389/fmed.2022.917019 (*NEW)

16.12. Treatment

Also see **Research Summary:** What are the current treatments being trialled for Long Covid?

Babliuk et al. (2022) Rehabilitation of post-COVID patients with chronic fatigue and cognitive disorders syndromes. *Balneo and PRM Research* 13(1): 497. **Link:** doi.org/10.12680/balneo.2022.497

Bornstein SR et al. (2021) Chronic post-COVID-19 syndrome and chronic fatigue syndrome: Is there a role for extracorporeal apheresis? *Molecular Psychiatry* 27 (1): 34-37. **Link:** doi.org/10.1038/s41380-021-01148-4

van Campen C et al. (2021) Orthostatic Symptoms and Reductions in Cerebral Blood Flow in Long-Haul COVID-19 Patients: Similarities with Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Medicina* 58: 28. **Link:** <https://www.mdpi.com/1648-9144/58/1/28>

Chee YJ et al. (2022) Clinical trials on the pharmacological treatment of long COVID: a systematic review. *Journal of Medical Virology* [Epub ahead of print]. **Link:** doi.org/10.1002/jmv.28289 (*NEW)

Comhaire F (2022) The Role of Immunity and Inflammation in ME/ CFS and Post-COVID Syndrome: Implications for Treatment. *MedLife Clinics* Volume 4 (2): 1043. **Link:** <https://www.medtextpublications.com/open-access/the-role-of-immunity-and-inflammation-in-me-cfs-and-1254.pdf> (*NEW)

Comment

Hohberger B et al. (2021) Case Report: Neutralization of Autoantibodies Targeting G-Protein-Coupled Receptors Improves Capillary Impairment and Fatigue Symptoms After COVID-19 Infection. *Frontiers in Medicine* (Lausanne) 8: 754667. **Link:** <https://pubmed.ncbi.nlm.nih.gov/34869451/>

Kjellberg A et al. (2022) Hyperbaric Oxygen Therapy for Long COVID (HOTLoCO), an interim safety report from a randomised controlled trial. *ResearchSquare* [Preprint]. **Link:** doi.org/10.21203/rs.3.rs-1848136/v1 (*NEW)

Kjellberg A et al. (2022) Hyperbaric oxygen for treatment of long COVID-19 syndrome (HOT-LoCO): protocol for a randomised, placebo-controlled, double-blind, phase II clinical trial. *BMJ Open* 12: e061870. **Link:** doi.org/10.1136/bmjopen-2022-061870 (*NEW)

Levine PH et al. (2022) Individualizing medical treatment in chronic fatigue syndrome/ myalgic encephalomyelitis: Evidence for effective medications and possible relevance to “Long-Hauler Syndrome” in Covid-19 affected patients. *Journal of Clinical Images and Medical Case Reports* 3 (1): 1681. **Link:** <https://jcimcr.org/pdfs/JCIMCR-v3-1681.pdf>

Liu Z et al. (2022) Efficacy of traditional Chinese exercises in patients with post-COVID-19 chronic fatigue syndrome: A protocol for systematic review and meta-analysis. *Medicine* 101(46): e31450. **Link:** doi.org/10.1097/MD.00000000000031450 (*NEW)

Natelson BH et al. (2022) Transcutaneous Vagus Nerve Stimulation in the Treatment of Long Covid-Chronic Fatigue Syndrome. *medRxiv* [preprint] **Link:** doi.org/10.1101/2022.11.08.22281807 (*NEW)

Robbins et al. (2021) Hyperbaric oxygen therapy for the treatment of long COVID: early evaluation of a highly promising intervention. *Clinical Medicine* 21 (6): e629-e632. **Link:** doi.org/10.7861/clinmed.2021-0462 (*NEW)

Shelton AG (2023) Epstein-Barr Virus Testing-to-Treatment in Long COVID Patients: A Review and Recommendation. *Lynchburg Journal of Medical Science* 5 (1). **Link:** <https://digitalshowcase.lynchburg.edu/dmscjournal/vol5/iss1/101/>

Singh J et al. (2022) Non-pharmacological therapies for post-viral syndromes, including Long COVID: A systematic review. *International Journal of Environmental Research and Public Health* 20 (4): 3477. **Link:** doi.org/10.3390/ijerph20043477 (*NEW) **Comment**

Spencer LH et al. (2023) What interventions or best practice are there to support people with Long COVID, or similar post-viral conditions or conditions characterised by fatigue, to return to normal activities: a rapid review. *medRxiv* [Preprint]. **Link:** doi.org/10.1101/2023.01.24.23284947 (*NEW)

Vink M and Vink-Niese (2022) Is It Useful to Question the Recovery Behaviour of Patients with ME/CFS or Long COVID? *Healthcare*: 10: 392. **Link:** doi.org/10.3390/healthcare10020392

Zilberman-Itskovich S et al. (2022) Hyperbaric oxygen therapy improves neurocognitive functions and symptoms of post-COVID condition: randomized controlled trial. *Scientific Reports* 12: 11252. **Link:** doi.org/10.1038/s41598-022-15565-0 (*NEW) **Comment**

16.13. Vaccinations

Manysheva K et al. (2022) Myalgic Encephalomyelitis/Chronic Fatigue Syndrome: First Described Complication after Gam-COVID-Vac Vaccine. *Psychiatria Danubina* 34 (8):189-190. **Link:** https://www.psychiatria-danubina.com/UserDocsImages/pdf/dnb_vol34_noSuppl%208/dnb_vol34_noSuppl%208_189.pdf (*NEW)

17. MISCELLANEOUS

Agbonlahor O & Osasuyi O (2021) Gender and Racial Differences in Post-Traumatic Stress Disorder and Chronic Fatigue Syndrome: A Twin Study. *Journal of Health, Medicine and Nursing* 91: 1-10. **Link:** <https://iiste.org/Journals/index.php/JHNM/article/view/56857>

Araja D et al. (2022) Direct Costs of Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS) in Latvia. *Value in Health* 25 (1): S45. **Link:** [https://www.valueinhealthjournal.com/article/S1098-3015\(21\)02003-9/fulltext](https://www.valueinhealthjournal.com/article/S1098-3015(21)02003-9/fulltext)

Fink P et al. (2022) Facts and myths about chronic fatigue syndrome. *Ugeskr Laeger* 184 (21): V12210943. [Article in Danish] **Link:** <https://pubmed.ncbi.nlm.nih.gov/35656619/> (*NEW)

Hallet M et al. (2022) Functional neurological disorder: new subtypes and shared mechanisms. *The Lancet- Neurology* 21 (6): 537-550. **Link:** [doi.org/10.1016/S1474-4422\(21\)00422-1](https://doi.org/10.1016/S1474-4422(21)00422-1) (*NEW)

He L et al. (2022) Effects of Shenxian Congee on Chronic Fatigue Syndrome Rats by NF-κB Signaling Pathway. *Pakistan Journal of Zoology*

Kanaan RA (2022) Functional neurological disorder and other unexplained syndromes. *The Lancet- Neurology* 21 (6): 499-500. **Link:** [doi.org/10.1016/S1474-4422\(22\)00095-3](https://doi.org/10.1016/S1474-4422(22)00095-3) (*NEW)

Jason LA and Torres C (2022) Differences in Symptoms among Black and White Patients with ME/CFS. *Journal of Clinical Medicine* 11 (22): 6708. **Link:** doi.org/10.3390/jcm11226708 (*NEW) **Comment**

Lechner J and Schick F (2021) Chronic Fatigue Syndrome and Bone Marrow Defects of the Jaw - A Case Report on Additional Dental X-Ray Diagnostics with Ultrasound. *International Medical Case Reports Journal* 14: 241-249. **Link:** <https://pubmed.ncbi.nlm.nih.gov/33907473/>

- Mathur R et al.** (2021) mapMECFS: a portal to enhance data discovery across biological disciplines and collaborative sites. *Journal of Translational Medicine* 19 (1): 461. Link: <https://pubmed.ncbi.nlm.nih.gov/34749736/>
- Morizot R et al.** (2021) Patients with Persistent Polyclonal B-Cell Lymphocytosis Share the Symptomatic Criteria of Systemic Exertion Intolerance Disease. *Journal of Clinical Medicine* 10 (15): 3374. Link: <https://pubmed.ncbi.nlm.nih.gov/34362156/>
- Ohashi Y et al.** (2022) Differences in outcomes after total hip arthroplasty for osteoarthritis between patients with and without central sensitivity syndromes other than fibromyalgia. *Scientific Reports* 12: 15327. Link: doi.org/10.1038/s41598-022-19369-0 (*NEW)
- Rogers EL (2022)** Recursive Debility: Symptoms, Patient Activism, and the Incomplete Medicalization of ME/CFS. *Medical Anthropology Quarterly*. Link: doi.org/10.1111/maq.12701
- Shan M et al.** (2022) The Hindi Version of International Consensus Criteria: A Cross-cultural Adaptation and Validation Study for Myalgic Encephalomyelitis in Post-COVID Patients. *Journal of the Association of Physicians in India* 70 (10): 59–63. Link: doi.org/10.5005/japi-11001-0090 (*NEW)
- Springer A et al.** (2023) Occupational burnout and chronic fatigue in the work of academic teachers-moderating role of selected health behaviours. *PLoS One* 18 (1): e0280080. Link: doi.org/10.1371/journal.pone.0280080 (*NEW)
- Stanculescu D and Bergquist J** (2022) Perspective: Drawing on Findings From Critical Illness to Explain Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Frontiers in Medicine*. Link: doi.org/10.3389/fmed.2022.818728
- Tamura Y et al.** (2022) Animal Models for Neuroinflammation and Potential Treatment Methods. *Frontiers in Neurology* 13: 890217. doi.org/10.3389/fneur.2022.890217 (*NEW)
- Tokumasu K et al.** (2021) Idiopathic combined adrenocorticotropin and growth hormone deficiency mimicking chronic fatigue syndrome. *BMJ Case Reports* CP 14: e244861. Link: <https://casereports.bmj.com/content/14/10/e244861>
- Torrent XG** (2021) The circuit of symbolic violence in chronic fatigue syndrome (CFS)/myalgic encephalomyelitis (ME) (I): A preliminary study. *Health Care for Women International* 43: 1-3, 5-41. Link: doi.org/10.1080/07399332.2021.1925900

18. MASTER AND DOCTORAL THESES

Almutairi BS (2022) Investigating the neural substrates of Chronic Fatigue Syndrome/Myalgic Encephalomyelitis (CFS/ME): a structural and functional MRI study. [Doctoral dissertation, University of Bristol] **Link:**

<https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.866683> (*NEW)

Arnold B (2022) A View Into the Mechanisms Underlying TORC1, AMPK, and Complex V Activity in Myalgic Encephalomyelitis Using the Dictyostelium discoideum Model. [Master dissertation, La Trobe University] **Link:**

doi.org/10.26181/21085051.v1 (*NEW)

Asprusten TT (2022) Diagnosis of Chronic Fatigue Syndrome in Adolescents. [Doctoral dissertation, University of Oslo]. **Link:**

<https://www.duo.uio.no/bitstream/handle/10852/92148/PhD-Asprusten-2022.pdf?sequence=1>

Bierre KL (2022) Support Experiences of Children and Youth with Myalgic Encephalomyelitis/Chronic Fatigue Syndrome and Epilepsy in New Zealand Schools: A Parental Perspective. [Master dissertation, Massey University] **Link:**

<https://mro.massey.ac.nz/bitstream/handle/10179/17655/BierreMScThesis.pdf?sequence=1&isAllowed=y> (*NEW)

Clapperton B (2022) Applying latent class cluster analysis and data mining methods to identify classes of chronic fatigue syndrome patients that are predictive of treatment success. [Doctoral dissertation, King's College London].

Link: https://kclpure.kcl.ac.uk/portal/files/181949538/2022_Clapperton_Ben_0976409_ethesis.pdf (*NEW)

Dibble J (2022) Investigating the Genetic and Immunological Aetiology of Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. [Doctoral Dissertation, University of Edinburgh]. **Link:**

https://era.ed.ac.uk/bitstream/handle/1842/39763/DibbleJJ_2022.pdf?sequence=1&isAllowed=y (*NEW)

Fennema M (2021) Language as a Predictor of Anxiety, Depression, and Self-Efficacy Scores and Recovery Rate in Teenagers with Chronic Fatigue Syndrome. [Master Dissertation, Utrecht University] **Link:**

<https://studenttheses.uu.nl/bitstream/handle/20.500.12932/43311/Thesis%20Mara%20Fennema%20Final%20Version.pdf?sequence=1&isAllowed=y> (*NEW)

Franklin JD (2021) Investigating the Relationship Between Physical Activity and Myalgic Encephalomyelitis/ Chronic Fatigue Syndrome. [Doctoral dissertation, Teesside University] **Link:**

https://research.tees.ac.uk/ws/portalfiles/portal/25523843/John_Franklin_PhD_Thesis.pdf

Hajdarevic R (2022) Immunogenetic studies in myalgic encephalomyelitis/chronic fatigue syndrome (ME/CFS). [Doctoral dissertation, University of Oslo] **Link:** <https://www.duo.uio.no/bitstream/handle/10852/94321/3/Phd-Hajdarevic-DUO.pdf> (*NEW)

Lewis ML (2023) A narrative inquiry into the school experiences of teenagers living with Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS). [DEdPsy Thesis, University of Bristol.] **Link:** https://research-information.bris.ac.uk/ws/portalfiles/portal/349168131/Final_Copy_2022_12_06_Lewis_M_L_DEdPsy.pdf (*NEW)

Linney C (2021) Investigating Access to Specialist Chronic Fatigue Syndrome / Myalgic Encephalomyelitis (CFS/ME) Services for Ethnic Minority Children. [Doctoral dissertation, University of Bristol] **Link:** <https://research-information.bris.ac.uk/en/studentTheses/investigating-access-to-specialist-chronic-fatigue-syndrome-myalg>

Loades M (2022) Improving the identification and treatment of co-morbid depression and/or anxiety in adolescents with Chronic Fatigue Syndrome (CFS/ME). [Doctoral dissertation, University of Bristol] **Link:** <https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.852541> (*NEW)

O'Neal AJ (2022) Investigating The Enterovirus Theory Of Disease Etiology In Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. [Doctoral dissertation, Cornell University]. **Link:** doi.org/10.7298/j3mn-zp26 (*NEW)

Pandley AA (2022) Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS) and mitochondria: A review. [Masters Thesis, Cornell University] **Link:** doi.org/10.7298/bkje-4a52 (*NEW)

Similä WA. (2022) Health-related quality of life in Young People with Chronic fatigue syndrome/ Myalgic encephalomyelitis. [Doctoral dissertation, NTNU Norwegian University of Science and Technology]. **Link:** <https://ntnuopen.ntnu.no/ntnu-xmlui/bitstream/handle/11250/2991015/Wenche%20Ann%20Simil%c3%a4%20Phd.pdf?sequence=1&isAllowed=y>

Seaton K (2022) Investigating Immune Reactivity to the Intestinal Microbiome in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. [Doctoral dissertation, University of East Anglia]. **Link:** <https://ueaeprints.uea.ac.uk/id/eprint/90862/> (*NEW)

Torp E (2022) Understanding the experiences of caring for a partner with myalgic encephalopathy: a qualitative study of men in Norway. [Masters dissertation, Inland Norway University] **Link:** <https://brage.inn.no/inn-xmlui/handle/11250/3019314> (*NEW)



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ME Connect provides a safe and understanding environment for people with ME/CFS where they can be heard and understood.

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calls will normally come out of your inclusive minutes.

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ME Connect Helpline: 0344 576 5326
Available every day of the year: 10am-12noon, 2pm-4pm and 7pm-9pm
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