

Chronisches Erschöpfungs – Syndrom, myalgische Encephalomyelitis, chronic fatigue syndrome (CFS), myalgic encephalomyelitis, Systemic exertion intolerance disease (SEID) and fibromyalgia, Fibromyalgie

Downsett EG REDEFINITIONS OF ME/CFS – A 20TH CENTURY PHENOMENON by Dr. E.G. Dowsett <http://www.name-us.org/defintionspages/DefinitionsArticles/DefinitionsBy%20Dowsett.pdf>
<http://www.name-us.org/defintionspages/deframsay.htm#Top%20of%20Ramsay%20page>

Synonyma: CFS – Chronic fatigue syndrome, SEID - Systemic exertion intolerance disease, Myalgische Enzephalomyelitis, Myalgische Enzephalopathie ME, Benign Myalgic Encephalomyelitis M, Low Natural Killer Cell Syndrome LNKS, Chronic Fatigue Immune Dysfunction Syndrome CFIDS; Febricula (leichtes Fieber), DaCosta-Syndrom, Effort-Syndrom, Soldiers heart Neurasthenie, Island-Krankheit, Immundysfunktionssyndrom
[.http://www.fatigatio.de](http://www.fatigatio.de)
<http://www.news-medical.net/health/Chronic-Fatigue-Syndrome-Epidemiology.aspx>
http://www.praxis-berghoff.de/dokumente/Chronic_Fatigue_Syndrome.pdf

Auch bei Krebs, Multiple Sklerose, Depression durch umweltmedizinische Erkrankungen, Burn-out-Syndrom, COMT Polymorphismen und bei vorübergehenden Erschöpfungszuständen als **Unwohlsein und Ermüdung**.

As well in cancer, multiple sclerosis, depression through environmental health disorders, burn-out syndrome, COMT polymorphisms and temporary exhaustion as **malaise and fatigue**.

Immunosystem

Calligiuri M (1987), 2 x Straus SE (1988), Klimas NG (1990), Wakefield D (1990), Gupta S (1991), Landay AL (1991), Lad AR (1993), Ojo-Amaize EA (1994), Cannon JG (1999), Patarca-Montero R (2001), Zang, Z (2008), Feng J (2009), Fletcher MA (2009), Fletcher MA (2010), Feng J (2013), Vanelzakker MB (2013), Elfaitouri A (2013), Üçeyler N (2013), Brenu EW (2013), Nakatomi Y (2014), Hornig M (2015), Underhill RA (2015), Saury JM (2016), Nguyen T (2017), Montoya JG (2017),

Viruses

Epstein Barr Virus u.a.

Buchwald D (1987), Gurvis S (1987), Behan PO (1988), Dowsett, EG (1990), Wessely S. (1991), Miller NA (1991), Buchwald D (1992), Hay J (1994), Gow JW (1994), Swanink CMA (1994), White P (1994), Glaser R (2005), Hickie I (2006), Enksen W (2017),

Bacteria and misfolded proteins

Shor S (2011), Donta ST (2014), Patrick DM (2015),

Toxins

Hilgers A (1994), Stejskal V (2013)

RAMSAY AM (1956) Encephalomyelitis simulating polio myelitis. Lancet. 1, 761-766

Buchwald D, Goldenberg DL, Sullivan JL, et al. (1987) The "chronic, active **Epstein-Barr virus** infection" syndrome and **primary fibromyalgia**. Arthritis Rheum 30, 1132-6.

Caligiuri M, Murray C, Buchwald D, Levine H, Cheney P, Peterson D, Komaroff AL, Ritz J (1987) **Phenotypic and functional deficiency of natural killer cells in patients with chronic fatigue syndrome**. J Immunol.

- Ashkin A, Dziedzic J M (1987) **Optical trapping and manipulation** of viruses and bacteria. *Science* 235, 1517-20
- Gurvis S (1987) **Epstein-Barr: Myth and Reality**. *The Spokesman-Review* 23. Nov. 1987.
- Taerk GS, Toner BB, Salit IE, et al. (1987) Depression in patients with neuromyasthenia (benign myalgic encephalomyelitis). *Int J Psychiatry Med* 17, 49
- Straus SE, Dale JK, Wright R, et al. (1988) **Allergy** and the chronic fatigue syndrome. *J Allergy Clin Immunol* 81,791-5.
- Straus SE. (1988) The **chronic mononucleosis syndrome**. *J Infect Dis* 157, 405-12.
- Behan PO, Behan WMH. (1988) **Postviral** fatigue syndrome. *Crit Rev Neurobiol* 4, 157-78.
- Holmes GP, Kaplan JE, Gantz NM, et al. (1988) **Chronic fatigue syndrome: a working case definition**. *Ann Intern Med.* 108(3). PMID:2829679 **The 1988 Holmes Definition for CFS Chronic Fatigue Syndrome: A Working Case Definition.**
- Manu P, Lane TJ, Matthews DA. (1988) The frequency of the chronic fatigue syndrome in patients with symptoms of persistent fatigue. *Ann Intern Med* 109, 554.
- Kruesi MJ, Dale J, Straus SE. (1989) Psychiatric diagnoses in patients who have chronic fatigue syndrome. *J Clin Psychiatry* 50, 53
- Klimas NG, Salvato FR, Morgan R, et al. (1990) Immunologic abnormalities in chronic fatigue syndrome. *J Clin Microbiol* 28, 1403-10.
- Lloyd, A.R., et al. (1990) Prevalence of Chronic Fatigue Syndrome in an Australian population. *Medical Journal of Australia.* 153, 522-8.
- Dowsett, EG et al. (1990) Myalgic encephalomyelitis – a persistent enteroviral infection? *Postgraduate Medical Journal,* 66, 526-30.
- Reilly, P.A., and Littlejohn, G.O. (1990) Fibromyalgia and chronic fatigue syndrome. *Curr. Opin. Rheum.* 2, 282–290.
- Wigley, R.D. (1990) **Chronic fatigue syndrome, myalgic encephalomyelitis, and fibromyalgia**. *New Zeal. Med. J.* 103, 378–378.
- Wakefield D, Lloyd A, Brockman A (1990) Immunoglobulin subclass abnormalities in patients with chronic fatigue syndrome. *Pediatr. Infect. Dis. J.* 9, S50–S53.
- Wysenbeek A.J., Shapira, Y., and Leibovici, L. (1991) Primary fibromyalgia and the chronic fatigue syndrome. *Rheumatol. Int.* 10, 227–229.
- Gupta S, Vayuvegula B (1991) A comprehensive immunological analysis in chronic fatigue syndrome. *Scand. J. Immunol.* 33, 319–327. 25.
- Buchwald D, Komaroff AL. (1991) Review of laboratory findings for patients with chronic fatigue syndrome. *Rev Infect Dis* 13(suppl 1), 12-18.
- Ho-Yen, D.O. and McNamara, I. (1991) General Practitioner's experience of chronic fatigue syndrome. *British Journal of General Practice.* 41, 324-6.
- Landay AL, Jessop C, Lennette ET, Levy JA. (1991) Chronic fatigue syndrome: clinical condition associated with immune activation. *Lancet* 338, 707.
- Wessely S. (1991) **Viruses** and fatigue: the current status of chronic fatigue syndrome. In: Kurstak E, ed. *Psychiatry and biological factors*. New York, NY: Plenum Press, 231-56.

Miller NA, Carmichael HA, Calder BD, et al. (1991) Antibody to **coxsackie B virus** in diagnosing postviral fatigue syndrome. *BMJ* 302, 140-3.

[Buchwald D](#), [Cheney PR](#), [Peterson DL](#), [Henry B](#), [Wormsley SB](#), [Geiger A](#), [Ablashi DV](#), [Salahuddin SZ](#), [Saxinger C](#), [Biddle R](#) et al. (1992) A chronic illness characterized by fatigue, neurologic and immunologic disorders, and active **human herpesvirus type 6** infection. *Ann Intern Med.* 116,103

Klonoff DC. (1992) Chronic fatigue syndrome. *Clin Infect Dis* 15, 812-23.

Lloyd, A., Hickie, I., Hickie, C., Dwyer, J., and Wakefield, D. (1992) Cell mediated immunity in patients with chronic fatigue syndrome, healthy control subjects and patients with major depression. *Clin. Exp. Immunol.* 87, 76–79. Tel: 805.693.1802 • Fax: 805.693.1806
CustomerService@ResearchedNutritionals.com

Lad AR, Wakefield D, Hickie I (1993) Immunity and the pathophysiology of chronic fatigue syndrome. *Ciba Found. Symp.* 173, 176–192.

Bates DW, Schmitt W, Buchwald D, et al. (1993) Prevalence of fatigue and chronic fatigue syndrome in a primary care practice. *Arch Intern Med* 153, 2759. 7

Buchwald D, Garrity D. (1994) Comparison of patients with chronic fatigue syndrome, fibromyalgia, and multiple chemical sensitivities. *Arch Intern Med* 154, 2049.

Ojo-Amaize EA, Conley EJ, Peter JB. (1994) **Decreased natural killer cell activity** is associated with severity of chronic fatigue immune dysfunction syndrome. *Clin Infect Dis.* 18(1), 157-9.
<https://www.researchednutritionals.com/store/item.cfm?code=CRN103&cat=3>

Fukuda K, Straus SE, Hickie I, Sharpe MC, Dobbins JG, Komaroff A (1994) International Chronic Fatigue Syndrome Study Group. The chronic fatigue syndrome: a comprehensive approach to its definition and study. *Ann Intern Med.* 121(12), 953-959.

Hay J, Jenkins F. (1994) **Human herpesviruses** and chronic fatigue syndrome. In: Straus S, ed. *Chronic fatigue syndrome*. New York, NY: Marcel Dekker, 181-98.

Gow JW, Behan WM, Simpson K, et al. (1994) Studies of **enteroviruses** in patients with chronic fatigue syndrome. *Clin Infect Dis* 18(suppl 1), 126-9.

Swanink CMA, Melchers WJG, van der Meer JWM, et al. (1994) **Enteroviruses** and the chronic fatigue syndrome. *Clin Infect Dis* 19, 860-4.

Wessely S, Chalder T, Hirsch S, et al. (1994) **Post infectious** fatigue: a prospective study in primary care. *Lancet* (Fekety R. *Infection and chronic fatigue syndrome*. In: Straus S, ed. *Chronic fatigue syndrome*. New York, NY: Marcel Dekker, 101-80.

White P, Thomas J, Amess J, et al. (1994) A fatigue syndrome following **infectious mononucleosis**. I. The existence of the syndrome. *Psychol Med* Strober W. Immunological function in chronic fatigue syndrome. In: Straus S, ed. *Chronic fatigue syndrome*. New York, NY: Marcel Dekker, 207-40.

Hilgers A, Johannes Frank J (1994) Chronic Fatigue Syndrom: Immundysfunktion, Erreger- und Schadstoffbeteiligung sowie neurologische und kardiale Veränderungen, *Wien Med Wschr* 16, 399-406 [PMID 7856214](https://pubmed.ncbi.nlm.nih.gov/pubmed/7856214) <http://www.ncbi.nlm.nih.gov/pubmed/7856214?dopt=Abstract>

Lawrie SM, Pelosi AJ. (1995) Chronic fatigue syndrome in the community: prevalence and associations. *Br J Psychiatry.* 166(6), 793-797.

Wessely S. (1995) The Epidemiology of Chronic Fatigue Syndrome. *Epidemiologic Reviews* 17 (1) 139-151

Buchwald D, Umali P, Umali J, et al. (1995) Chronic fatigue and chronic fatigue syndrome: prevalence in a Pacific Northwest health care system. *Ann Intern Med* 123, 91.

- Melton LJ III. (1996) History of the Rochester Epidemiology Project. *Mayo Clin Proc.* 71(3), 266-274.
- Levine PH, Dale JK, Benson-Grigg E, et al. (1996) A cluster of cases of chronic fatigue and chronic fatigue syndrome: clinical and immunologic studies. *Clin Infect Dis* 23, 408
- Bennett RM, De Garmo P, Clark SR (1996) [A Randomized, Prospective, 12 Month Study To Compare The Efficacy Of Guaifenesin Versus Placebo In The Management Of Fibromyalgia](#) (reprint). *Arthritis and Rheumatism* 39 (10), 212, doi:[10.1002/art.1780391402](#)
“Unfortunately this study was not able to confirm the anecdotal observations on the efficacy of guaifenesin in the treatment of fibromyalgia patients.”
- Bennett RM, Clark SR, St. Amand P (K.A.) [Report on a randomized, prospective, 12 month study to compare the efficacy of guaifenesin versus placebo in the management of fibromyalgia](#), « **This study provides persuasive evidence that the improvement was not due to a disease specific effect of guaifenesin on the underlying pathophysiology of fibromyalgia** ».
- Reyes M, Gary HE Jr, Dobbins JG, et al. (1997) Surveillance for chronic fatigue syndrome—four U.S. cities, September 1989 through August 1993. *MMWR CDC Surveill Summ.* 46(2), 1-13.
- Wessely S, Chalder T, Hirsch S, Wallace P, Wright D. (1997) The prevalence and morbidity of chronic fatigue and chronic fatigue syndrome: a prospective primary care study. *Am J Public Health.* 87(9), 1449-1455.
- Steele L, Dobbins JG, Fukuda K, et al. (1998) The epidemiology of chronic fatigue in San Francisco. *Am J Med.* 105(3A), 83S-90S.
- Piper BF, Dribble SL, Dodd MJ. (1998) The revised Piper Fatigue Scale: psychometric evaluation in women with breast cancer. *Oncol Nurs Forum.* 25, 667–684.
- Jason LA, Richman JA, Rademaker AW, et al. (1999) A community based study of chronic fatigue syndrome. *Arch Intern Med.* 159(18), 2129-2137.
- Cannon JG, Angel JB, Ball RW, Abad LW, Fagioli L, et al. (1999) Acute phase responses and cytokine secretion in chronic fatigue syndrome. *J Clin Immunol* 19: 414–421.
- Chaudhuri A, Behan PO (2000) Fatigue and basal ganglia. *J Neurol Sci* 179, 34–42. doi: 10.1016/s0022-510x(00)00411-1
- Aaron LA, Burke MM, Buchwald D (2000) Overlapping conditions among patients with chronic fatigue syndrome, fibromyalgia, and temporomandibular disorder. *Arch Intern Med* 160, 221
- Patarca-Montero R, Antoni M, Fletcher MA, Klimas NG (2001) Cytokine and other immunologic markers in chronic fatigue syndrome and their relation to neuropsychological factors. *Appl Neuropsychol* 8, 51–64. doi: 10.1207/s15324826an0801_7
- Lindal E, Stefánsson JG, Bergmann S. (2002) The prevalence of chronic fatigue syndrome in Iceland—a national comparison by gender drawing on four different criteria [published correction appears in *Nord J Psychiatry.* 2006. 60(2), 183]. *Nord J Psychiatry.* 56(4), 273-277.
- Taylor RR, Jason LA, Curie CJ. (2002) Prognosis of chronic fatigue in a community-based sample. *Psychosom Med.* 64(2), 319-327.
- Reeves WC, Lloyd A, Vernon SD, et al. (2003) International Chronic Fatigue Syndrome Study Group. Identification of ambiguities in the 1994 chronic fatigue syndrome research case definition and recommendations for resolution. *BMC Health Serv Res.* 3(1), 25.
- Roberto Patarca-Montero (2003) *Chronic Fatigue Syndrome. Genesis, and Infection.* Haworth Medical,
- Afari N, Buchwald D. (2003) Chronic fatigue syndrome: a review. *Am J Psychiatry.* 160(2), 221-236.

Reyes M, Nisenbaum R, Hoaglin DC, et al. (2003) Prevalence and incidence of chronic fatigue syndrome in Wichita, Kansas. Arch Intern Med. 163(13), 1530-1536.

Nisenbaum R, Jones JF, Unger ER, Reyes M, Reeves WC. (2003) A population-based study of the clinical course of chronic fatigue syndrome. Health Qual Life Outcomes. 1, 49.

Carruthers BM, Jain AK, de Meirleir KL, et al. (2003) Myalgic Encephalomyelitis/Chronic Fatigue Syndrome: Clinical Working Case Definition, Diagnostic and Treatment Protocols. J Chronic Fatigue Syndr. 11(1)

Goldenberg DL, Burckhardt C, Crofford L. (2004) Management of fibromyalgia syndrome. JAMA. 292(19), 2388-95. PMID 15547167.

Solomon L, Reeves WC. (2004) Factors influencing the diagnosis of chronic fatigue syndrome. Arch Intern Med. 164(20), 2241-2245.

Chaudhuri A, Behan PO (2004) Fatigue in neurological disorders. Lancet 363: 978–988. doi: 10.1016/s0140-6736(04)15794-2

Glaser R, Padgett DA, Litsky ML, Baiocchi RA, Yang EV, et al. (2005) Stress-associated changes in the steady-state expression of **latent Epstein-Barr virus**: implications for chronic fatigue syndrome and cancer. Brain Behav Immun 19, 91–103. doi: 10.1016/j.bbi.2004.09.001

[Ranjith G](http://www.ncbi.nlm.nih.gov/pubmed/15699086). (2005) Epidemiology of chronic fatigue syndrome. Occup Med (Lond). 55(1), 3-9. <http://www.ncbi.nlm.nih.gov/pubmed/15699086>

Jens Gaab & Ulrike Ehlert (2005) Chronische Erschöpfung und Chronisches Erschöpfungssyndrom Hogrefe, Göttingen

Kim CH, Shin HC, Won CW. (2005) Prevalence of chronic fatigue and chronic fatigue syndrome in Korea: community-based primary care study. J Korean Med Sci. 20(4), 529-534.

Reeves WC, Wagner D, Nisenbaum R, Jones JF, Gurbaxani B et al. (2005) Chronic fatigue syndrome—a clinically empirical approach to its definition and study. BMC Med 3, 19.

Hickie I, Davenport T, Wakefield D, Vollmer-Conna U, Cameron B, et al. (2006) Post-infective and chronic fatigue syndromes precipitated by viral and non-viral pathogens: prospective cohort study. BMJ 333, 575. doi: 10.1136/bmj.38933.585764.ae

Njoku MG, Jason LA, Torres-Harding SR. (2007) The prevalence of chronic fatigue syndrome in Nigeria. J Health Psychol. 12(3), 461-474.

Müller KE et al. (2007) Genetische Polymorphismen der **Catechol-O-Methyltransferase (COMT)**. umwelt medizin gesellschaft 20(4), 282-288. http://www.umg-verlag.de/umwelt-medizin-gesellschaft/407_mue.html

Zang, Z, Cherryholmes, G, Mao, A, Marek, C, Longmate J, Kalos, M, St Amand, RP Shivley JE (2008) **High plasma levels of MCP-1, and Eotaxin provide evidence for an immunological basis of Fibromyalgia.** J of Ex Bio Med 233(9), 1171-80. doi: 10.3181/0712-RM-328.

<http://www.ncbi.nlm.nih.gov/pubmed/18535166>

« High levels of MCP-1 (P<0.001) and eotaxin (P<0.01) were found in patients and family members compared to controls. Patients (56/92) treated with the single agent guaifenesin (>3 months) had higher levels of eotaxin than those not treated (P<0.01). ... Furthermore, the chemokine profile associated with FMS has direct effects on the migration of eosinophils and monocytes in the presence of mast cells, and skeletal muscle itself may secrete»

[R. Paul St. Amand, Claudia Craig Marek: Fibromyalgie: Die revolutionäre Behandlungsmethode, durch die man vollständig von Beschwerden frei werden kann.](https://www.amazon.de/Fibromyalgie-revolution%C3%A4re-Behandlungsmethode-vollst%C3%A4ndig-Beschwerden/dp/3837023079) Books on Demand 2009 <https://www.amazon.de/Fibromyalgie-revolution%C3%A4re-Behandlungsmethode-vollst%C3%A4ndig-Beschwerden/dp/3837023079>

- Feng J, Zhang Z, Li W, Shen X, Song W, et al. (2009) **Missense Mutations in the MEFV Gene Are Associated with Fibromyalgia Syndrome and Correlate with Elevated IL-1b Plasma Levels.** PLoS ONE 4(12): e8480. doi:10.1371/journal.pone.0008480
- Jason LA, Porter N, Brown M, et al. (2009) CFS: a review of epidemiology and natural history studies. Bull IACFS ME. 17(3), 88-106.
- Fletcher MA, Zeng XR, Barnes Z, Levis S, Klimas NG (2009) Plasma cytokines in women with chronic fatigue syndrome. J Transl Med 7, 96. doi: 10.1186/1479-5876-7-96
- Harris PA, Taylor R, Thielke R, Payne J, Gonzalez N, Conde JG. (2009) Research electronic data capture (REDCap)—a metadata-driven methodology and workflow process for providing translational research informatics support. J Biomed Inform. 42(2), 377-381.
- Lin JM, Brimmer DJ, Boneva RS, Jones JF, Reeves WC. (2009) Barriers to healthcare utilization in fatiguing illness: a population-based study in Georgia. BMC Health Serv Res. 9, 13.
- Brimmer DJ, Fridinger F, Lin JM, Reeves WC. (2010) U.S. healthcare providers' knowledge, attitudes, beliefs, and perceptions concerning chronic fatigue syndrome. BMC Fam Pract. 11, 28.
- Eisenberger NI, Berkman ET, Inagaki TK, Rameson LT, Mashal NM, et al. (2010) Inflammation-induced anhedonia: endotoxin reduces ventral striatum responses to reward. Biol Psychiatry 68, 748–754. doi: 10.1016/j.biopsych.2010.06.010
- Müller KE. (2010) **Depression** bei umweltmedizinischen Erkrankungen. <http://www.mcskempen.de/component/content/article/2-allgemeines/54-depression-bei-umweltmedizinischen-erkrankungen.html> *umwelt · medizin · gesellschaft - 4/2010*
- Oriol Romero-Isart et al. (2010) **Toward quantum superposition of living organisms.** New Journal of Physics, 12, 033015 <http://iopscience.iop.org/1367-2630/12/3/033015/>
- Howard KJ, Mayer TG, Neblett R, et al. (2010) Fibromyalgia syndrome in chronic disabling occupational musculoskeletal disorders: prevalence, risk factors, and posttreatment outcomes. J Occup Environ Med. 52(12), 1186-91. PMID 21124244.
- 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.
- McDonald M, DiBonaventura M, Ullman S. (2011) Musculoskeletal pain in the workforce: the effects of back, arthritis, and fibromyalgia pain on quality of life and work productivity. J Occup Environ Med. 53(7), 765-70. PMID 21685799.
- Jason LA, Porter N, Hunnell J, Brown A, Rademaker A, Richman JA. (2011) A natural history study of **chronic fatigue syndrome.** Rehabil Psychol. 56(1), 32-42.
- Hamaguchi M, Kawahito Y, Takeda N, Kato T, Kojima T. (2011) Characteristics of **chronic fatigue syndrome** in a Japanese community population: chronic fatigue syndrome in Japan. Clin Rheumatol. 30(7), 895-906.
- St Sauver JL, Grossardt BR, Yawn BP, Melton LJ III, Rocca WA. (2011) Use of a medical records linkage system to enumerate a dynamic population over time: the Rochester Epidemiology Project. Am J Epidemiol. 173(9), 1059-1068.
- Shor S (2011) RETROSPECTIVE ANALYSIS OF A COHORT OF INTERNATIONALLY CASE DEFINED **CHRONIC FATIGUE SYNDROME PATIENTS IN A LYME ENDEMIC ARE.** Bulletin of the IACFS/ME. 18(4), 109 - 123.© 2011 IACFS/ME <http://www.iacfsme.org/LinkClick.aspx?fileticket=VcL5jCgZHa8%3D&tabid=458>
- Carruthers BM, van de Sande MI, De Meirleir KL et al. (2011) **Myalgic encephalomyelitis: International Consensus Criteria.** Journal of internal medicine. 270(4), 327-338 DOI: 10.1111/j.1365-2796.2011.02428.x

<http://onlinelibrary.wiley.com/doi/10.1111/j.1365-2796.2011.02428.x/full>

Maes M, Twisk FN, Kubera M, Ringel K (2012) Evidence for inflammation and activation of cell-mediated immunity in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS): increased interleukin-1, tumor necrosis factor-alpha, PMN-elastase, lysozyme and neopterin. *J Affect Disord* 136, 933–939. doi: 10.1016/j.jad.2011.09.004

Vincent A, Brimmer DJ, Whipple MO et al (2012) Prevalence, Incidence, and Classification of **Chronic Fatigue Syndrome** in Olmsted County, Minnesota, as Estimated Using the Rochester Epidemiology Project. *Mayo Clin Proc.* 87(12), 1145-1152 <http://www.ncbi.nlm.nih.gov/pubmed/23140977>

Jason LA, Brown A, Clyne E, et al. (2012) Contrasting case definitions for chronic fatigue syndrome, Myalgic Encephalomyelitis/chronic fatigue syndrome and myalgic encephalomyelitis. *Eval Health Prof.* 35(3). PMID:22158691

Centers for Disease Control and Prevention. **Fibromyalgia**. In: Centers for Disease Control and Prevention, editor; 2012.

Feng J, Zhang Z, Wu X, Mao A, Chang F, et al. (2013) **Discovery of Potential New Gene Variants and Inflammatory Cytokine Associations with Fibromyalgia Syndrome by Whole Exome Sequencing**. *PLoS ONE* 8(6), e65033. doi:10.1371/journal.pone.0065033

Prof. Dr. Kenny De Meirleir (2013) **Is ME and/or CFS a disease?**
<https://www.youtube.com/watch?v=X-uwSxoUqTY>

Meiklejohn CD et al. (2013) **An incompatibility between a mitochondrial tRNA and its nuclear-encoded tRNA synthetase compromises development and fitness in Drosophila**. *PLOS Genetics*. 9(1), e1003238. doi:10.1371/journal.pgen.1003238
<http://www.plosgenetics.org/article/info%3Adoi%2F10.1371%2Fjournal.pgen.1003238>

[Vanelzakker MB](#) (2013) Chronic fatigue syndrome from **vagus nerve infection**: A psychoneuroimmunological hypothesis. *Med Hypotheses*. 81(3), 414-23. doi: 10.1016/j.mehy.2013.05.034. Epub 2013 Jun 19. <http://www.ncbi.nlm.nih.gov/pubmed/23790471>
<http://dx.doi.org/10.1016/j.mehy.2013.05.034>
[http://www.medical-hypotheses.com/article/S0306-9877\(13\)00275-2/pdf](http://www.medical-hypotheses.com/article/S0306-9877(13)00275-2/pdf)
“According to this hypothesis, any pathogenic infection of the vagus nerve can cause CFS, which resolves the ongoing controversy about finding a single pathogen. The vagus nerve infection hypothesis offers testable hypotheses for researchers, animal models, and specific treatment strategies”.

[Elfaitouri A](#), [Herrmann B](#), [Bölin-Wiener A](#), [Wang Y](#), [Gottfries CG](#), [Zachrisson O](#), [Pipkorn R](#), [Rönnblom L](#), [Blomberg J](#). (2013) Epitopes of microbial and human **heat shock protein 60** and their recognition in myalgic encephalomyelitis. *PLoS One*. 8(11), e81155 doi: 10.1371/journal.pone.0081155.
<http://www.ncbi.nlm.nih.gov/pubmed/24312270>

[Üçeyler N](#), [Zeller D](#), [Kahn AK](#), [Kewenig S](#) et al. (2013) **Small fibre pathology in patients with fibromyalgia syndrome**. *Brain*. 136(Pt 6), 1857-67. doi: 10.1093/brain/awt053. Epub 2013 Mar 9.
<http://www.ncbi.nlm.nih.gov/pubmed/23474848>

Brenu EW et al. (2013) **Natural killer cells in patients with severe chronic fatigue syndrome**. *Auto Immun Highlights* 4(3), 69–80.

Blackwell D, Clarke TC (2013) **Percentage of adults who often felt very tired or exhausted in the past 3 months, by sex and age group**. National Health Interview Survey, United States, 2010-2011. *MMWR* 62, 275. <https://www.cdc.gov/mmwr/preview/mmwrhtml/mm6214a5.htm>

[Stejskal V](#), [Ockert K](#), [Björklund G](#) (2013) **Metal-induced inflammation triggers fibromyalgia in metal-allergic patients**. *Neuro Endocrinol Lett*. 34(6), 559-65.
<https://www.ncbi.nlm.nih.gov/pubmed/24378456>

Arroll MA (2013) **Allostatic overload in myalgic encephalomyelitis/chronic fatigue syndrome (ME/CFS)** *Medical Hypotheses*, 81(3), 506-508

[http://www.medical-hypotheses.com/article/S0306-9877\(13\)00313-7/fulltext](http://www.medical-hypotheses.com/article/S0306-9877(13)00313-7/fulltext)

Naviaux RK (2014) **Metabolic features of the cell danger response**. Mitochondrion 16, 7–17.

<http://www.ncbi.nlm.nih.gov/pubmed/23981537>

“The cell danger response (CDR) is the evolutionarily conserved metabolic response that protects cells and hosts from harm. ... An understanding of the CDR permits us to reframe old concepts of pathogenesis for a broad array of chronic, developmental, autoimmune, and degenerative disorders. These disorders include autism spectrum disorders (ASD), attention deficit hyperactivity disorder (ADHD), asthma, atopy, gluten and many other food and chemical sensitivity syndromes, emphysema, Tourette's syndrome, bipolar disorder, schizophrenia, post-traumatic stress disorder (PTSD), chronic traumatic encephalopathy (CTE), traumatic brain injury (TBI), epilepsy, suicidal ideation, organ transplant biology, diabetes, kidney, liver, and heart disease, cancer, Alzheimer and Parkinson disease, and autoimmune disorders like lupus, rheumatoid arthritis, multiple sclerosis, and primary sclerosing cholangitis”.

Koslik HJ, Hamilton G, Golomb BA (2014) **Mitochondrial Dysfunction in Gulf War Illness Revealed by 31 Phosphorous Magnetic Resonance Spectroscopy: A Case Control Study**. PLoS ONE 9(3), e02887 <http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0092887>

[Nakatomi Y, Mizuno K, Ishii A et al. \(2014\) Neuroinflammation in Patients with Chronic Fatigue Syndrome/Myalgic Encephalomyelitis: An 11C-\(R\)-PK11195 PET Study. J Nucl Med.](http://www.ncbi.nlm.nih.gov/pubmed/24665088)

<http://www.ncbi.nlm.nih.gov/pubmed/24665088>

Donta ST (2014) **Lyme Disease, Chronic Fatigue and Fibromyalgia**. Chronic Dis Int. 1(1), 2.

[Institute of Medicine \(Hg.\): Report Beyond Myalgic Encephalomyelitis/Chronic Fatigue Syndrome: Redefining an Illness; 10. Februar 2015](http://www.iom.edu/Reports/2015/ME-CFS.aspx) <http://www.iom.edu/Reports/2015/ME-CFS.aspx>

Institute of Medicine (2015) **Beyond Myalgic Encephalomyelitis/Chronic Fatigue Syndrome: Redefining an Illness** (The National Academies Press, Washington, DC).

<http://www.ncbi.nlm.nih.gov/pubmed/25695122>

Hornig M, Montoya JG, Klimas NG et al. (2015) **Distinct plasma immune signatures in ME/CFS are present early in the course of illness**. Science Advances 1(1), e1400121

DOI: 10.1126/sciadv.1400121 <http://advances.sciencemag.org/content/1/1/e1400121.full>

[Patrick DM, Miller RR, Gardy JL et al. \(2015\) Lyme Disease Diagnosed by Alternative Methods: A Common Phenotype with Chronic Fatigue Syndrome. Clin Infect Dis. doi: 10.1093/cid/civ470](http://cid.oxfordjournals.org/content/early/2015/06/16/cid.civ470.abstract)

<http://cid.oxfordjournals.org/content/early/2015/06/16/cid.civ470.abstract>

[Craig C \(2015\) Mitoprotective dietary approaches for Myalgic Encephalomyelitis/Chronic Fatigue Syndrome: Caloric restriction, fasting, and ketogenic diets. Med Hypotheses. pii: S0306-9877\(15\)00318-7. doi: 10.1016/j.mehy.2015.08.013. \[Epub ahead of print\]](http://www.ncbi.nlm.nih.gov/pubmed/26315446)

<http://www.ncbi.nlm.nih.gov/pubmed/26315446>

IOM (Institute of Medicine). **Beyond Myalgic Encephalomyelitis/Chronic Fatigue Syndrome: Redefining an Illness**. Washington, CD: The National Academies Press; 2015

<http://www.iom.edu/mecfs> (Accessed on February 12, 2015).

Underhill RA (2015) **Myalgic encephalomyelitis, chronic fatigue syndrome: An infectious disease**. Medical Hypotheses, 85(6), 765-773 Open Access

[http://www.medical-hypotheses.com/article/S0306-9877\(15\)00382-5/fulltext](http://www.medical-hypotheses.com/article/S0306-9877(15)00382-5/fulltext)

Matthees A, Kindlon T, Maryhew C, Stark P, Levin B (2016) **A preliminary analysis of ‘recovery’ from chronic fatigue syndrome in the PACE trial using individual participant data**.

<http://www.virology.ws/wp-content/uploads/2016/09/preliminary-analysis.pdf>

[Doss J, Mo H, Carroll RJ et al. \(2016\) Phenome-Wide Association Study of Rheumatoid Arthritis Subgroups Identifies Association between Seronegative Disease and Fibromyalgia. Arthritis Rheumatol. doi: 10.1002/art.39851. \[Epub ahead of print\]](http://www.ncbi.nlm.nih.gov/pubmed/27589350)

<http://www.ncbi.nlm.nih.gov/pubmed/27589350>

„This PheWAS in RA patients identifies a strong association between seronegativity and fibromyalgia.“

Naviaux RK, Naviaux JC, Li K et al. (2016) **Metabolic features of chronic fatigue syndrome.** Edited by Ronald W. Davis, Stanford University School of Medicine, Stanford, CA <http://www.pnas.org/content/early/2016/08/24/1607571113.full> PNAS 113(37), doi: 10.1073/pnas.1607571113 <http://www.pnas.org/content/113/37/E5472.full>
“**The pattern and directionality of these changes showed that CFS is a conserved, hypometabolic response to environmental stress similar to dauer (35). Only about 25% of the metabolite disturbances found in each person were needed for the diagnosis of CFS. About 75% of the metabolite abnormalities were unique to the individual and useful in guiding personalized treatment.**”

Saury JM (2016) **The role of the hippocampus in the pathogenesis of Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS)** Medical Hypotheses, 86, 30-38 [http://www.medical-hypotheses.com/article/S0306-9877\(15\)00447-8/fulltext](http://www.medical-hypotheses.com/article/S0306-9877(15)00447-8/fulltext)

Berghoff W (2016) **Chronic Fatigue Syndrome (CFS) Systemic exertion intolerance disease (SEID)** http://www.praxis-berghoff.de/dokumente/Chronic_Fatigue_Syndrome.pdf

Nguyen T, Johnston S, L. Clarke L (2017) **Impaired calcium mobilization in natural killer cells from chronic fatigue syndrome/myalgic encephalomyelitis patients is associated with transient receptor potential melastatin 3 ion channels.** *Clin Exp Immunol.* 187(2), 284–293. Published online 2016 Nov 23. doi: [10.1111/cei.12882](https://doi.org/10.1111/cei.12882) PMCID: PMC5217865 <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5217865/>

Jha MK et al. (2017) **Can C-reactive protein inform antidepressant medication selection in depressed outpatients? Findings from the CO-MED trial.** *Psychoneuroendocrinology* 78, 105-113.

Oczko-Grzesik B, Kępa L, Puszcz-Matlińska M et al. (2017) **Estimation of cognitive and affective disorders occurrence in patients with Lyme borreliosis.** *Ann Agric Environ Med.* 24(1), 33-38. doi: 10.5604/12321966.1229002. <https://www.ncbi.nlm.nih.gov/pubmed/28378969>

Montoya JG, Holmes TH, Anderson JN et al. (2017) **Cytokine signature associated with disease severity in chronic fatigue syndrome patients.** doi: 10.1073/pnas.1710519114 <http://www.pnas.org/content/early/2017/07/25/1710519114.full4>
„**Although only two cytokines were found to be different (TGF- β higher and resistin lower) in ME/CFS patients compared with controls, 17 cytokines correlated with ME/CFS severity. Thirteen of these cytokines are proinflammatory and may contribute to many of the symptoms these patients experience for several years. Only CXCL9 (MIG) inversely correlated with fatigue duration.**“

Heymann RE, Paiva ES, Martinez JE et al. (2017) **Novas diretrizes para o diagnóstico da fibromialgia.** *Revista Brasileira de Reumatologia*, Available online 30 June 2017, Pages [PDF \(1MB\)](#)

Enksen W (2017) **The spread of EBV to ectopic lymphoid aggregates may be the final common pathway in the pathogenesis of ME/CFS** Medical Hypotheses, Vol. 102, 8-15 [http://www.medical-hypotheses.com/article/S0306-9877\(16\)30867-2/fulltext](http://www.medical-hypotheses.com/article/S0306-9877(16)30867-2/fulltext)

Nicholas J Higgins P, Pickard JD et al. (2017) **Chronic fatigue syndrome and idiopathic intracranial hypertension: Different manifestations of the same disorder of intracranial pressure?** Medical Hypotheses, 105, 6-9 Open Access [http://www.medical-hypotheses.com/article/S0306-9877\(17\)30418-8/fulltext](http://www.medical-hypotheses.com/article/S0306-9877(17)30418-8/fulltext)

D'Aoust RF, Rossiter AG, Elliott A et al. (2017) **Women Veterans, a Population at Risk for Fibromyalgia: The Associations Between Fibromyalgia, Symptoms, and Quality of Life.** *Mil Med.* 182(7), e1828-e1835. doi: 10.7205/MILMED-D-15-00557. <https://www.ncbi.nlm.nih.gov/pubmed/28810979>

Pridgen WL, Duffy C, Gendreau JF, Gendreau RM (2017) **A famciclovir + celecoxib combination treatment is safe and efficacious in the treatment of fibromyalgia.** *J Pain Res.* 10, 451–460. doi: [10.2147/JPR.S127288](https://doi.org/10.2147/JPR.S127288) <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5328426/>
« **IMC-1 was efficacious and safe in treating symptoms of fibromyalgia, supporting the hypothesis that herpes virus infections may contribute to this syndrome. Improved retention rates, decreased adverse event rates, and evidence of efficacy on a broad spectrum of outcome measures are suggestive that IMC-1 may represent an effective, novel treatment for fibromyalgia.** «

[Nacul L](#), [Lacerda EM](#), [Kingdon CC](#) et al. (2017) **How have selection bias and disease misclassification undermined the validity of myalgic encephalomyelitis/chronic fatigue syndrome studies?** *J Health Psychol*. 1359105317695803. doi: 10.1177/1359105317695803. [Epub ahead of print] <https://www.ncbi.nlm.nih.gov/pubmed/28810428>

[Goudsmit E](#), [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.** *J Health Psychol*. 22(9), 1159-1167. doi: 10.1177/1359105317707216. Epub 2017 May 29. <https://www.ncbi.nlm.nih.gov/pubmed/28805527>

- ➔ **Related Articles:** <http://www.medical-hypotheses.com/action/ckRelatedArticles?pii=S0306987713002752>

- ➔ **Chlamydia pneumoniae** http://www.kabilahsystems.de/chlamydia_pneumoniae.pdf
- ➔ **Xeno-Autophagie** <http://www.xerlebnishaft.de/xenoautophagie.pdf>

- ➔ **Gendynamik und Plasmidverlust** http://www.xerlebnishaft.de/gen_dynamik.pdf
<http://www.erlebnishaft.de/gentransfer.pdf>
- ➔ **Immunität** http://www.erlebnishaft.de/danger_model.pdf
- ➔ **Zytokine** <http://www.kabilahsystems.de/antizyt-chem.pdf>

- ➔ **Mitochondrien** <http://www.xerlebnishaft.de/mitochondrien.pdf>
- ➔ **Zytoskelett** <http://www.xerlebnishaft.de/zytoskelett.pdf>

- ➔ **Virus triggers** <http://www.erlebnishaft.de/virus triggers.pdf>
- ➔ **Immunsuppressive Virusarten** <http://www.erlebnishaft.de/immunsuppressivvirus.pdf>
- ➔ **Virus, Bakterien, Immunsystem** <http://www.erlebnishaft.de/virusbaktimmun.pdf>
- ➔ **Stress, Toxine, PH-Wert** <http://www.xerlebnishaft.de/salutogenese.pdf>
<http://www.kabilahsystems.de/entgiftung.pdf> <http://www.kabilahsystems.de/ph.pdf>
<http://www.erlebnishaft.de/l-arginin.pdf>

- ➔ **Methylierung** <http://www.erlebnishaft.de/methylierung.pdf> <http://www.xerlebnishaft.de/bildmethyl-arginin.pdf>
- ➔ **Catechol-O-Methyltransferase (COMT)** <http://de.wikipedia.org/wiki/Catechol-O-Methyltransferase>
- ➔ **Mitochondrienfunktion** http://www.kabilahsystems.de/q10_und_l.pdf
- ➔ **Elektrolyte und Spurenelemente** http://www.xerlebnishaft.de/elektro_spur_ph.pdf
- ➔ **Vitamine** <http://www.xerlebnishaft.de/vitamine.pdf>
- ➔ **Biogene Amine und Peptide** <http://www.kabilahsystems.de/biogeneamineundpeptide.pdf>
<http://www.erlebnishaft.de/prione.pdf>
- ➔ **Probiotika** <http://www.kabilahsystems.de/probiotika.pdf>
- ➔ **Polyphenole** <http://www.kabilahsystems.de/polyphenole.pdf>
- ➔ **Fettsäuren** <http://www.kabilahsystems.de/ungesaeftfets.pdf>
- ➔ **Koagulation** <http://www.kabilahsystems.de/hyperkoagulation.pdf>

- ➔ **Angiopathie** <http://www.xerlebnishaft.de/angiopathie.pdf>
- ➔ **Alzheimer** <http://www.erlebnishaft.de/alzheimerspirochaetosis.pdf>
- ➔ **Chronische Entzündungen** http://www.xerlebnishaft.de/borrel_inflam_lymphom_neopl.pdf
- ➔ **Krebsstammzellen** <http://www.xerlebnishaft.de/krebsstammzelltherapie.pdf>
- ➔ **Cavetediagnosen** <http://www.erlebnishaft.de/kommentalternativ.pdf>

- ➔ **Shor S (2012) Personal interest chronic fatigue** <http://vimeo.com/41466006>
- ➔ **Fibromyalgia Treatment Center** <http://www.fibromyalgiatreatment.com/scientific-research-papers.html>

[Bernt - Dieter Huismans](#), Letzte Revision Dezember 2017 www.Huismans.click



Back to top: http://www.erlebnishaft.de/chronic_fatigue.pdf