

**Myth 1: CFS is a disease defined just by a group of symptoms. There are no objective abnormalities.**

Many published studies report abnormalities of the central nervous system, autonomic nervous system, and immune system in patients with CFS--abnormalities not present in comparison groups who are healthy or have other fatiguing illnesses.

- Schondorf R, Freeman R. The importance of orthostatic intolerance in the chronic fatigue syndrome. *Am J Med Sci* 1999;317(2):117-123.
- Scott LV, Medbak S, Dinan TG. Blunted adrenocorticotropin and cortisol responses to corticotropin-releasing hormone stimulation in chronic fatigue syndrome. *Acta Psychiatr Scand* 1998;97:450-457.
- Patarca R, Klimas N, Sandler D, Garcia MV, Fletcher MA. Interindividual immune status variation patterns in patients with chronic fatigue syndrome: association with gender and tumor necrosis factor system. *J of CFS* 2(1):7-41, 1996.
- Cannon JG, Angel JB, Abad LW, Vannier E, Mileno MD, Fagioli L, Wolff SM, Komaroff AL. Interleukin-1 beta, interleukin-1 receptor antagonist, and soluble interleukin-1 receptor type II secretion in chronic fatigue syndrome. *Journal of Clinical Immunology* 17(3):253-61, 1997.
- De Meirleir, K., Bisbal, C., Campine, I., De Becker, P., Salehzada, T., Demetree, E., Lebleu, B. (2000). A 37 kDa 2-5A binding protein as a potential biochemical marker for chronic fatigue syndrome. *The American Journal of Medicine*, 108, 99-105
- Natelson, B.H., Weaver, S.A., Tseng, C-L., & Ottenweller, J.E. (2005). Spinal fluid abnormalities in patients with chronic fatigue syndrome. *Clinical and Diagnostic Laboratory Immunology*, 12, 52-55.
- Lange, G., Steffner, J., Cook, D.B., Bly, B.M., Christodoulou, C., Liu, W.C., Deluca, J., & Natelson, B.H. (2005). Objective evidence of cognitive complaints in chronic fatigue syndrome: A BOLD fMRI study of verbal working memory. *Neuroimage*, 26(2), 513-524.
- Hanson, S.J., Gause, W., & Natelson, B. (2001). Detection of immunologically significant factors for chronic fatigue syndrome using neural-network classifiers. *Clinical and Diagnostic Laboratory Immunology*, 8, 658-662.
- Peckerman, A., LaManca, J.J., Dahl, K.A., Chemitiganti, R, Qureishi, B. Natelson, B.H. (2003). Abnormal impedance cardiography predicts symptom severity in chronic fatigue syndrome. *The American Journal of the Medical Sciences*, 2003, 326(2), 55-60.
- Jason, L.A., Corradi, K., Torres-Harding, S., Taylor, R.R., & King, C. (2005). Chronic fatigue syndrome: The need for subtypes. *Neuropsychology Review*, 15, 29-58.

**Myth 2: People with CFS who think they are suffering from a physical illness have a worse prognosis, which just goes to show that it is their perception of a physical cause for their illness that is keeping them from functioning normally.**

It is more likely that people who think they are suffering from a physical illness have a worse prognosis because they are correct in recognizing that they have a physical illness, one that doctors do not yet have effective treatments for.

Jason, L.A., Fennell, P., Taylor, R.R. (Editors)(2003). *Handbook of chronic fatigue syndrome*. New York: John Wiley & Sons, Inc.

**Myth 3: Whenever one research group finds a biological abnormality in patients with CFS, another research group can't find it.**

With research on virtually all illnesses, there are always some reports in the research literature that conflict. The question with CFS or any illness is: Counting all of the published reports, and the numbers of patients in all of these reports, do the great majority of reports involving the great majority of patients find objective biological abnormalities? The answer for CFS, with regard to studies of the nervous system and immune system, is yes.

Komaroff, A.L. (2000). The biology of chronic fatigue syndrome. *American Journal of Medicine*, 108, 169-171.

Evengard, B., Schacterle, R.S., & Komaroff, A.L. (1999). Chronic fatigue syndrome: New insights and old ignorance. *Journal of Internal Medicine*, 246, 455-469.

#### **Myth 4: CFS only affects white and higher income individuals, and is a relatively rare disorder.**

Recent evidence from community prevalence studies indicates that CFS is not a YUPPIE disease, and in fact, it occurs more often among Latino and African-American minority groups and those with lower incomes. CFS affects from 800,000 to one million individuals in the US, and thus represents one of the more common chronic health conditions.

Reyes, M., Nisenbaum, R., Hoaglin, D.C., Unger, E.R., Emmons, C., Randall, B., Stewart, G., Abbey, S., Jones, J. F., Gantz, N., Minden, S., & Reeves, W.C. (2003) Prevalence and incidence of chronic fatigue syndrome in Wichita, Kansas. *Archives of Internal Medicine*, 163, 1530-1536.

Jason, L.A., Richman, J.A., Rademaker, A.W., Jordan, K.M., Plioplys, A.V., Taylor, R., McCready, W., Huang, C., & Plioplys, S. (1999). A community-based study of chronic fatigue syndrome. *Archives of Internal Medicine*. 159, 2129-2137.

#### **Myth 5: Cognitive behavior therapy interventions can cure CFS.**

Cognitive behavior therapy is widely used to help people cope with chronic illnesses, both “physical” illnesses and psychological illnesses. While these types of psychological interventions can help patients with CFS cope better with their symptoms and deal with the consequences of having a chronic health problem, these types of intervention do not cure the illness.

Van Hoof, E. (2004). Cognitive behavioral therapy as cure-all for CFS. *Journal of Chronic Fatigue Syndrome*, 11, 43-47.

#### **Myth 6: Patients with CFS are either lazy or malingering.**

There is no truth to this statement, and many patients with this condition would like nothing better than to have their old lifestyle back. They are very motivated and often go to many physicians to find a way of getting better.

Friedberg, F., & Jason, L.A. (1998). *Understanding chronic fatigue syndrome: An empirical guide*

to assessment and treatment. Washington, D.C.: American Psychological Association.

**Myth 7: All cases of CFS are caused by the Epstein-Barr Virus (EBV).**

These are common misconceptions among primary care providers. The onset of CFS is sometimes but not always linked with the recent presence of an infection. CFS has been reported as following acute mononucleosis (a viral infection like EBV), Lyme disease (a bacterial infection) and Q fever (an infection with a different type of infectious agent).

Komaroff, A.L. (2000b). The physical basis of CFS. *The CFIDS Research Review*, 1(2), 1-3, 11.

**Myth 8: Patients with CFS can be cured by exercise.**

It is a myth that patients with CFS can be cured by exercise, but it is also a myth that no one with CFS can ever benefit from some physical activity. For some patients, a carefully monitored program incorporating paced and non-fatiguing activity can be used to strengthen and condition muscles. But it is worth noting that Black, O'Connor, and McCully (2005) recently found that with an average 28% increase over baseline levels of daily physical activity over for a four week period, patients with CFS indicated they had worsening overall mood, muscle pain intensity and time spent each day with fatigue.

Black, C.D., O'Connor, P.J., & McCully, K.K. (2005). Increased daily physical activity and fatigue symptoms in chronic fatigue syndrome. *Dynamic Medicine*, 4:3 (doi:10.1186/1476-5918-4-3).

Edmonds, M., McGuire, H., & Price, J. (2004). Exercise therapy for chronic fatigue syndrome. *The Cochrane Library*, Issue 3, 1-22.

**Myth 9: CFS is difficult to diagnose.**

Actually it is pretty straightforward to diagnose when familiar with the case definition. It is, however, important to determine whether the Fukuda et al. (1994) or the Canadian case definition of ME/CFS is being used (Caruthers et al., 2003).

Fukuda, K., Straus, S.E., Hickie, I., Sharpe, M.C., Dobbins, J.G., & Komaroff, A. (1994). The Chronic Fatigue Syndrome: A comprehensive approach to its definition and study. *Annals of Internal Medicine*, 121, 953-959.

Carruthers, B.M., Jain, A.K., DeMeirleir, K.L., Peterson, D.L., Klimas, N.G., Lerner, A.M., Bested, A.C., Flor-Henry, P., Joshi, P., Powles, A.C.P., Sherkey, J.A., & van de Sande, M.I. (2003). Myalgic encephalomyelitis/chronic fatigue syndrome: Clinical working case definition, diagnostic and treatments protocols. *Journal of Chronic Fatigue Syndrome*, 11, 7-115.