YOU ASKED FOR IT
Question Authority

by David C. Nieman, Dr.PH., FACSM

Q: My mother was diagnosed with chronic fatigue syndrome 3 years ago. She is losing muscle mass because she is not exercising. What type of exercise do you recommend, and should she be taking dietary supplements or herbs to improve her energy level?

A: Yes, just the right amount of exercise can decrease fatigue symptoms and improve strength. But no supplement or herb has been identified to improve chronic fatigue syndrome beyond what a balanced and healthy diet can do.

Chronic fatigue syndrome (CFS) is complex, debilitating, and can persist for years. Approximately 500,000 people in the United States have CFS, and it affects all racial groups and both sexes. The chief symptom is profound fatigue that is not improved by going to bed and often worsened by attempts to exercise. Other symptoms include weakness, muscle pain, poor memory, inability to concentrate, and sleep difficulties.

To receive a diagnosis of chronic fatigue syndrome, a patient must satisfy two criteria (1):

- Have severe chronic fatigue for 6 months or longer.
- Have four or more of the following symptoms: substantial impairment in short-term memory or concentration; sore throat; tender lymph nodes; muscle pain; multi-joint pain without swelling or redness; headaches of a new type, pattern or severity; unrefreshing sleep; and post-exercise tiredness lasting more than 24 hours.

Unfortunately, the causes of CFS have not been discovered, and no specific diagnostic tests are available. Conditions that may trigger the development of CFS include virus infection, poor immune function, physical and emotional stress, and poor nutrition. But no one knows for sure, and attempts by researchers to find a cause that explains most CFS cases have failed. Some patients with CFS recover to the point that they can resume work and other activities but

continue to experience periodic CFS symptoms. Some patients recover completely with time, and some grow progressively worse. Approximately half of patients with CFS report recovery within the first 5 years, but we do not know why or how.

Treatment of CFS is directed at reducing symptoms, especially fatigue, and includes physical exercise, medication, education, and a balanced diet. CFS patients should work with a health-care provider to develop an individually tailored program that provides the greatest benefit.

There is new, encouraging evidence that patients with CFS receiving exercise therapy experience less fatigue and have better physical function than patients who do not exercise (2–4). A key consideration for patients with CFS is to know their exercise limits and when to stop the activity. Regardless of the level of activity a patient with CFS may attempt, the most important guideline is to avoid increasing the level of fatigue. In general, health-care providers advise patients with CFS to pace themselves carefully and avoid unusual physical or emotional stress. The exercise program should be supervised by a knowledgeable health-care provider or exercise therapist for at least the first 3 months.

Exercise training for CFS patients should start out at an easy level and progress very gradually (4). Exercise should only be conducted every other day so that energy levels can be built up during rest days. A person with CFS could start by walking or exercising on a stationary bicycle for 5 minutes at an easy pace, and slowly build up to 15 to 20 minutes at a moderate pace. With the help of an exercise therapist, a patient with CFS should engage in exercises without weights to build up all of the major muscle groups. He or she can slowly add light weights as strength improves. He or she should avoid the impulse to over-exercise because there is no clear warning of the point at which too much exercise will trigger a relapse.

Be careful about claims that dietary supplements and herbal preparations have potential benefits for patients with CFS. Products that have been pushed on patients with CFS include adenosine monophosphate, coenzyme Q-10, germanium, glutathione, magnesium sulfate, melatonin, NADH, selenium, astralagus, borage seed oil, bromelain, comfrey, echinacea, garlic, Ginkgo biloba, ginseng, primrose oil, quercetin, St. John's wort, and Shiitake mushroom extract. At this time, no supplement or herb has been shown to improve CFS, and patients should simply eat a balanced and healthy diet (5). Dietary supplements and herbal preparations can have potentially serious side reactions, and some can interfere or interact with prescription medications. Patients with CFS should seek the advice of their health-care providers before using any unprescribed remedy.

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References

1. Afari, N., and D. Buchwald. Chronic fatigue syndrome: A review. *American Journal of Psychiatry* 160:221–236, 2003.
2. Edmonds, M., H. McGuire, and J. Price. Exercise therapy for chronic fatigue syndrome. *Cochrane Database of Systematic Reviews* 3:CD003200, 2004.
3. Ross, S.D., R.P. Estok, D. Frame, et al. Disability and chronic fatigue syndrome: A focus on function. *Archives of Internal Medicine* 164:1098–1107, 2004.
4. LaManca, J.J., and S.A. Sisto. Chronic fatigue syndrome. In: *ACSM's Resources for Clinical Exercise Physiology: Musculoskeletal, Neuromuscular, Neoplastic, Immunologic, and Hematologic Conditions.* Myers, J.N., W.G. Herbert, R. Humphrey, et al. (Editors). Philadelphia: Lippincott Williams & Wilkins, 2002.
5. Brouwers, F.M., S. Van Der Werf, G. Bleijenberg, et al. The effect of a polynutrient supplement on fatigue and physical activity of patients with chronic fatigue syndrome: A double-blind randomized controlled trial. *QJM: Monthly Journal of the Association of Physicians* 95:677–683, 2002.