

Working it Out: Exercise and MS

Evidence is growing on the benefits of exercise for people with MS. Ten years ago, the National MS Society funded the first study showing that aerobic exercise (using stationary bikes) could fight fatigue in MS. The late Jack H. Petajan, MD, and colleagues at the University of Utah, Salt Lake City, showed a positive impact on quality of life as well (*Annals of Neurology* 1996 Apr;39(4):432-41). Now, Lesley White, PhD (University of Florida, Gainesville) and colleagues report positive findings on resistance training in a small group of people with MS.

White tested whether a 16-week program of resistance training could increase leg strength, mobility and decrease fatigue, and disability in 10 people with MS, with funding from a Society Pilot Research Award. Participants lifted weights with leg, back and abdominal muscles twice a week for four months. When a subject could complete 15 repetitions in consecutive sessions, the weight was increased. As a group, subjects were able to lift heavier weights each week during the training period without significant muscle soreness. At the end of the program, leg strength increased and participants could walk faster. They also reported less fatigue and disability (*Annual Meeting of the American College of Sports Medicine*, 2005).

These early findings have provided White with sufficient data to conduct a larger study, funded by a research grant from the Society. This study, which will begin in Spring 2006, will evaluate whether resistance training influences activities of daily living, mobility and quality of life in MS.

Tailoring Programs to the Individual

This growing field presents an exciting opportunity to increase function and quality of life, but experts recommend using caution before beginning an exercise program. The first step is to consult with a neurologist or primary healthcare provider. A physical therapist or exercise physiologist trained to work with MS can develop a program.

The program should be designed “with careful consideration of the capabilities and limitations of the patient, based on the result of preliminary exercise testing and the need to monitor MS symptoms,” wrote White and Rudolf Dressendorfer, PhD, PT (Rocklin Physical Therapy and Wellness, CA) in *Sports Medicine* (2004; 34(15):1077-100).

For example, exercise can be prescribed on an intermittent basis to avoid fatigue and heat stress, which might worsen MS symptoms. Exercising in cool water might help to attain a greater range of motion, or help maintain balance while minimizing heat-related symptoms. People who experience cognitive problems related to MS may have exercise routines written up or illustrated by an exercise specialist.

Herbert I. Karpatkin, PT, NCS, comments that people with more advanced MS may face severe spasticity, weakness, and fatigue. “However, none of these are truly contraindications to exercise -- they may represent reasons why exercise may be difficult,

but not reasons that exercise should be avoided,” he writes in the *International Journal of MS Care* (2005;2:36—41).

For more information on exercise and MS, please visit our section on Healthy Living with MS.

<http://www.nationalmssociety.org/Healthy%20Living%20with%20MS.asp>