

Newsletter

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Chronic Back Patients Chronically Unfit?

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Some chronic back pain patients are so unfit they cannot participate in the activities of daily living, let alone complete a rehabilitation program, according to a new study by Frank Boumphrey, MD, and colleagues at the Cleveland Clinic.

One patient with back pain of 10 years duration hit her anaerobic threshold when doctors tried to walk her across the room. Other patients lacked the aerobic fitness to garden, take a slow walk. Or ride a bike. Obviously none of these patients are going to return to blue-collar jobs anytime soon.

"All the subjects in this study were exceptionally unfit," reported Boumphrey at the annual meeting of the North American Spine Society in Minneapolis. "None of them could walk and play golf at the same time."

Boumphrey et al. studied a group of 13 males and eight females who had long-term disabling back pain. "We chose patients who had been out of work because of their back pain for six months or more," said Boumphrey. The mean age of the women was 44 and the men 41. The subjects had been off work for anywhere from six months to 11 years.

To gauge the patients' aerobic capacity, Boumphrey et al. measured the accumulation of lactic acid in the patients' blood while they exercised. The patients worked out on a stationary bicycle at a present workload until they reached their anaerobic thresholds, i.e., when lactic acid began to accumulate in the blood. The researchers compared the patients' results to norms taken from a Canadian fitness survey in 1981.

The subjects displayed dismal aerobic capacity. Boumphrey expressed the patients' performance in terms of METS, or metabolic equivalent would be the energy consumed by a person lying flat on his back and not thinking," he explained. Sitting in a chair would account between two and three metabolic equivalents, slow walking about four, and slow bike riding or slow running between eight and 10.

"All our patients were four or less," stressed Boumphrey. "In other words, they were just about able to sit in a chair and be active. Most of the activities of daily living, when done continuously, would go above their anaerobic threshold. All of these subjects would have had difficulty with the average rehab program."

Boumphrey et al. do not claim that the subjects are typical of chronic back pain patients. However, they observe that aerobic fitness is often an issue in patients with longstanding back problems.

"We conclude that in very chronic patients, aerobic fitness should probably be one of the primary goals of rehabilitation. Many of these patients are so unfit that their exercise program should be based on measured anaerobic threshold rather than on any preconceived plan," says Boumphrey. Patients who attempt to carry out rehabilitation exercise programs without developing sufficient aerobic fitness may develop an overtraining syndrome that could aggravate their back symptoms.