

## Low-intensity exercise reduces fatigue symptoms by 65 percent, study finds

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Sedentary people who regularly complain of fatigue can increase their energy levels by 20 percent and decrease their fatigue by 65 percent by engaging in regular, low intensity exercise, according to a new University of Georgia study.

“Too often we believe that a quick workout will leave us worn out – especially when we are already feeling fatigued,” said researcher Tim Puetz, who recently completed his doctorate at UGA and is the lead author of the study. “However, we have shown that regular exercise can actually go a long way in increasing feelings of energy – particularly in sedentary individuals.”

Puetz co-authored the study with professor Patrick O’Connor, co-director of the UGA Exercise Psychology Laboratory, and former UGA student Sara Flowers. The team’s results appear in the February issue of the journal *Psychotherapy and Psychosomatics*.

O’Connor said previous studies – including one that he and Puetz co-authored in 2006 – have shown that exercise can significantly improve energy levels and decrease fatigue. Those studies, however, primarily looked at patients with medical conditions such as cancer, heart disease and mental health problems. In this latest study, the researchers studied volunteers who had fatigue that was persistent yet didn’t meet the criteria for a medical condition such as chronic fatigue syndrome. O’Connor said about 25 percent of the general population experiences such fatigue.

“A lot of people are overworked and not sleeping enough,” O’Connor said. “Exercise is a way for people to feel more energetic. There’s a scientific basis for it, and there are advantages to it compared to things like caffeine and energy drinks.”

The researchers recruited 36 volunteers who did not exercise regularly and had reported persistent fatigue based on a commonly used health survey. The volunteers were divided into three groups: The first engaged in 20 minutes of moderate-intensity aerobic exercise three times a week for six weeks; the second engaged in low-intensity aerobic exercise for the same time period; the control group did not exercise.

The low- and moderate-intensity groups had a 20 percent increase in energy levels over the control group. Surprisingly, the low-intensity group had a greater reduction in fatigue levels than the moderate-intensity group, 65 percent compared to 49 percent, respectively.

“It could be that moderate-intensity exercise is too much for people who are already fatigued,” O’Connor said, “and that might contribute to them not getting as great an improvement as they would had they done the low-intensity exercise.”

He adds that energy and fatigue aren’t exactly opposites of each other. A student who stays up late to finish a term paper may feel fatigued, for example, but may also feel energized as she nears the end of the paper.

The volunteers in the study used exercise bikes that allowed the researchers to control their level of exertion so that low-intensity exercise was defined as 40 percent of their peak oxygen consumption and moderate-intensity exercise was defined as 75 percent of peak oxygen consumption. For comparison, O’Connor said a leisurely, easy walk is low-intensity exercise, while a fast-paced walk with hills is moderate-intensity exercise.

The team's analysis also found that the improvements in energy and fatigue were not related to increases in aerobic fitness that the exercisers experienced. Puetz said the finding suggests that exercise acts directly on the central nervous system to increase energy and reduce fatigue.

“Exercise traditionally has been associated with physical health, but we are quickly learning that exercise has a more holistic effect on the human body and includes effects on psychological health,” Puetz said.

“What this means is that in every workout a single step is not just a step closer to a healthier body, but also to a healthier mind.”

Source: University of Georgia

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