

Aerobic exercise relieves insomnia

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The millions of middle-aged and older adults who suffer from insomnia have a new drug-free prescription for a more restful night's sleep. Regular aerobic exercise improves the quality of sleep, mood and vitality, according to a small but significant new study from Northwestern Medicine.

The study is the first to examine the effect of aerobic exercise on middle-aged and [older adults](#) with a diagnosis of insomnia. About 50 percent of people in these age groups complain of [chronic insomnia](#) symptoms.

The aerobic exercise trial resulted in the most dramatic improvement in patients' reported quality of sleep, including sleep duration, compared to any other non-pharmacological intervention.

"This is relevant to a huge portion of the population," said Phyllis Zee, M.D., director of the [Sleep Disorders](#) Center at Northwestern Medicine and senior author of a paper to be published in the October issue of *Sleep Medicine*. The lead author is Kathryn Reid, research assistant professor at Feinberg.

"Insomnia increases with age," Zee said. "Around middle age, sleep begins to change dramatically. It is essential that we identify behavioral ways to improve sleep. Now we have promising results showing [aerobic exercise](#) is a simple strategy to help people sleep better and feel more vigorous."

The drug-free strategy also is desirable, because it eliminates the

potential of a sleeping medication interacting with other drugs a person may be taking, Reid said.

Sleep is an essential part of a [healthy lifestyle](#), like nutrition and exercise, noted Zee, a professor of neurology, neurobiology, and physiology at Northwestern University Feinberg School of Medicine and a physician at Northwestern Memorial Hospital.

"By improving a person's sleep, you can improve their physical and mental health," Zee said. "Sleep is a barometer of health, like someone's temperature. It should be the fifth vital sign. If a person says he or she isn't sleeping well, we know they are more likely to be in poor health with problems managing their hypertension or diabetes."

The study included 23 sedentary adults, primarily women, 55 and older who had difficulty falling sleep and/or staying asleep and impaired daytime functioning. Women have the highest prevalence of [insomnia](#). After a conditioning period, the aerobic physical activity group exercised for two 20-minute sessions four times per week or one 30-to-40-minute session four times per week, both for 16 weeks. Participants worked at 75 percent of their maximum heart rate on at least two activities including walking or using a stationary bicycle or treadmill.

Participants in the non-physical activity group participated in recreational or educational activities, such as a cooking class or a museum lecture, which met for about 45 minutes three to five times per week for 16 weeks.

Both groups received education about good sleep hygiene, which includes sleeping in a cool, dark and quiet room, going to bed the same time every night and not staying in bed too long, if you can't fall asleep.

Exercise improved the participants' self-reported sleep quality, elevating

them from a diagnosis of poor sleeper to good sleeper. They also reported fewer depressive symptoms, more vitality and less daytime sleepiness.

"Better sleep gave them pep, that magical ingredient that makes you want to get up and get out into the world to do things," Reid said.

The participants' scores on the Pittsburgh Sleep Quality Index dropped an average of 4.8 points. (A higher score indicates worse sleep.) In a prior study using t'ai chi as a sleep intervention, for example, participants' average scores dropped 1.8 points.

"Exercise is good for metabolism, weight management and cardiovascular health and now it's good for [sleep](#)," Zee said.

Provided by Northwestern University

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