

Trying to lower blood pressure? Evening exercise might be best

April 19 2023



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A new study of elderly patients showed that those who exercised in the evening experienced a greater decrease in blood pressure compared to those who exercised in the morning. The work also revealed the neurovascular mechanisms responsible for these findings. Researchers will present their work this week at the [American Physiology Summit](#) in Long Beach, California.

"Elderly patients or those with resistant hypertension or obesity don't always experience as much [blood pressure](#) benefit from exercise as other groups," said the study's first author Leandro Brito, Ph.D., a postdoctoral fellow at the Oregon Health & Science University. "For these patients, finding a more beneficial time to exercise may reduce their need for medication or help it work better."

The study, which was conducted when Brito was a postdoctoral trainee at the University of São Paulo in Brazil, included 23 older adults with hypertension, all of whom were taking prescribed [blood pressure medication](#) for at least four months. The participants exercised three times a week for 10 weeks by cycling on a stationary bike. One group exercised only between 7 and 10 a.m. and the other group only exercised between 5 and 8 p.m.

The researchers found that although [diastolic blood pressure](#) decreased similarly in both groups, [systolic blood pressure](#) only decreased after evening exercise. The investigators also measured the autonomic functions—nervous system functions that regulate involuntary physiologic processes—that control blood pressure in each group. The results showed that an improvement in the neural responses to changes in blood pressure—known as the arterial tonus—was responsible for the greater blood pressure benefit from evening exercise.

"Although any exercise is always better than no exercise, people who need to achieve faster regularization of blood pressure or who don't see benefits from [exercise](#) might want to try working out in the evening," Brito said. "These findings replicate what we found in a previous study of middle-aged men with hypertension on blood pressure medicine, but now we understand the neural mechanisms that contribute."

Provided by American Physiological Society

Citation: Trying to lower blood pressure? Evening exercise might be best (2023, April 19)
retrieved 23 June 2024 from <https://medicalxpress.com/news/2023-04-blood-pressure-evening.html>

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