

# Research shows protective effects of exercise

6 January 2015



Depending on your age, just one exercise session may improve the body's ability to overcome stressors by potentially boosting the antioxidant system. These results are part of Tinna Traustadóttir's study published this month in *Age*, the Journal of the American Aging Association.

In her study, Traustadóttir, an assistant professor of [biological sciences](#), worked with two groups of healthy adults, one was comprised of people aged 18 to 25, and the other was made up of individuals at least 50 years old.

Participants rode a [stationary bike](#) rigorously for 45 minutes and returned the following day for additional testing. A blood pressure cuff was inflated and applied steady pressure for 10 minutes followed by a two-minute break. The inflation procedure was repeated three times. Before and after blood samples measured the

body's oxidative stress response and changes in antioxidant-related enzymes.

"What we found is the young people got protection from this one bout of [exercise](#), their response to the oxidative stress challenge was lower," Traustadóttir said. The older participants did not have a protective effect after one [exercise session](#), which may be related to impaired cell signaling, a process that could potentially be improved with regular workouts.

Traustadóttir's ongoing research aims to identify where in the cell's processes specific age-related changes take place. By better understanding cell signaling and the beneficial effects of exercise or phytonutrient supplementation, definitive recommendations could be made for improving the body's reaction to [oxidative stress](#), which could lower the risk for many chronic diseases.

At a time when many scientists study longevity, Traustadóttir prefers focusing on compressing morbidity or what she calls successful aging. "Instead of extending life, I'm interested in minimizing the time when a person has some sort of disability or disease and is unable to do their activities," Traustadóttir said.

**More information:** [Age, link.springer.com/article/10.1... 07/s11357-014-9727-z](#)

Provided by Northern Arizona University

APA citation: Research shows protective effects of exercise (2015, January 6) retrieved 6 June 2022 from <https://medicalxpress.com/news/2015-01-effects.html>

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