

## Study: Women not getting enough exercise; at risk of developing metabolic syndrome

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A national study shows that women are less likely than men to get at least 30 minutes of exercise per day, resulting in greater odds of developing metabolic syndrome – a risky and increasingly prevalent condition related to obesity.

Metabolic syndrome is a name for a group of risk factors – including high cholesterol, high blood pressure and extra weight around the middle part of the body – which occur together and increase the risk for coronary disease, stroke, and Type 2 diabetes. The researchers initially were interested in the correlation between physical activity, depression and metabolic syndrome, and ended up finding a gender difference.

The study, now online in the journal *Preventive Medicine*, was conducted at Oregon State University by Paul Loprinzi and Bradley Cardinal, professor of social psychology of physical activity at OSU. Loprinzi is now an assistant professor of exercise science at Bellarmine University. He conducted the research when he was a student in Cardinal's lab at OSU.

"The results indicate that regular physical activity participation was associated with positive health outcomes for both men and women; however, there was a greater strength of association for women," Loprinzi said.

Looking at more than 1,000 men and women from a nationally represented sample, the researchers found that women were getting only



about 18 minutes of moderate-to-vigorous exercise daily, compared to men who, on average, were getting 30 minutes of moderate-to-vigorous exercise daily.

"Those who get at least 30 minutes of exercise a day are less likely to be depressed, less likely to have high cholesterol and less likely to have metabolic syndrome," Loprinzi said.

Loprinzi and Cardinal's study is unique in part because it is the first to use an "objective" measure of physical activity – in this case participants were outfitted with accelerometers that measured daily activity. In their study, slightly more than one in three women had metabolic syndrome, and one in five had symptoms of depression.

"It's pretty striking what happens to you if you don't meet that 30 minutes a day of activity," Cardinal said. "Women in our sample had better health behavior – they were much less likely to smoke for instance, but the lack of activity still puts them at risk."

Cardinal said depression puts people at more risk of abdominal fat and insulin resistance, and both are risk factors for metabolic syndrome.

"Physical activity has been shown to reduce depression," he said. "So the key message here is to get that 30 minutes of exercise every day because it reduces a great deal of risk factors."

While their study does not address why women were not getting enough exercise, the authors said research shows that physical activity patterns often begin in childhood.

"Research has shown that around ages 5 or 6 these patterns begin," Cardinal said. "Parents tend to be more concerned with the safety of girls, and have more restrictive practices around outdoor time and



playtime than with boys."

Loprinzi said this pattern tends to continue into adulthood, and that overall confidence may be a factor.

"Some evidence indicates that women, compared to men, have less confidence in their ability to overcome their exercise-related barriers," Loprinzi said, adding that women also often cite a lack of time to exercise due to child-rearing.

The researchers have a study coming out that may help those time-challenged women. Loprinzi said he and Cardinal found that adults can still enhance their health by accumulating <u>physical activity</u> in short periods throughout the day, such as taking the stairs instead of the elevator or pacing while talking on the phone.

## Provided by Oregon State University

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