

# Moderate exercise cuts rate of metabolic syndrome

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Research from Duke University Medical Center shows that even a modest amount of brisk walking weekly is enough to trim waistlines and cut the risk of metabolic syndrome (MetS), an increasingly frequent condition linked to obesity and a sedentary lifestyle.

It's estimated that about a quarter of all U.S. adults have MetS, a cluster of risk factors associated with greater likelihood of developing heart disease, diabetes and stroke: large waist circumference, high blood pressure, high levels of triglycerides, low amounts of HDL, or "good" cholesterol, and high blood sugar. To be diagnosed with MetS, patients must have at least three of these five risk factors, and according to many studies, a growing number of people do.

But Johanna Johnson, a clinical researcher at Duke Medical Center and the lead author of a new study examining the impact of exercise on MetS, said a person can lower risk of MetS by walking just 30 minutes a day, six days per week. "That's about 11 miles per week. And our study shows that you'll benefit even if you don't make any dietary changes."

"The results of our study underscore what we have known for a long time," said Duke cardiologist William Kraus. "Some exercise is better than none; more exercise is generally better than less, and no exercise can be disastrous."

The study appears in the December 15 issue of the *American Journal of Cardiology*.

The results come from a multi-year, federally funded study called STRRIDE (Studies of a Targeted Risk Reduction Intervention through Defined Exercise) that examined the effects of varying amounts and intensity of exercise on 171 middle-aged, overweight men and women.

Before exercising regularly, 41 percent of the participants met the criteria for MetS. At the end of the 8-month exercise program, only 27 percent did.

“That’s a significant decline in prevalence,” said Johnson. “It’s also encouraging news for sedentary, middle-aged adults who want to improve their health. It means they don’t have to go out running four or five days a week; they can get significant health benefits by simply walking around the neighborhood after dinner every night.”

Still, some exercise regimens were better than others. Those who exercised the least, walking about 11 miles per week, gained significant benefit, while those who exercised the most, jogging about 17 miles per week, gained slightly more benefit in terms of lowered MetS scores.

One group puzzled the researchers, however. Those who did a short period of very vigorous exercise didn't improve their MetS scores as much as those who performed less intense exercise a longer period.

Kraus said there may be more value in doing moderate intensity exercise every day rather than more intense activity just a few days a week.

In all three of the study's exercise groups, waistlines got smaller over the 8-month period. In general, men who exercised saw greater improvement in their MetS risk factors than women. But Johnson points out that at baseline, the men generally had worse scores than women, “so they had more room to improve,” she said.

Over the course of the STRRIDE study, the inactive control group – those who didn't change their diet or activity level at all – gained an average of about one pound and a half-inch around the waist. "That may not sound like much, but that's just six months," Kraus said. "Over a decade, that's an additional 20 pounds and 10 inches at the beltline."

Source: Duke University Medical Center

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