

Simvastatin blunts benefits of exercise in overweight, obese

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Cholesterol-lowering therapy with simvastatin reduces the physiological responses to aerobic exercise training in overweight or obese adults who are at increased risk for metabolic syndrome, according to research published in the *Journal of the American College of Cardiology*.

(HealthDay)—Cholesterol-lowering therapy with simvastatin reduces the physiological responses to aerobic exercise training in overweight or obese adults who are at increased risk for metabolic syndrome, according to research published in the *Journal of the American College of Cardiology*.

Catherine R. Mikus, Ph.D., of Duke University in Durham, N.C., and colleagues studied the effects of statin use on adaptations to exercise training in 37 sedentary overweight or [obese adults](#) with at least two risk factors for metabolic syndrome, who were randomly assigned to either simvastatin therapy and 12 weeks of [aerobic exercise](#) training (18 participants) or exercise training alone (19 participants). Cardiorespiratory fitness and mitochondrial content in skeletal muscle were evaluated at baseline and at 12 weeks.

After 12 weeks, the researchers observed a significant increase in cardiorespiratory fitness (10 percent) in the exercise-only group, compared with a non-significant increase (1.5 percent) in the simvastatin + exercise group. Mitochondrial content in skeletal muscle, measured by citrate synthase enzyme activity, increased significantly (13 percent) in the exercise-only group, but

decreased by 4.5 percent in the simvastatin + exercise group.

"In conclusion, simvastatin attenuates increases in cardiorespiratory fitness and skeletal muscle mitochondrial content associated with [exercise training](#) in previously sedentary, overweight, or obese patients at risk of the metabolic syndrome," the authors write. "Given the strong independent cardio-protective effects of increasing cardiorespiratory fitness or lowering low-density lipoprotein cholesterol, the benefits and risks of each should be carefully considered when choosing treatment modalities."

More information: [Full Text \(subscription or payment may be required\)](#)

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