

# Sprint interval training could cut time exercising while controlling weight

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Time spent in the drudgery of strenuous exercise is a well-documented turn-off for many people who want to get in better shape. In a new study, researchers show that exercisers can burn as many as 200 extra calories in as little as 2.5 minutes of concentrated effort a day—as long as they intersperse longer periods of easy recovery in a practice known as sprint interval training. The finding could make exercise more manageable for would-be fitness buffs by cramming truly intense efforts into as little as 25 minutes.

Kyle Sevits, Garrett Peltonen, Rebecca Scalzo, Scott Binns, Anna Klochak, Christopher Melby, and Christopher Bell, all of Colorado State University, and Edward Melanson and Tracy Swibas, both of University of Colorado Anschutz Medical Campus, compared volunteers' energy expenditures on two different days, one in which they performed a sprint interval workout on a [stationary bicycle](#). Their results showed a marked uptick in the amount of calories the volunteers burned on the workout day, despite the short amount of time spent in actual hard exercise.

Their poster presentation entitled, "A Single Session of Sprint Interval Training Increases Total Daily Energy Expenditure," will be discussed at The [Integrative Biology](#) of Exercise VI meeting being held October 10-13 at the Westin Westminster Hotel in Westminster, CO.

## Feeling the Burn

Study leader Sevits notes that despite exercise's numerous documented benefits, few people hit the U.S. government's recommendations of 150 minutes of [moderate exercise](#) or 75 minutes of [vigorous exercise](#) per week. "Research shows that many people start an [exercise program](#) but just can't keep it up," Sevits says. "The biggest factor people quote is that they don't have the time to fit in exercise. We hope if exercise can be fit into a smaller period of time, then they may give exercise a go and stick with it."

Though other studies have shown that sprint interval training can markedly improve fitness and athletic performance, little was known about how this type of exercise affects energy expenditure, a factor that motivates many people to exercise. To determine how many calories a typical sprint [interval training](#) workout might burn, Sevits and his colleagues recruited five healthy male volunteers, all between the ages of 25 and 31 years old. These volunteers made an initial visit to Colorado State University in Fort Collins in which they performed an exercise stress test to make sure their hearts were healthy enough to participate. The researchers also analyzed the volunteers' body compositions and their resting metabolic rates.

Over the next three days, the volunteers ate a diet precisely calibrated to meet their metabolic needs so that they'd be in "energy balance," Sevits explains, with just enough calories so they weren't over- or under-eating. At the end of those three days, the men then checked in to a research facility at the University of Colorado Anschutz Medical Campus that was outfitted much like a typical hospital room. However, this room was completely enclosed, with air intake and exhaust regulated and equipment installed to analyze oxygen, carbon dioxide, and water content. Based on the results of this analysis, the researchers could determine how many calories the volunteers burned while each stayed in the room.

For two days, each volunteer lived in the room, continuing to eat the prescribed diet and spending the majority of their time in sedentary activities, such as watching movies or using a computer. However, on one of the days, they engaged in a sprint interval workout that involved pedaling as fast as possible on a stationary bicycle in the room that was set at a high resistance for five 30-second periods, each separated by four-minute periods of recovery in which they pedaled slowly with very little resistance. During the intense, 30-second bouts, the researchers coached the volunteers over an intercom system, encouraging them to give 100 percent effort.

## **Sprint Interval Trainer?**

Analyzing results from the room calorimeter system showed that the volunteers burned an average of an extra 200 calories on the sprint interval workout day, despite spending just 2.5 minutes engaged in hard exercise. Though the researchers can't yet speculate on whether such efforts could translate into weight loss, Sevits and his colleagues suggest that engaging in intense, but brief, bursts of exercise could aid in weight maintenance. "Burning an extra 200 calories from these exercises a couple of times a week can help keep away that pound or two that many Americans gain each year," Sevits says.

However, maintaining the maximum effort needed to [exercise](#) at peak intensity over the 30-second sprints could prove tricky for many people to maintain on their own without help, Sevits warns. "Motivating yourself can be very hard," he says. "The way this could work in the real world is with the guidance of a personal trainer."

**More information:** [bit.ly/OrMFtN](http://bit.ly/OrMFtN)

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