

Exercise not likely to rev up your metabolism

Studies bust myth that working out gives you a fat-burning boost



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While it's true that a pound of muscle burns more calories than a pound of fat — about seven to 10 calories a day versus two calories — most people don't put on enough muscle to make much of a difference.

By Jacqueline Stenson
MSNBC contributor
msnbc.com contributor
updated 5:22 a.m. PT, Tues., May 26, 2009

Start exercising and you'll become a round-the-clock, fat-burning machine, right? That's long been a commonly held belief among exercisers and fitness experts alike. But a new report finds that, sadly, it's not very likely.

The notion that exercise somehow boosts the body's ability to burn fat for as long as 24 hours after a workout has led to a

misperception among the general public that diet doesn't matter so much as long as one exercises, says Edward Melanson, an exercise physiologist and associate professor of medicine at the University of Colorado in Denver.

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"People think they have a license to eat whatever they want, and our research shows that is definitely not the case," he says. "You can easily undo what you set out to do."

In the new report, published in the journal Exercise and Sport Sciences Reviews, Melanson and colleagues discuss research to date on the issue of burning fat during and after exercise. The authors conclude that while people do burn more fat when they are exercising than when they are not, they have no greater ability to burn fat over the next 24 hours than on days when they are couch potatoes.

"If you exercise and replace the calories you burn, you're no better — with regard to how much fat you burn off — than if you didn't exercise," says Melanson.

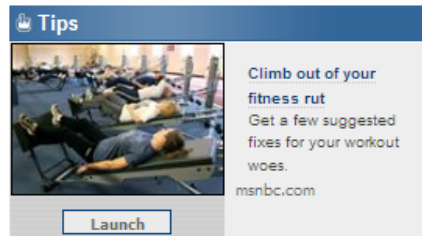
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Do you think diet or exercise plays a bigger role in weight loss?

Experts 'flabbergasted'

In their own research, Melanson and his team studied moderately active people who, on separate days, performed low-intensity or high-intensity cycling, or no structured exercise at all. They repeated their experiment with endurance athletes (competitive runners and triathletes), while comparing sedentary obese people with sedentary lean people, and then again while comparing older men with younger men.

None of these studies, which involved a total of 65 exercisers whose dietary intake was closely controlled, showed that people burned substantially more fat in the 24 hours after they



exercised than on days when they didn't exercise. Melanson says other experts in his field have been "flabbergasted" by the results.

"Bottom line is that we once thought that exercise would burn calories, especially fat calories, for a long period after a bout of exercise," says exercise physiologist Gerald Endress, fitness director for the Duke University Diet and Fitness Center who was not involved in the research. "This does not seem to be the case."

But both Melanson and Endress say it can't be ruled out that longer, harder and possibly different types of exercise performed regularly on consecutive days could lead to a more lasting post-workout fat burn. In Melanson's research, for instance, participants all cycled for under an hour, burning up to 400 calories.

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The new paper offers additional evidence that exercise does not boost metabolism as much as widely believed, Endress says. In addition to the misperception that exercise greatly hikes fat burning after exercise, there is also the false belief that weight training dramatically increases metabolism by adding muscle, he notes.

While it's true that a pound of muscle burns more calories than a pound of fat — about seven to 10 calories a day versus two calories — most people don't put on enough muscle to make much of a difference, Endress says.

"Building muscle is very difficult for most individuals because it requires heavy weight workouts and a higher intake of calories," he says. "Average fitness enthusiasts [who are working out to gain muscle] will only add four to five pounds of lean mass," he says, and burn an additional 28 to 50 calories a day. (Men tend to gain more muscle, on average, than women.)

Keep moving

All this isn't to say, however, that you should not exercise to help lose weight and keep it off. "It's not that exercise doesn't help with weight loss," says Melanson. "It's that it's harder to lose weight with exercise than diet." That's not surprising when you consider that it might take an hour to burn 400 calories but just five minutes to consume them.

Essentially, weight loss comes down to math, experts say, and the number of calories in versus calories out. To lose a pound of fat, you need to create a deficit of about 3,500 calories. That can be done with both diet and exercise. To lose a pound a week, for instance, you could reduce your food intake by 500 calories a day or burn an additional 500 calories each day through exercise — or do some combination of diet and exercise that knocks off 500 calories. So if you exercise and then don't replace the calories you burned during the workout, your body will burn more fat because you've created a caloric deficit.

The government's physical activity guidelines released last year state that people "vary a great deal in how much physical activity they need to achieve and maintain a healthy weight. Some need more physical activity than others to maintain a healthy body weight, to lose weight or to keep weight off once it has been lost."

Many people, the guidelines say, will need to engage in the equivalent of more than 150 minutes (2.5 hours) a week of moderate-intensity activity to maintain their weight and possibly more than 300 minutes (five hours) to lose significant amounts of weight.

To get the biggest bang for your buck while exercising, continually challenge yourself, suggests Pete McCall, an exercise physiologist at the American Council on Exercise in San Diego.

Gradually ratcheting up the exercise intensity, for instance, burns more calories minute-for-minute than sticking with a slow but steady pace. One way to kick up your program is to interval train, McCall says. People who like to work out on the treadmill or elliptical machine at the gym, for instance, could try going faster and harder during the commercials on the TV screens in front of them, he says. Joggers could incorporate sprints into their routine.

The more fit you become, the harder you can work out — and the more calories you'll ultimately burn, notes Melanson. That's a bonus for the many people with limited time for exercise.

Secrets to weight-loss success

John Pine, 27, of Pittsburgh credits both diet and exercise with helping him to lose more than 50 pounds in the last year. But he attributes "the vast majority of this to a pretty rigorous physical activity schedule."

Pine has been a vegetarian for years but has had trouble with what he calls "portion lunacy," especially with dessert. Instead of having one cookie from the tray, he'd have four.

He's eating a healthier diet now — practicing better portion control — but still gives in to some dessert cravings. To make up for it and keep the weight off, he works out hard six days a week. His early morning workouts consist of a group exercise class — such as spinning and boot camp — followed by weight training.

"It's like part of my day," Pine says. "It's no different than going to work now."

Some say exercise can help with weight loss by doing more than burning calories.

Lynne Nelson, 61, of Pitman, N.J., believes diet was the key factor in losing 40 pounds between the fall of 2007 and spring of 2008. But the two-mile-a-day walking program she started helps not only to burn calories but also to keep her from overeating. Instead of snacking while preparing dinner, she now walks with her husband.

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"In the old days, I would have all of my calories consumed while I made dinner because I was hungry and nibbled like crazy," she says. "I really did not want my husband to know that I had been stuffing food in my mouth the whole time I was cooking, so I would sit down and eat a regular dinner even though it was just like eating two meals. Now I put something in the oven while we are out walking for 45 minutes, and as soon as we get home, it is ready to eat."

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Unlike Pine and Nelson, Becky Speer, 27, of Dallas believes diet and exercise were equally effective in her weight loss. She shed 43 pounds in 2007.

The exercise — including running and biking almost every day — helped her lose weight by burning calories but also by boosting her motivation to stick with her weight-loss program and avoid dietary missteps, she says.

"It helps me to gain more confidence and to feel good about myself," says Speer. "And if you're feeling good, you don't want to go back to where you were before."