

# Cool hands may be the key to increasing exercise capacity

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Cooling the palms of the hands while working out could help you stick with a physical activity program, according to a small study presented at the American Heart Association's Epidemiology and Prevention/Nutrition, Physical Activity and Metabolism 2012 Scientific Sessions.

In the study, obese women who exercised while using the AvaCore Rapid Thermal Exchange (RTX [palm](#) cooling device) improved their exercise tolerance and [cardiovascular fitness](#).

"Obese women often complain about sweating and getting tired because they're walking around with extra insulation," said Stacy T. Sims, Ph.D., the study's lead researcher and [exercise physiologist](#) and nutrition scientist at Stanford University in California. "If you can slow the rate [internal temperature](#) rises and cool someone who is obese, they don't store as much heat and don't feel as uncomfortable. They can do more work."

The cooling devices cooled the palms of the hand and circulating blood, thus pulling heat off the body.

Sims suggested that holding a bottle of cold water may also cool palms and help exercisers feel cooler, less sweaty and less fatigued — allowing them to work out longer and make them more likely to stick with their exercise regimen.

For 12 weeks, researchers studied 24 women, 30-45 years old, who had a body mass index between 30 and 34.9, which is considered obese. Half worked out with their hands in a cylinder containing water at 60.8 degrees Fahrenheit. The other half used the same device with water at 98.6 degrees Fahrenheit. Participants didn't know the difference in their devices and did the same fitness activities, starting with push-ups, lunges and then progressing to using the treadmill, which contained the device. The goal was to increase exercise duration up to 45-minute stretches at 80 percent of their maximum heart rates.

"The control group dropped out quite early," Sims said. "The women who had the cooling device continued to participate and didn't have an issue with attrition because they finally didn't feel uncomfortable exercising."

During the three-month study, the control group's data remained almost the same while the cooling group:

- Shaved an average five minutes off the time to walk 1.5 miles.
- Dropped almost three inches off their waists.
- Had lower resting blood pressure and greater exercise heart rate.

The device used in the study is costly and is typically found in professional sports training facilities, clinics and hospitals, not general fitness centers, Sims said.

Provided by American Heart Association

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