

New research shows benefit of interval training for women

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Interval training is a well-known way to get the maximum benefits of exercise in the shortest amount of time. New research shows that when it comes to running, women may get more out of high intensity interval training (HIIT) than their male counterparts.

"Sex-specific Responses to Interval Training" was conducted by Drs. Matt Laurent and Matt Kutz, Human Movement, Sport and Leisure Studies at Bowling Green State University; Lauren Vervaecke, Division of Applied Physiology, University of South Carolina; and Dr. Matt Green, Department of Health, Physical Education and Recreation at the University of North Alabama. The study will be published in an upcoming Journal of *Strength and Conditioning*.

Earlier [interval training](#) studies primarily focused on highly trained males, but researchers say that overlooks the variety of other populations that routinely use interval training.

Researchers put eight men and eight [women](#) between the ages of 19 and 30 through self-paced, [high intensity interval training](#) using different recovery periods. All of them reported at least a moderate fitness level and participation in at least one session of interval training a week.

Participants hit the treadmill for six, four-minute intervals performed at the highest intensity they felt they could maintain. Recovery between intervals consisted of one minute, two minutes or four minutes.

Throughout the intervals, their maximum [oxygen consumption](#) and [heart rates](#) were measured. Results revealed a significant effect of gender on both percentages. Across the trials, men self-selected a faster relative pace, but the women worked at a higher percentage of their [maximum heart rate](#) than the men and a higher percentage of their maximum oxygen consumption.

"I think what our data show is that there appear to be meaningful differences in how men and women self-regulate their workouts," Laurent said. "Specifically, in our case, men and women tend to work at the same level of perceived exertion and feel similarly recovered between each interval, however, as they perform the interval runs women tended to work 'harder' from a relative cardiovascular (%HRmax and %VO2max) standpoint than men."

Results also confirmed previous findings suggesting that a 2:1 work-to-rest ratio is optimal during HIIT for both men and women.

"I really think one of the 'take home' points from our study was, despite the gender differences that we found, individuals performing high-intensity interval training should listen to and trust their body and pay attention to how they are feeling," said Laurent

"Without having any feedback about their data, all the participants had to use to set their pace was how they felt during the run and how recovered they felt. In that sense when runners perform high-intensity intervals, trust that if you push yourself to run what you consider hard, you are probably at the correct intensity, and if you maintain recommended work-to-rest ratios you most likely will recover appropriately to get the most out of your workout, independent of gender."

Provided by Bowling Green State University

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