

# RUNNER'S WORLD

## How Much Does Sitting Negate Your Workout Benefits?

**Study: Each hour of sitting erases 8% from the health benefit of an hour of running.**

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Runners have always known that more is better (within reason). If you run a few more miles per week, you get fitter and faster. The same increases in fitness have been linked to decreased risk of major life diseases such as heart disease, high blood pressure, diabetes, and the like.

More recently, we've learned that less is better too—less sitting. That's because lots of sitting increases the risk of the just-mentioned diseases. *Runner's World Newswire* reported on this phenomenon as recently as two weeks ago.

A just-published study in *Mayo Clinic Proceedings* provides runners with a new tool to evaluate the benefits/risks of running/sitting. It explains how to “subtract” the negative effects of sitting time from the positive benefits of running time.

Warning: The whole process is a little depressing, because we've never before had such a tool. You never had to subtract anything from your runs.

According to a research team from the University of Texas Southwest Medical Center, each time unit of sitting cancels out 8 percent of your gain from the same amount of running. In other words, if you run for an hour in the morning, and then sit for 10 hours during the day, you lose roughly 80 percent of the health benefit from your morning workout.

People who engage in an hour of moderate-intensity exercise—running is considered vigorous exercise—fare much worse. They lose 16 percent of their workout gain from each hour of sitting.

Dr. Jarett Berry and colleagues reached this conclusion through an analysis of objective fitness and exercise data obtained from the National Education and Nutrition Examination Survey (NHANES). NHANES is an annual survey conducted to assess the nation's exercise and nutrition habits. The 2003-2004 survey also included objective fitness tests (treadmill tests) and objective accelerometer data to determine how much 2,223 subjects moved and sat during the course of at least one day. On average, subjects were relatively young (20), healthy, and non-obese.

Using the objective measurements, the researchers were able to draw exact correlations between exercise time, sitting time, and a subject's fitness score.

While past studies have looked for connections between fitness and health, this study is the first to also tease out the inverse question: How much does sitting affect fitness/health? “Our data suggest that sedentary behavior may increase [disease] risk through an impact on lower fitness levels,” Dr. Berry says.

While men and women differed in their responses to exercise time and sitting time (women tended to gain more, and also to lose more), the win-loss ratio was the same for both genders—the previously mentioned 16 percent, or 8 percent for runners.

The team from UT Southwestern advises that office workers (and home workers) employ a number of strategies to avoid excessive sitting time. The list is becoming standard these days, and includes: walking up stairs at work rather than taking elevators; standing while talking on the phone; holding walking meetings; sitting on a fitness ball or using a standing desk; taking a lunchtime walk; and using pedometer to log your daily step count.

“We found that when someone’s sitting for a long time, any movement is good movement,” says co-author Jacquelyn Kulinski, M.D. “If you’re stuck at your desk, stretch, shift positions frequently or just fidget. They all improve fitness.”

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