

YOUR MOVE

Sitting all day increases dementia risk — even if you exercise

The results underscore just how pervasive the consequences of sitting can be, and suggest that exercise by itself may not protect us.



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In news that we shouldn't take sitting down, a [study just published in JAMA](#) finds that people who stay seated for long hours at work and home are at much higher risk of developing dementia than people who sit less.

The negative effects of extended sitting can be so strong, researchers found, that even people who exercise regularly face higher risk if they sit for much of the day.

The study, which involved 49,841 men and women aged 60 or older, “supports the idea that more time spent in sedentary behaviors increases one's risk of dementia,” said Andrew Budson, a professor of neurology at Boston University and author of *Seven Steps to Managing Your Aging Memory*, who was not involved with the study.

The results also underscore just how pervasive the consequences of sitting can be, affecting our minds, as well as our bodies, and they hint that exercise by itself may not be enough to protect us.

The peril of sitting too much

The downsides of oversitting are well known to scientists and most of the rest of us. Past research shows that people who sit throughout the day, accumulating multiple hours of sedentary time at the office, commuting, and at home, in front of televisions and computers, are more likely to develop [heart disease](#), [obesity](#), [diabetes](#) and other illnesses and [die prematurely](#) than people who often get up and move around.

Sitting can even [undermine exercise](#). According to other recent research, people who work out but then sit for the rest of the day wind up erasing some of the expected metabolic benefits of their exertions.

But whether sitting likewise affects brain health hasn't been as clear. Some studies have linked sitting and later memory problems, including Alzheimer's disease and other forms of dementia. But they've mostly relied on people's recall of how much they sit, which can be quite inaccurate.

How much do people sit?

So, for the new study, scientists at the University of Southern California in Los Angeles and other universities sought objective measures of sitting, and found it in the UK Biobank, a large repository of data about the lives, health and deaths of hundreds of thousands of British men and women.

Many of the Biobank participants wore a sophisticated activity tracker for a week after joining the study to minutely record their movements — and stillness — throughout the day.

The scientists pulled records for almost 50,000 of these men and women aged 60 or older who didn't have dementia when they joined the study.

With the help of artificial intelligence algorithms that could interpret the tracker readouts, the scientists identified every minute during the day when people were moving or sedentary — meaning they were sitting or lying down, but not sleeping.

10 hours of sitting raises brain risks

Then they checked people's medical status for the next seven years or so, looking for hospital or death records detailing a dementia diagnosis of any kind.

Finally, they cross-checked sitting habits and brain health. And they found strong correlations.

If the men and women sat for at least 10 hours a day, which many of them did, their risk of developing dementia within the next seven years was 8 percent higher than if they sat for fewer than 10 hours.

The risks ballooned from there, reaching a 63-percent greater risk of dementia for people who spent at least 12 hours chair-bound.

“Sitting in the office all day, then in front of the TV and in the car and all the other ways we find to sit, it adds up,” said David Raichlen, a professor of biological sciences and anthropology at the University of Southern California, who led the new study. “These extreme levels of sedentary behavior are where we see a much higher risk” for cognitive and memory decline.

Exercise doesn't undo sitting

Surprisingly, the researchers found little benefit from exercise.

People who worked out but then plopped into chairs for 10 hours or more were as prone to dementia as people who hadn't exercised much at all.

"It looks like you can't exercise your way out of the risk," Raichlen said.

What about standing desks or walk breaks?

The same was true for walking and other short breaks. After adjusting for other factors, the researchers noted few improvements among people who interrupted their sitting time with breaks. If they got up and walked around, but still managed to sit for 10 or more hours a day, their risk didn't change much. What ultimately mattered was how many hours, in total, a person spent in a chair most days.

Some questions remain about standing and standing desks, though, in part because it's not always easy to differentiate between sitting and standing still in data from activity trackers. Standing generally isn't considered sedentary behavior, but whether it can lessen the brain risks from sitting is unclear from this study.

How do I lower my risk?

The best way to reduce dementia risk, Raichlen said, is to find ways to sit less overall. "People in our study who were sedentary for 9.5 hours a day didn't have any increased risk," he said.

If your job requires a lot of desk and computer time, look for opportunities during the day to be in motion. Stroll around your office while you're on the phone. Schedule walking meetings. Pick up your lunch instead of having it delivered.

Try to keep track of how many hours you're spending stationary. As they reach or exceed 10, Raichlen said, move more, Zoom less.

Of course, this study was associational and can't prove sitting causes cognitive decline. It also doesn't tell us how the two might be related.

“There have been suggestions cerebral blood flow is affected” by sitting, Raichlen said, reducing the brain’s supplies of oxygen and fuel. We also may snack and otherwise eat poorly when we sit for hours, especially in front of the TV, which could influence long-term brain health.

The encouraging news about oversitting, though, is that it can be undone, Raichlen said. “Sit less, move more. That’s the message, and we probably can’t repeat it enough.”

Do you have a fitness question? Email YourMove@washpost.com and we may answer your question in a future column.