

# Too much time on a computer, watching TV or other sedentary activities raises stroke risk

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Adults younger than age 60 whose days are filled with sedentary leisure time (which includes using the computer, TV, or reading) and little physical activity have a higher stroke risk than people who are more

physically active, according to new research published today in *Stroke*.

According to [American Heart Association statistics](#), U.S. adults spend an average of 10.5 hours a day connected to media such as smartphones, computers or television watching, and adults ages 50 to 64 spend the most time of any age group connected to media. Data also indicate that [stroke](#)-related deaths decreased in 2010 among adults 65 years and older. However, death from stroke appears to be on the rise among younger adults, ages 35 to 64 years—increasing from 14.7 in every 100,000 adults in 2010 to 15.4 per 100,000 in 2016. Previous research suggests the more time adults spend sedentary, the greater their risk of cardiovascular disease including stroke, and nearly 9 in 10 strokes could be attributed to modifiable risk factors such as sedentary behaviors.

"Sedentary time is increasing in the United States and Canada," said study author Raed A. Joundi, M.D., D.Phil., a stroke fellow in the department of clinical neurosciences at the Cumming School of Medicine at the University of Calgary in Canada. "Sedentary time is the duration of awake activities that are done sitting or lying down. Leisure sedentary time is specific to the sedentary activities done while not at work. It is important to understand whether high amounts of sedentary time can lead to stroke in [young individuals](#), as a stroke can cause premature death or significantly impair function and quality of life."

In this study, researchers reviewed health and lifestyle information for 143,000 adults with no prior stroke, heart disease or cancer who participated in the Canadian Community Health Survey in years 2000, 2003, 2005, 2007-2012. Researchers followed the participants for an average of 9.4 years (until Dec. 31, 2017) and identified strokes through linkages with hospital records.

They reviewed the amount of time spent each day in leisure sedentary activities (hours spent on computer, reading and watching TV) and

divided them into categories of less than four hours per day; four to less than six hours per day; six to less than eight hours per day; and eight hours or more a day. They also divided physical activity into quartiles, or four equal categories, where the lowest quartile was the least physically active and equivalent to going for a walk for 10 minutes or less daily. "A walk of 10 minutes or less per day is lower than half of what the American Heart Association's physical activity guidelines recommend," Joundi said.

The American Heart Association [recommends](#) adults get at least 150 minutes, or 2.5 hours, of moderate-intensity physical activity per week.

Analysis of study participants found:

- During the follow-up period, an average of 9.4 years, 2,965 strokes occurred. Nearly 90% of those were ischemic strokes, the most common stroke type, which occurs when a vessel supplying blood to the brain is obstructed.
- The average daily leisure sedentary time among all participants was 4.08 hours. Individuals aged 60 and younger had an average leisure sedentary time of 3.9 hours per day. Average daily leisure sedentary time was 4.4 hours for adults aged 60 to 79, and 4.3 hours for those 80 years and older.
- Adults 60 years and younger who had low physical activity and reported eight or more hours of leisure sedentary time a day had a 4.2 times higher risk of stroke compared to those reporting less than four hours of daily [leisure](#) sedentary time.
- The most inactive group—those reporting eight or more hours of sedentary time and low physical activity—had 7 times higher risk of stroke compared to those reporting less than four hours of sedentary time a day and higher levels of physical activity.

"Adults 60 years and younger should be aware that very high sedentary

time with little time spent on physical activity can have adverse effects on health, including increased risk of stroke," Joundi said. "Physical activity has a very important role in that it reduces the actual time spent sedentary, and it also seems to diminish the negative impact of excess sedentary time. Physician recommendations and public health policies should emphasize increased [physical activity](#) and lower sedentary time among young adults in combination with other healthy habits to lower the risks of cardiovascular events and stroke."

A significant limitation of the study's results was that the survey did not ask participants about occupation-related sedentary time; this could mean [sedentary time](#) is underreported among people who have desk jobs, for example.

**More information:** Association Between Excess Leisure Sedentary Time and Risk of Stroke in Young Individuals, *Stroke* (2021).  
[www.ahajournals.org/doi/10.1161/STROKEAHA.121.034985](http://www.ahajournals.org/doi/10.1161/STROKEAHA.121.034985)

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