The Common Habit Linked to Smaller Memory Regions Two Decades Later

7 MIN READ

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BY LAUREN GRAY

Researchers tracked 1,700 adults for 20 years. The people who sat all day at work were fine. The people who sat in front of the TV werenâ??t.

Few things are more inviting than a comfy couch after a long day. Letting a TV episode or three roll by while you rest? Thatâ??s icing on the cake. But a **new study** published in *Alzheimerâ??s & Dementia: The Journal of the Alzheimerâ??s Association* suggests that how often you reach for the remote in midlife may leave a mark on your brain that shows up decades later. Researchers at the University of Southern California and several partner institutions found that middle-aged adults who reported watching the most television had smaller volumes in memory-related brain regions when they were scanned more than 20 years later.

What the Researchers Found

The team drew on data from roughly 1,700 participants in the Atherosclerosis Risk in Communities (ARIC) Study, a long-running U.S. project that has tracked adults since the late 1980s to better understand heart and brain health. Participants were 53 on average when they enrolled. They rated how frequently they watched TV in their leisure time and estimated how much of their workday they spent seated.

Two decades on, each person had a brain MRI. Compared with those who rarely or never watched TV, the heaviest viewers showed a broad pattern of differences. Areas tied to the earliest stages of Alzheimerâ??s disease were smaller. So were the frontal lobes, which steer planning and judgment, and the occipital lobes, which process what

we see.

Heavy viewers also had more white matter hyperintensities, bright spots on their MRI that point to damage in the brainâ??s smallest blood vessels. While these can represent normal age-related changes in the brain, finding a higher concentration of lesions can also be associated with higher risk of stroke, mobility problems, mood symptoms, and cognitive changes including memory loss and dementia, the **Mayo Clinic** notes.

The links held after the researchers adjusted for exercise, diabetes, body mass index, smoking and alcohol, meaning frequent TV watchers werenâ??t simply less active or less healthy in other ways, the study would suggest.

However, Christin Glorioso, MD, PhD, a neuroscientist, physician, and brain aging researcher, says there could still be â??some residual confoundersâ?• that the researchers failed to control for. â??People who had desk jobs at that time where they sit were likely to be better educated and to make more money and therefore have better access to healthcare and take care of themselves more,â?• she tells Super Age. â??They tried to control for these factors but may not have been able to capture everything.â?•

Not All Sitting Is the Same

Not all sedentary behavior impacted the brain the same way. People who sat for much of their workday actually had larger frontal and occipital lobes and fewer white matter lesions than the frequent TV watchers.

The researchers suspect the difference comes down to what the brain is doing. Many desk jobs demand focus, problem-solving and active thinking. Television asks very little of us. Senior author David Raichlen, a USC professor of biological sciences and anthropology, says the conversation about sedentary time should expand beyond how long we sit to include how we spend those hours.

â??Cognitively active sedentary behavior may preserve brain structure and cerebrovascular health,â?• the study authors write.

Thereâ??s a Gender Difference Worth Noting

The effects also appeared stronger in men. When the team analyzed the data separately by sex, most of the brain differences tied to TV viewing and workplace sitting showed up in male participants.

Dr. Glorioso suggests that this difference may help explain the findings overall. She points to a passage in the study which says that women in two of the cohorts were likely to watch TV in a

â??less prolonged and more intermittent manner than men," and offers an explanation: â??It may be that women are watching TV differently â?? perhaps multi-tasking or watching less of it.â?•

She adds that the baseline data for the study was gathered in the 1980s, a time when more women were home during the day. â??Many women would have been well educated and higher socio economic status and homemakers so this wouldn't hold for them,â?• she tells Super Age. â??There is something about men watching TV at this time that is correlating with something detrimental that isn't the case for women. Perhaps many women were watching daytime TV regardless of other healthy habits for instance.â?•

What the Study Canâ??t Tell Us

A few caveats. The research shows an association, not cause and effect. Participants reported their own TV habits, which is far less precise than tracking actual viewing

time. And because no one had a brain scan at the start, the researchers canâ??t say whether brain volume declined over time or whether some differences were present from the beginning â?? only how their brain size compared to people who reported watching less. Studies with scans at both ends would help settle that.

The Nuanced Relationship Between Screens and Brain Aging

Because it began in the 1980s, that particular study looked at television specifically, not phones, tablets, or computers. Given that limitation, Dr. Glorioso says that she would refrain from applying the findings to screen time as a whole. However, more recent research which has included more modern technology suggests that thereâ??s a nuanced relationship between screentime in midlife and the brain health of older adults.

â??Digital engagement provides valuable opportunities for cognitive stimulation, skill-building, and maintaining independence in midlife and older adulthood, benefiting both cognitively healthy individuals and those experiencing mild cognitive impairment,â?• says a **2025 study** published in the journal *Digital Health*. â??For instance, active use of digital technologies can foster continuous learning, curiosity, and social connectivity, which are critical factors supporting cognitive resilience and healthy aging.â?•

But as those researchers note, there are two sides to the coin. The risks, they say, include â??attention deficits, disrupted sleep patterns, social isolation, reduced physical activity, and structural brain changes that could accelerate cognitive decline and dementia onset.â?• Prolonged screen exposure â?? especially mindless scrolling or passive TV watching â?? may also contribute to â??visual fatigue, chronic distraction, and sedentary behaviors, potentially exacerbating cognitive vulnerabilities,â?• the authors write.

Quality, not quantity alone, appears to shape the brain effects of screens, that study suggests.

How to Make Your Downtime Work Harder for Your Brain

You donâ??t need to give up your favorite shows. The goal is to balance passive hours with ones that keep your mind engaged, and to spend at least some of your screentime doing other things simultaneously. A few ideas:

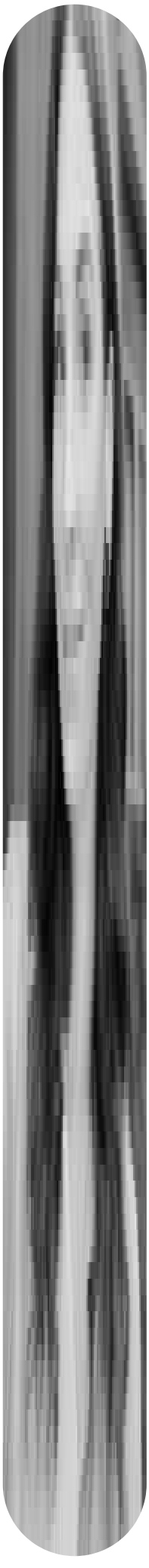
- Trade one evening of TV a week for a puzzle, book, or a board game.
- Learn something that stretches you, like a language, an instrument or a tricky recipe.
- Call a friend or host a dinner. Conversation keeps attention and memory in play.
- Break up long viewing stretches by standing, stretching or walking between episodes.
- Do your daily chores while watching TV: wash dishes, exercise, or knit while you watch, for instance.

â??In general it’s safe to say that spending free time on mentally challenging activities, hobbies, exercise, or social time is healthier than watching TV,â?• says Dr. Glorioso. â??But it may be the absence of other activities, not the TV, that’s to blame.â?•

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WRITTEN BY:



Lauren Gray