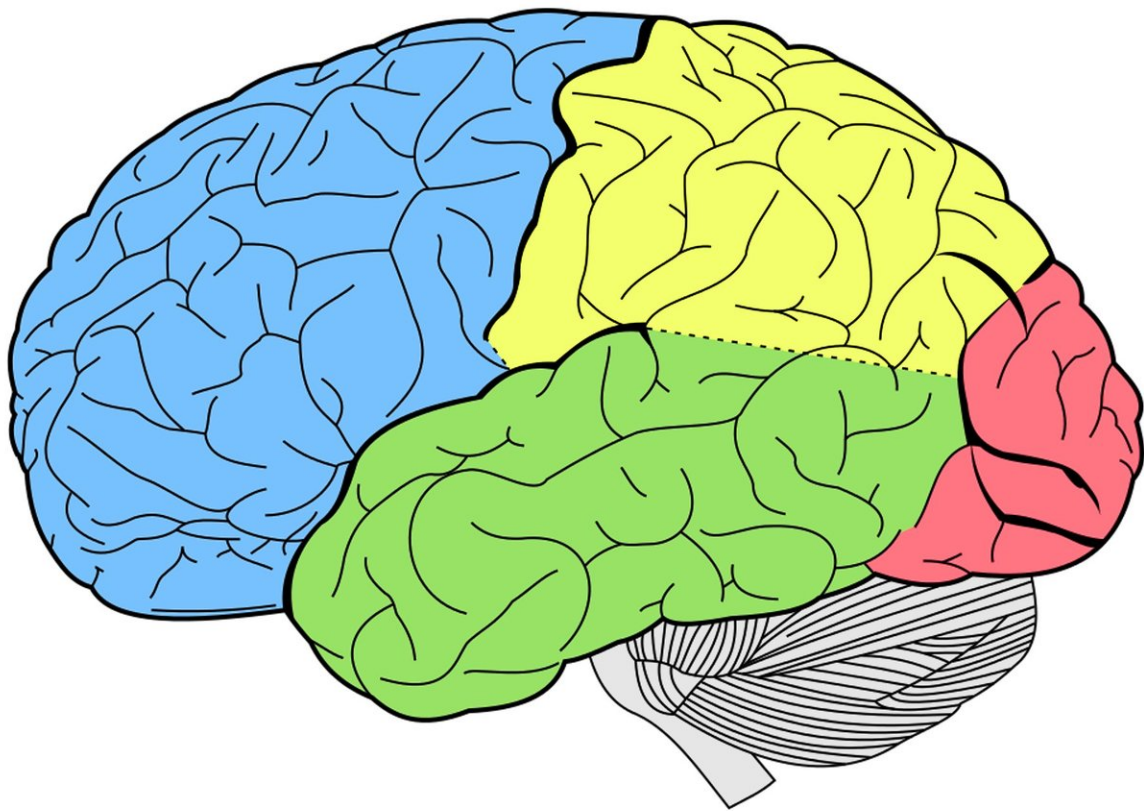


# Thinning in brain regions important for memory linked to sedentary habits

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Sitting too much is linked to changes in a section of the brain that is critical for memory, according to a preliminary study by UCLA

researchers of middle-aged and older adults.

Studies show that too much sitting, like smoking, increases the risk of heart disease, diabetes and [premature death](#). Researchers at UCLA wanted to see how sedentary behavior influences brain health, especially regions of the brain that are critical to memory formation.

UCLA researchers recruited 35 people ages 45 to 75 and asked about their [physical activity levels](#) and the average number of hours per day they spent sitting over the previous week. Each person had a high-resolution MRI scan, which provides a detailed look at the medial temporal lobe, or MTL, a brain region involved in the formation of new memories.

The researchers found that sedentary behavior is a significant predictor of thinning of the MTL and that [physical activity](#), even at high levels, is insufficient to offset the harmful effects of sitting for extended periods.

This study does not prove that too much sitting causes thinner brain structures, but instead that more hours spent sitting are associated with thinner regions, researchers said. In addition, the researchers focused on the hours spent sitting, but did not ask participants if they took breaks during this time.

The researchers next hope to follow a group of people for a longer duration to determine if sitting causes the thinning and what role gender, race, and weight might play in brain health related to sitting.

MTL thinning can be a precursor to cognitive decline and dementia in middle-aged and [older adults](#). Reducing [sedentary behavior](#) may be a possible target for interventions designed to improve [brain health](#) in people at risk for Alzheimer's disease, researchers said.

The study appears in the April 12 issue of *PLOS ONE*.

Provided by University of California, Los Angeles

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