

Study shows extra weight in 60s may be linked to brain thinning years later

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Having a bigger waistline and a high body mass index (BMI) in your 60s may be linked with greater signs of brain aging years later, according to a study published by a leading University of Miami neurologist researcher in the July 24, 2019, online issue of *Neurology*, the medical journal of the American Academy of Neurology. The study suggests that

these factors may accelerate brain aging by at least a decade.

"People with bigger waists and higher BMI were more likely to have thinning in the [cortex](#) area of the brain, which implies that obesity is associated with reduced gray matter of the brain," said study author Tatjana Rundek, M.D., Ph.D., a UHealth neurologist, professor of neurology, epidemiology, and [public health](#) and scientific director of the Evelyn F. McKnight Brain Research Institute.

"These associations were especially strong in those who were younger than 65, which adds weight to the theory that having poor health indicators in mid-life may increase the risk for brain aging and problems with memory and thinking skills in later life," said Dr. Rundek,

The study involved 1,289 people with an average age of 64. Two-thirds of the participants were Latino. Participants' BMI and [waist circumference](#) were measured at the beginning of the study. An average of six years later, participants had MRI brain scans to measure the thickness of the cortex area of the brain, overall brain volume and other factors.

A total of 346 of the participants had a BMI of less than 25, which is considered [normal weight](#); 571 people had a BMI of 25 to 30, which is considered overweight; and 372 people had a BMI of 30 or higher, which is considered obese.

For waist circumference, which can be different for men and women, the normal weight group, which was 54 percent women, had an average of 33 inches, the overweight group, which was 56 percent women, had an average of 36 inches, and the obese group, which was 73 percent women, had an average of 41 inches.

Having a higher BMI was associated with having a thinner cortex, even

after researchers adjusted for other factors that could affect the cortex, such as high blood pressure, alcohol use and smoking. In overweight people, every unit increase in BMI was associated with a 0.098 millimeter (mm) thinner cortex and in obese people with a 0.207 mm thinner cortex. Having a thinner cortex has been tied to an increased risk of Alzheimer's disease.

Having a bigger waist was also associated with a thinner cortex after adjusting for other factors.

Rundek said, "In normal aging adults, the overall thinning rate of the cortical mantle is between 0.01 and 0.10 mm per decade, and our results would indicate that being overweight or obese may accelerate aging in the brain by at least a decade."

"These results are exciting because they raise the possibility that by losing weight, people may be able to stave off aging of their brains and potentially the memory and thinking problems that can come along with [brain](#) aging," Rundek said. "However, with the rising number of people globally who are overweight or obese and the difficulty many experience with losing weight, obviously this is a concern for public health in the future as these people age."

Rundek noted that the study does not prove that extra [weight](#) causes the cortex to get thinner; it only shows an association.

A limitation of the study was that, like many studies of older people, it is possible that the healthiest people are more likely to live longer and take part in studies, so that may affect the results.

Provided by University of Miami Leonard M. Miller School of Medicine

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