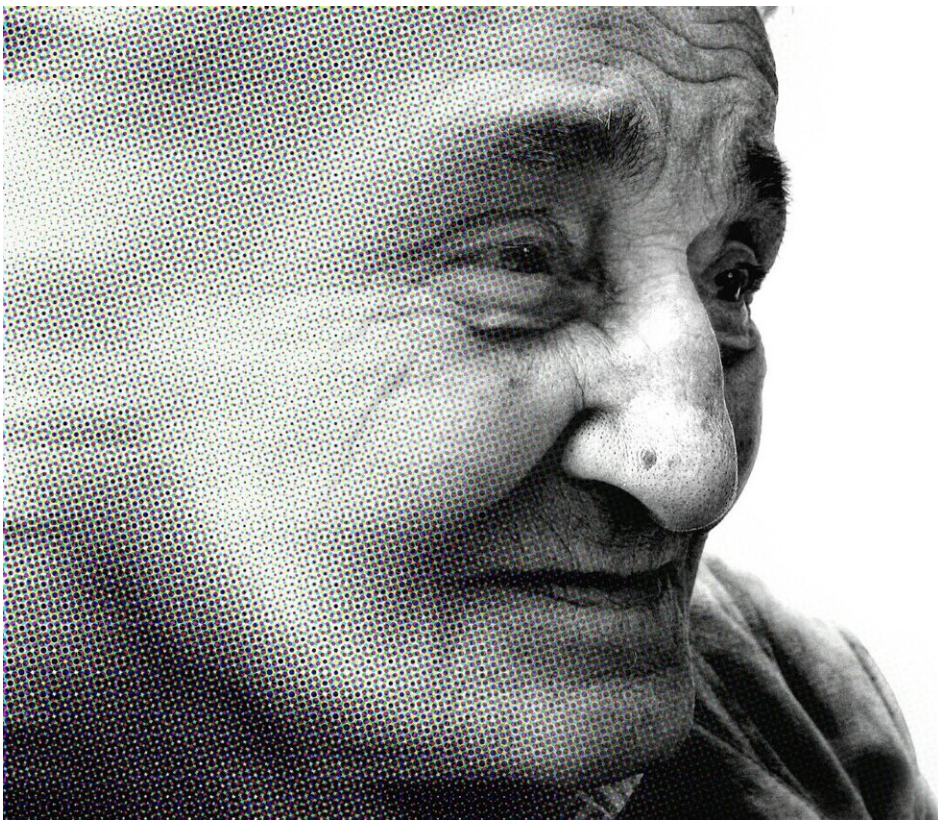


Abdominal fat depots can impact brain health and cognition in individuals at high risk for Alzheimer's disease

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The impact of abdominal fat on brain health and cognition is generally more pronounced in middle-aged men at high risk of Alzheimer's

disease than in women, according to researchers at Rutgers Health.

In middle-aged individuals with a family history of Alzheimer's disease, the amount of fat in their abdominal organs (pancreas, liver, and [belly fat](#)) is related to their brain volumes and cognitive function, according to the [study published](#) in the journal *Obesity*. The study was written by Sapir Golan Shekhtman, a Ph.D. student at the Joseph Sagol Neuroscience Center at the Sheba Medical Center in Israel and led by Michal Schnaider Beerli, director of the Herbert and Jacqueline Krieger Klein Alzheimer's Research Center at Rutgers Brain Health Institute.

The research, conducted on 204 healthy middle-aged Alzheimer's-dementia offspring, investigated fat depots in the pancreas, liver and abdomen measured with MRI.

"In middle-aged males at high Alzheimer's disease risk—but not females—higher pancreatic fat was associated with lower cognition and brain volumes, suggesting a potential sex-specific link between distinct abdominal fat with [brain health](#)," said Beerli, who is the Krieger Klein Endowed Chair in Neurodegeneration Research at BHI and a faculty member of the Rutgers Institute for Health, Health Care Policy and Aging Research.

Obesity is a risk factor for lower cognitive functioning and higher dementia risk, with different associations between sexes.

The research findings highlight the importance of investigating the interrelationships of fat depots, brain aging and cognition in the context of sex differences.

Additionally, the study challenges the conventional use of body mass index (BMI) as the primary measure for assessing obesity-related cognitive risks. The researchers said BMI poorly represents body fat

distribution and does not necessarily account for sex differences.

"Our findings indicate stronger correlations compared to the relationships between BMI and cognition, suggesting that abdominal fat depots, rather than BMI, is a risk factor for lower cognitive functioning and higher dementia risk," said Shekhtman.

These research findings open new avenues for targeted interventions and further exploration of sex-specific approaches in understanding and mitigating the impact of abdominal fat on brain health, Shekhtman noted.

More information: Abdominal Fat Depots are Related to Lower Cognitive Functioning and Brain Volumes in Middle-aged Males at High Alzheimer's Risk, *Obesity* (2024).

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Provided by Rutgers University

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