

The quality, not quantity, of cardiovascular fat can interfere with memory later in life

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A worsening cardiovascular profile after menopause may contribute to the fact that women are disproportionately affected by dementia. A new study identified a link between cardiovascular fat volume and radiodensity and cognitive function, as well as racial differences in this association. Study results will be presented during The North American

Menopause Society (NAMS) Annual Meeting in Washington, DC, September 22-25, 2021.

Cardiovascular fat deposition, found to be higher in postmenopausal women compared with premenopausal women, is a novel risk factor for [cardiovascular disease](#). It is also believed to affect cognitive function through neuropathological pathways by changing the secretion of inflammatory cytokines and adipokines. The quality of cardiovascular fat is characterized by its radiodensity.

In this new study, researchers aimed to assess associations of cardiovascular fat volume and radiodensity with future cognitive performance among midlife women and check for any [racial differences](#) in these associations. Racial differences were specifically analyzed since Blacks paradoxically have lower cardiovascular fat volume but are at a higher risk for [heart disease](#) and a higher prevalence of Alzheimer disease compared with Whites.

The study, which was based on SWAN (Study of Women's Health Across the Nation) data, involved nearly 500 women, of which 30.6% were postmenopausal and 35.9% were Black. Study results suggest a higher perivascular adipose tissue (PVAT) radiodensity is significantly associated with a worse performance in working memory. Researchers additionally identified a significant interaction between PVAT radiodensity and race, noting that a higher baseline PVAT radiodensity at midlife was associated with lower future performance in verbal episodic memory among Blacks, but not White women. The reported associations were independent of volume of PVAT depot, as well as [waist circumference](#) and other known confounders.

"Our study suggests that the quality, rather than the quantity, of perivascular adipose tissue at midlife may serve as a novel biomarker of cognitive function status in women later in life. We need more research

to understand the underlying mechanisms of the reported association," says Dr. Samar R. El Khoudary from the University of Pittsburgh and senior author of the study.

"Studies like these are valuable in helping [healthcare providers](#) identify who may be most vulnerable so they can intervene early to help delay disease progression," says Dr. Stephanie Faubion, NAMS medical director.

Provided by The North American Menopause Society

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