

# Metabolic syndrome linked to smaller brain tissue volume

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"Screening for MetS and treatment of its individual components, in particular, hyperglycemia, hypertriglyceridemia, and obesity, may prevent progression of cognitive aging in patients with MetS, even in a prediabetic stage," the authors write.

**More information:** [Abstract](#)  
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(HealthDay)—For patients with manifest arterial disease, components of metabolic syndrome (MetS) correlate with smaller brain tissue volume, even in the absence of diabetes, according to a study published online June 19 in *Diabetes Care*.

Audrey M. Tiehuis, M.D., from University Medical Center Utrecht in the Netherlands, and colleagues examined the correlation between MetS and cerebral changes in 1,232 patients with manifest arterial disease (mean age, 58.6 years; 37 percent with MetS) who had undergone brain magnetic resonance imaging. Volumes of brain tissue, ventricles, and white matter hyperintensities were expressed relative to intracranial volume.

The researchers found that the presence of MetS correlated with smaller brain tissue volume, even in patients without diabetes. There was no association between MetS and increased occurrence of white matter hyperintensities or cerebral infarcts. Individual components associated with smaller brain volume included impaired glucose metabolism, [abdominal obesity](#), and elevated triglycerides. When patients with diabetes were excluded, the associations for obesity and hypertriglyceridemia with smaller brain volume persisted. There was an association between hypertension and increased occurrence of [white matter hyperintensities](#) and infarcts.

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