

# Cognitive benefits seen two years after bariatric surgery

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Bariatric surgery (BS) is associated with cognitive benefits two years after surgery, according to a study published online Feb. 9 in *JAMA Network Open*.

Emma Custers, from Radboud University Medical Center in Nijmegen,

Netherlands, and colleagues examined the long-term associations of weight loss after BS with cognition and brain structure and perfusion in a cohort study involving 133 participants with severe obesity eligible for Roux-en-Y [gastric bypass](#) (aged 35 to 55 years).

The researchers found that at 24 months after BS, global cognition was at least 20 percent higher in 52 participants (42.9 percent). Inflammatory markers were lower at 24 months compared with baseline (mean high-sensitivity C-reactive protein, 4.77 versus 0.80 µg/mL); fewer patients used antihypertensives (36.1 versus 16.7 percent); and patients had lower depressive symptoms (median Beck Depression Inventory scores, 9.0 versus 3.0) and greater physical activity (mean Baecke score, 7.64 versus 8.19).

In most brain regions, brain structure and perfusion were lower after BS, while no change was seen in hippocampal and white matter volume. No change was observed in [cerebral blood flow](#) and spatial coefficient of variation (sCOV) in the [nucleus accumbens](#) and parietal cortex. Greater thickness and lower sCOV were seen in the temporal cortex after BS.

"These results provide new information on longer-term outcomes associated with BS-induced weight loss in cognition and brain structure and perfusion, although exact underlying mechanisms remain unsolved," the authors write.

**More information:** Emma Custers et al, Long-Term Brain Structure and Cognition Following Bariatric Surgery, *JAMA Network Open* (2024). [DOI: 10.1001/jamanetworkopen.2023.55380](https://doi.org/10.1001/jamanetworkopen.2023.55380)

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