

# Can surgery and anaesthesia affect memory?

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Findings from a new *Anaesthesia* study suggest that patients may score slightly lower on certain memory tests after having surgery and anaesthesia.

In the study of 312 participants who had surgery and 652 participants who had not (with an average age in the 50s), surgery between tests was associated with a decline in immediate [memory](#) by one point out of a possible maximum test score of 30 points. Memory became abnormal in 77 out of 670 participants with initially normal memory comprising 18% of those who had had surgery compared with 10% of those who had not. No differences in other measures of memory and executive function were observed between participants having and not having surgery. Reduced immediate memory scores at the second visit were significantly associated with the number of operations in the preceding nine years. Working memory decline was associated with longer cumulative operations.

"The [cognitive changes](#) we report are highly statistically significant in view of the internal normative standards we employ, and the large sample size of the control, or non-surgery, population. But the cognitive changes after surgery are small—most probably asymptomatic and beneath a person's awareness," said senior author Dr. Kirk Hogan, of the University of Wisconsin-Madison School of Medicine and Public Health. "The results await confirmation both in follow-up investigations in our own population [sample](#) after more surgeries in aging [participants](#), and by other investigators with other population samples."

Dr. Hogan noted that it is too early to recommend any changes in clinical practice regarding prevention, diagnosis, management, and prognosis of cognitive changes after [surgery](#).

**More information:** L. C. Bratzke et al, Cognitive decline in the middle-aged after surgery and anaesthesia: results from the Wisconsin Registry for Alzheimer's Prevention cohort, *Anaesthesia* (2018). [DOI: 10.1111/anae.14216](#)

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