

# Does open heart surgery affect cognitive abilities?

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Most people who need open heart surgery to repair damaged heart valves are aged 65 or older. The American Heart Association (AHA) estimates that nearly 8 million people have had heart surgeries. However, we don't fully understand the effects of heart surgery on an older adult's cognition (the ability to remember, think, and make decisions).

In 2014, an estimated 156,000 [heart](#) valve surgeries were performed in the US. The most common condition for valve surgery was aortic stenosis. The aorta is the heart valve that controls blood flow from your heart to the rest of your body. Aortic stenosis occurs when the aortic valve doesn't allow blood to flow out of the heart properly. Adults 65 and older represent most of the people who need aortic valve surgery, and the number of older adults with [aortic stenosis](#) is expected to double by 2050.

Understanding how heart valve surgery may affect your cognition is important for older adults. To learn more, researchers reviewed studies to see how patients' cognition changed before and after heart valve surgery. They also looked at whether surgeries on two types of heart valves, the mitral or the aortic, were associated with better or worse outcomes. Their study was published in the *Journal of the American Geriatrics Society*.

To learn more, researchers reviewed 12 studies that included hundreds of people who had heart valve surgery. In each of the studies, participants had been tested before and after surgery to determine their

ability to remember, think, and make decisions.

The researchers found that within the first month after valve surgery, people in the studies experienced some cognitive decline compared to before the surgery. Up to six months after surgery, patients' cognitive health had largely returned to normal. One-third of the studies included in this review even found small improvements in cognition half a year after surgery.

The researchers also learned that aortic valve surgery was associated with more early cognitive problems than mitral valve surgery.

People who had [mitral valve surgery](#) experienced a mild decline from their one-month check-up to their check-ups from two to six months after surgery. But people who had aortic valve surgery experienced poorer cognitive function the month after surgery, although they tended to improve after that.

Importantly, the researchers also learned that aortic valve patients were, on average, a decade older than mitral valve patients (68 years vs. 57). Because the people who had aortic valve surgeries were older, their increased age might have affected their cognitive decline.

The researchers concluded that heart valve surgery patients are at risk of cognitive problems up to six months after surgery. People having [aortic valve](#) surgery—the majority of whom are older adults—are at greater risk of early cognitive decline within the first month after surgery than people having mitral [valve surgery](#). However, cognitive health in both groups appears largely to return to what it was before surgery within the six months after [surgery](#).

**More information:** Mark A. Oldham et al, Cognitive Outcomes After Heart Valve Surgery: A Systematic Review and Meta-Analysis, *Journal*

*of the American Geriatrics Society* (2018). [DOI: 10.1111/jgs.15601](https://doi.org/10.1111/jgs.15601)

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