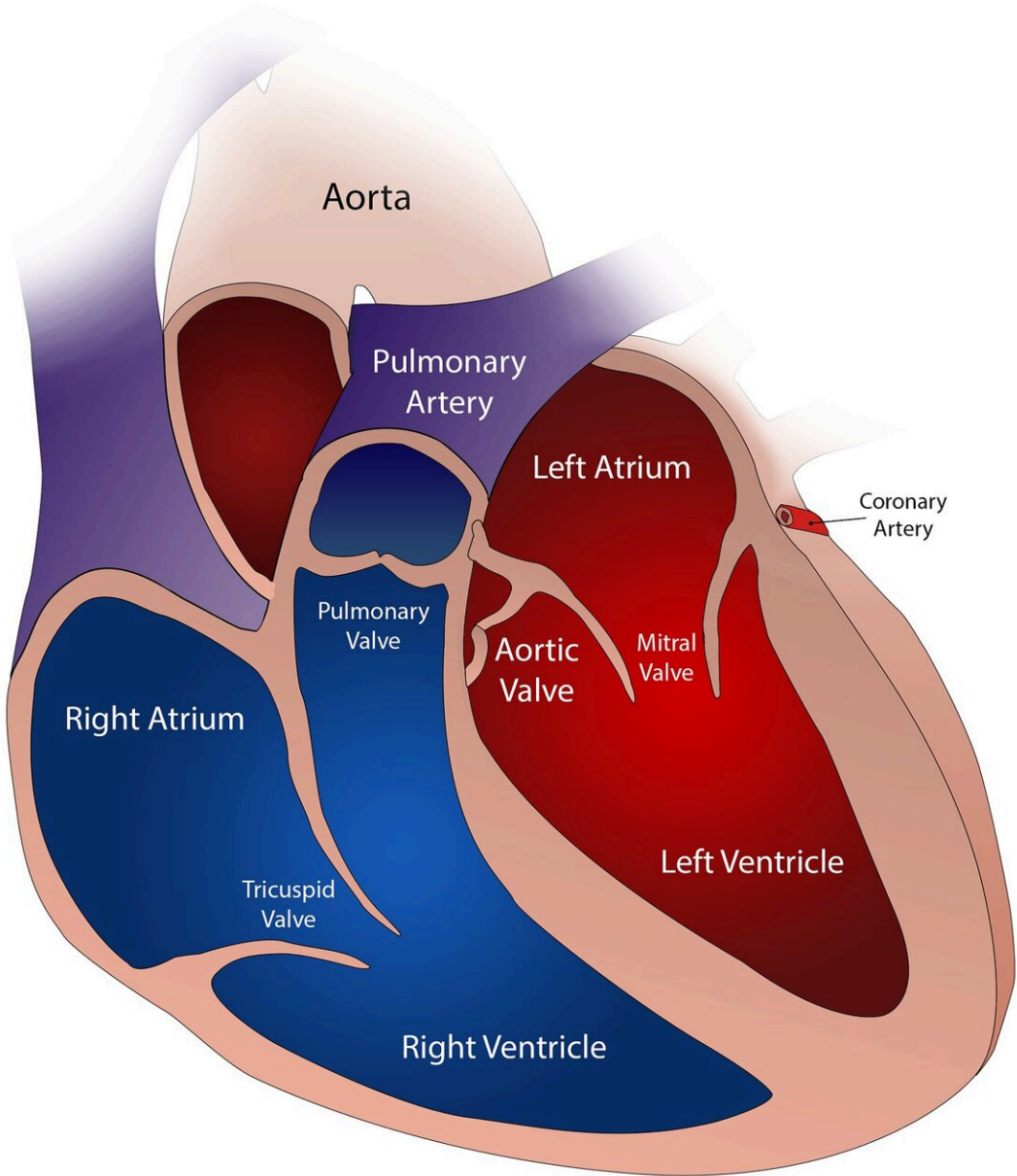


# **Cerebral embolic protection during transcatheter aortic-valve replacement**

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A study published today in the *New England Journal of Medicine* (*NEJM*) found that among patients with aortic stenosis undergoing transfemoral transcatheter aortic-valve replacement (TAVR), the use of a debris capturing device called cerebral embolic protection reduced the risk of disabling stroke from 1.3% to 0.5%.

Cedars-Sinai, under the leadership of Raj Makkar, MD, Cedars-Sinai's vice president of Cardiovascular Innovation and Intervention and the Stephen R. Corday, MD, Chair in Interventional Cardiology, was the largest enroller in the clinical trial that led to these published results. The results were announced during the Transcatheter Cardiovascular Therapeutics (TCT) conference in Boston Sept. 16-19.

TAVR is an established treatment for patients with [aortic stenosis](#) across the spectrum of surgical risk, however, it can lead to embolization of debris. This debris from the [valve](#) or the vasculature used in a TAVR procedure can cause post-procedure [stroke](#), leading to increased morbidity and mortality.

A total of 3,000 multicenter patients with aortic stenosis across North America, Europe and Australia underwent randomization. The first control group of 1,501 patients underwent transfemoral TAVR with CEP and the second control group of 1,499 patients underwent TVAR without the use of CEP.

The device was successfully placed in 95% of attempted patients and had no complications. While these results do not suggest a significant effect on the overall incidence of post-procedure stroke (2.9% for TAVR without CEP versus 2.3% for TAVR with CEP), disabling stroke rates were significantly reduced from 1.3% to 0.5%. Among patients who had stroke post TAVR, patients with CEP had lower mortality rates and were more likely to be discharged home rather than a nursing facility when compared to patients in the second control group who did

not receive CEP.

**More information:** Samir R. Kapadia et al, Cerebral Embolic Protection during Transcatheter Aortic-Valve Replacement, *New England Journal of Medicine* (2022). [DOI: 10.1056/NEJMoa2204961](https://doi.org/10.1056/NEJMoa2204961)

Provided by Cedars-Sinai Medical Center

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