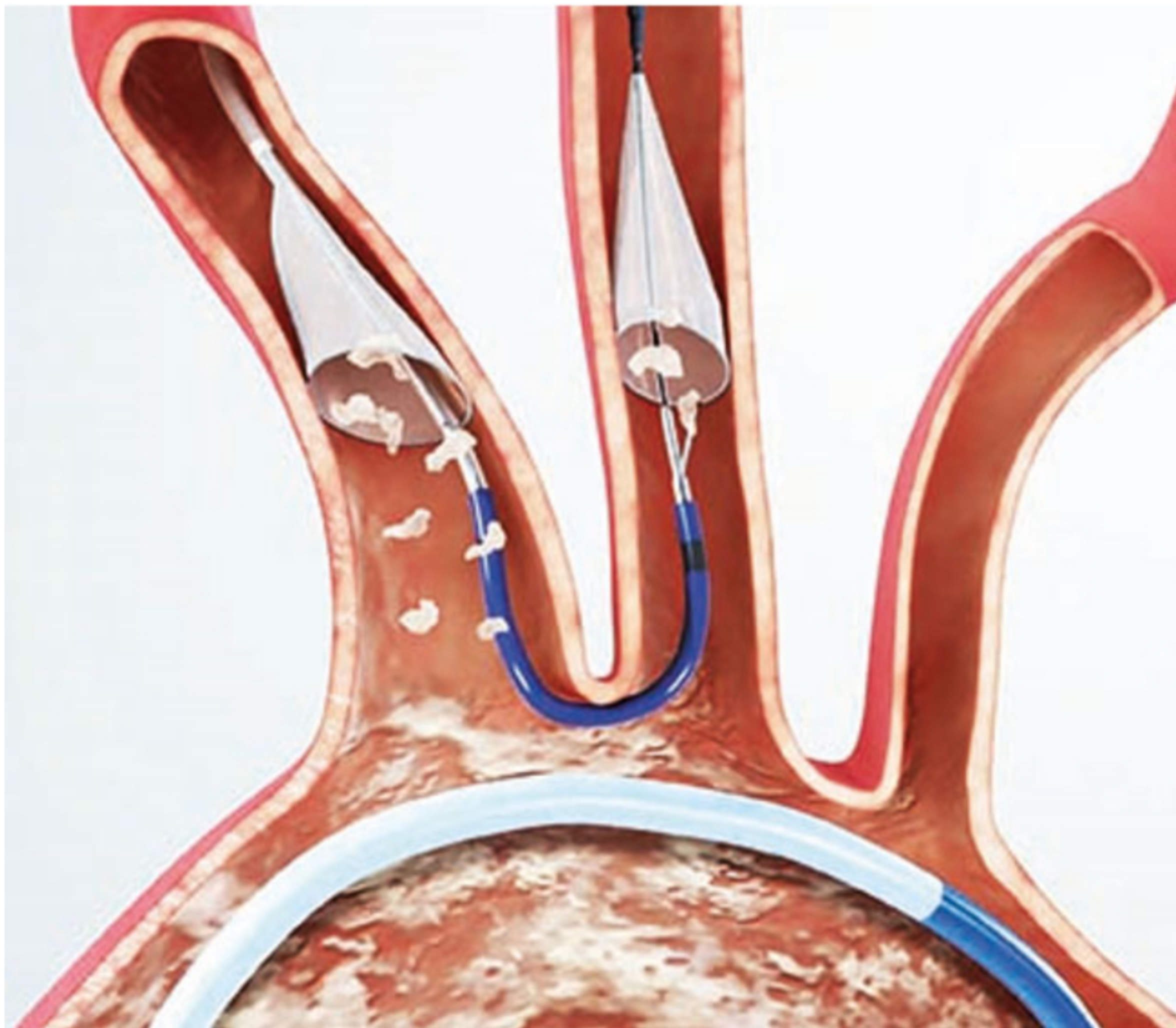


Sentinel Device

The Sentinel device is a *cerebral (-brain) protection device* used *during transcatheter aortic valve implantation (TAVI)*. The device is intended to reduce the patient's risk of developing a stroke during a TAVI.

How does the Sentinel device work?

The Sentinel device is a filter basket - based device that is inserted from your wrist at the start of the procedure. The baskets filter the blood that flows to your brain. If plaque or calcification is dislodged from the aorta or the aortic valve during TAVI, it may be caught in the filter basket, thereby reducing the risk of stroke.



The Sentinel Embolic Protection Device filters 90+% of blood flow to the brain during a TAVI procedure. If plaque or calcium deposits are mobilised during passage of the TAVI valve and catheter, it may be caught in the baskets and prevent a subsequent stroke. Image on the right shows debris caught in the filter basket.

Has the Sentinel device been proven to reduce strokes in TAVI?

In a large meta-analysis, the following was found:

The use of cerebral embolic protection devices:

- **Reduces the risk of 'all' strokes**
77 patients need to be treated to prevent one stroke.
- **Reduces the risk of disabling strokes**
111 patients need to be treated to prevent one disabling stroke.

Why is it not used more commonly?

The Sentinel device is presently not funded by medical aids, and patients will have to pay for the device out of pocket.

Take home message

The Sentinel device lowers the risk of disabling strokes during TAVI. The number of patients needed to treat to prevent a disabling stroke is substantial. The device is not funded by medical schemes. Speak to your cardiologist for more information.