

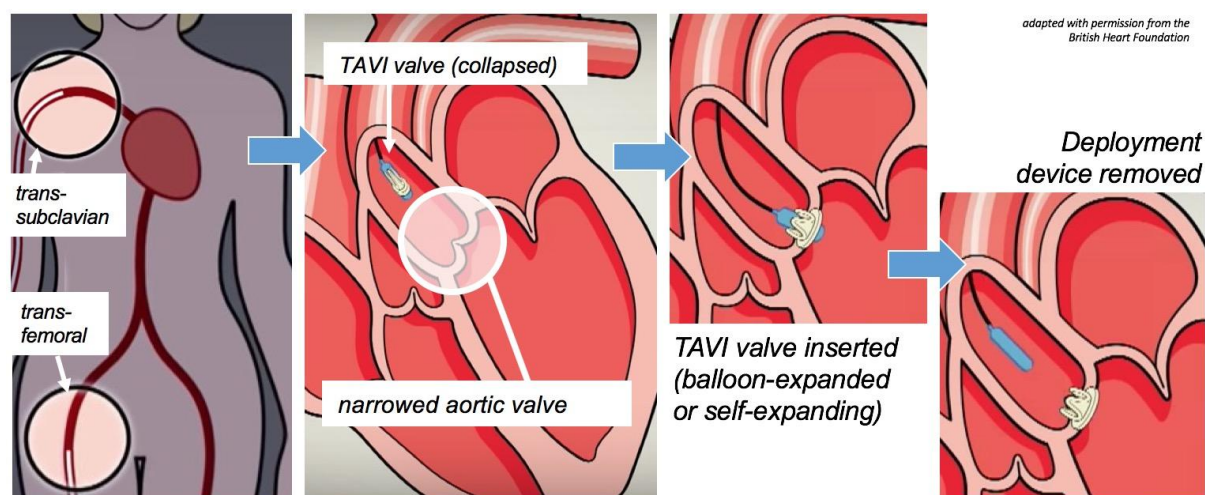
Transcatheter aortic valve implantation

Procedure information for patients

Your doctor has recommended a procedure called a **transcatheter aortic valve implantation** (TAVI). Please take some time to read this information sheet and discuss any questions or concerns you may have with a medical professional.

What is a TAVI?

A TAVI procedure is usually used to treat patients with severe narrowing (stenosis) of the aortic valve. The aortic valve is the main heart valve controlling the flow of blood from the heart to the body. The valve is often replaced directly through the chest wall with an operation. However, in patients considered to be at higher risk of complications, a TAVI procedure can be used. This is where a new valve is inserted via a minimally invasive approach. This relieves the obstruction allowing the heart to pump blood to the body more freely.



What will happen during the procedure?

Most commonly, the procedure is performed by inserting a plastic tube (introducer) into the groin artery (**transfemoral procedure**). This is done with minor sedation and local anaesthetic. The replacement TAVI valve is advanced up the main artery, round to the heart and then installed inside your existing valve, pushing it out of the way. X-rays will be used during the procedure to help with correct positioning of the valve. In addition, a second tube (catheter) may be inserted into the other groin or wrist artery to inject X-ray dye (contrast) to assess the valve and blood vessels. The replacement valve will start to function straight away. Your own valve will not be cut or removed.

Two types of heart valves are used; **balloon expandable** or **self-expanding**. Balloon expandable valves are inserted by blowing up a balloon inside the valve with fluid. Once the valve is securely in position, the balloon is removed. While the balloon is being expanded, a special wire will be placed in the heart to temporarily increase the heart rate. Self-expanding valves do not require inflation with a balloon. Your doctors will decide which valve is most appropriate for you.

Sometimes your doctors may advise that the valve is inserted via a puncture in the artery in the shoulder area (**trans-subclavian**) or directly into the heart via a small incision in the left side of the chest (**trans-apical**). This is usually advised when the blood vessels in the groin area are too narrow to allow the valve to pass up to the heart. Both of these approaches require a general anaesthetic (where you will be asleep for the procedure). In addition, a small ultrasound probe (transoesophageal echocardiogram) may be put down the food-pipe (oesophagus) to help position the device.

What are the risks of the procedure?

In recommending this procedure, your doctor has balanced the benefits and risks of the procedure against the benefits and risks of not proceeding.

Common risks and complications (more than 5 in 100) include:

- Swelling or bruising at the puncture site
- Abnormal heart rhythms. A permanent pacemaker may need to be implanted for a slow heart rhythm.

Uncommon risks or complications (between 1 and 5 in 100) include:

- Infection requiring antibiotics
- Worsening of kidney function sometimes requiring dialysis
- Stroke (blood clot or bleeding in the brain). This can cause long-term disability
- Heart attack caused by the new valve blocking the heart arteries
- Blood clot in the legs causing pain and swelling. This may break off and go to the lungs
- Bleeding requiring blood transfusion
- Arterial aneurysm or pseudoaneurysm at the puncture site which may require surgical repair.

Rare risks or complications (less than 1 in 100) include:

- Damage to the heart, major blood vessels or valves requiring major surgery
- Significant movement of the valve. This may require surgery to remove
- A tear in the main blood vessel (aortic dissection). This may require surgery
- Infection settling on the new valve
- Significant leakage (regurgitation) around the new valve back into the heart
- A very small increased lifetime risk of cancer from radiation exposure
- Death as a result of this procedure is rare.

What happens next?

Your doctor will speak to you about the procedure and answer any questions you may have. You will also be asked to sign a written consent form to confirm you are happy to have the procedure.