



Valve Surgery and Valvuloplasty

Valve surgery

If your cardiologist has established that your symptoms of breathlessness, chest pain, dizziness or faintness are due to a malfunctioning heart [valve](#), you may need an operation to repair or replace the affected valves. After the operation you will notice a significant improvement in your symptoms. Valve surgery may also reduce or prevent changes associated with long-term heart muscle strain.

If your valves are narrow – [stenosed](#) – they will usually be replaced by an artificial valve. Most valves are made from a combination of metal and plastic materials. A leaking valve can also be replaced by an artificial valve. Occasionally a leaking mitral valve will not be replaced but may be repaired by stitching, using [sutures](#).

Valve surgery is performed under general anaesthetic. The surgeon makes an [incision](#) down the length of your breastbone – the **sternum** – to expose your heart. It may be necessary to use a bypass machine to pump the blood around your body during your operation – the same machine as in a [coronary artery bypass graft](#).

After the operation you will usually stay in hospital about a week. After your operation you will always need antibiotics if you require dental or other surgical procedures. Tell your dentist that you have had valve surgery. You may need to take an **anticoagulant** – [warfarin](#) – for the rest of your life to prevent your blood clotting.

Valve surgery has a high success rate but rarely it may be fatal. The risk is greater if your heart muscle has already been severely damaged or if you have another serious disease, eg chest or kidney disease. Occasionally a valve that has been widened using this technique can start to leak later on. The procedure may provide only a temporary improvement in the case of an aortic valve, as these valves often become restricted again. Surgery may be recommended should the symptoms recur. Your cardiac surgeon will discuss these risks fully with you before you decide to go ahead with the operation.

Valvuloplasty

This involves inflating a balloon inside a valve to widen it. Compare [Balloon angioplasty](#). Valvuloplasty is a painless procedure and is carried out under local anaesthetic. You may have to stay in hospital about three or four days.

If the valves in your heart have become restricted – **stenosed**, it may be possible to correct the problem without major heart surgery. **Valvuloplasty** involves inflating a balloon inside the valve to widen it. The balloon is on the end of a [catheter](#) that looks similar to the balloon catheter used for coronary angioplasty. However, this balloon is much longer and wider.

The valves usually considered for valvuloplasty are: the pulmonary valves in children; and the [mitral valve](#) in adults. The procedure cannot be used if the patient's valve has become thickened and rigid with deposits of calcium as the balloon will simply not be strong enough to break these deposits – as is sometimes the case in adults.

The cardiologist inserts a guide [catheter](#) through a small [incision](#) into the [femoral artery](#) in your groin and moves it up to your heart. A guide wire is then inserted through the guide catheter and across the narrowed valve. With the guide wire in place, the balloon catheter is threaded along it until the balloon is in the correct position. A small portion of the balloon is then inflated and passed across your valve. Once this has been done, the balloon will be locked in position by inflating it a little bit more. The main balloon will then be inflated and deflated until the opening of the leaflets of your valve has been significantly improved. The catheters and guide wire are then removed.

In most patients valvuloplasty is successful. However, a restricted valve can become blocked and threaten serious damage to your heart. This is rare, but if it does occur immediate valve surgery may be needed. It is important that you understand this and are prepared for it.

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