

Coronary Valve Replacement

What is coronary valve replacement surgery?

Coronary valve replacement surgery is an 'open' heart surgery procedure to replace heart valves that have become susceptible to heart valve disease, or are abnormal in some way. Valves are replaced with either biological (animal or human tissue) or man-made valves.

Who can benefit from coronary valve replacement surgery?

Individuals who have heart valve disease or endocarditis can hugely benefit from coronary valve replacement as the surgery can improve symptoms or completely eradicate damage resulting in greater quality of life. Birth defects that have not been immediately addressed may get worse and aging can weaken the valves. Both of these may also be reasons for undergoing coronary valve replacement surgery.

Procedure

There are four valves surrounding the heart, and the length of operation will depend on how many need to be replaced.

- **Traditional coronary valve replacement** - An incision will be made down the length of the breastbone in order to reach the heart. The heart is then stopped using medication, and the blood diverted to a heart-lung bypass machine to maintain circulation. The affected valve is then replaced and the heart re-started using electrical shocks. The sternum is closed using wires and the incision sewn up.
- **Minimally invasive surgery** - Minimally invasive surgery (also known as 'keyhole' surgery) is a less common procedure. This type of surgery avoids the need for an incision down the sternum and instead uses small incisions between the ribs that instruments can be passed through. The surgeon then uses a TV monitor in order to replace the affected valve.

Recovery period

You will need to stay in hospital for around one week. On returning home you can take painkillers to alleviate the pain, which you be present around the wound. The breastbone (sternum) will take around six weeks to heal, and you should avoid driving and strenuous activities during this time. You will also need to take several weeks off work.

Risks

Any surgical procedure carries risk; specific to coronary valve replacement, complications can include blood clotting (which may lead to a stroke or heart attack), infection, damage to the new valve and an irregular heart beat (usually temporary). There is also the risk of death during and after the operation, but this is very small. Your surgeon will go through all of the risks with you before undertaking any procedure.