

Valve repair and/or replacement Information for patients and their carers

Why do I need a valve replacement?

The heart is a highly specialised muscle in the body which pumps oxygenated blood to all the vital organs in the body. In order to do this it is separated into four chambers. Valves are specialised tissues which facilitate passage of blood between the chambers. Disease of the valves involves calcification which narrows the valve or degeneration or infection (endocarditis) which allows the valves to become leaky.

You may hear your cardiologist or surgeon refer to these as the aortic valve, the mitral valve, the tricuspid valve or the pulmonary valve. The picture below shows the heart open with the valves displayed. The heart has 4 valves:

- The mitral valve and tricuspid valve, which control blood flow from the atria to the ventricles
- The aortic valve and pulmonary valve, which control blood flow out of the ventricles

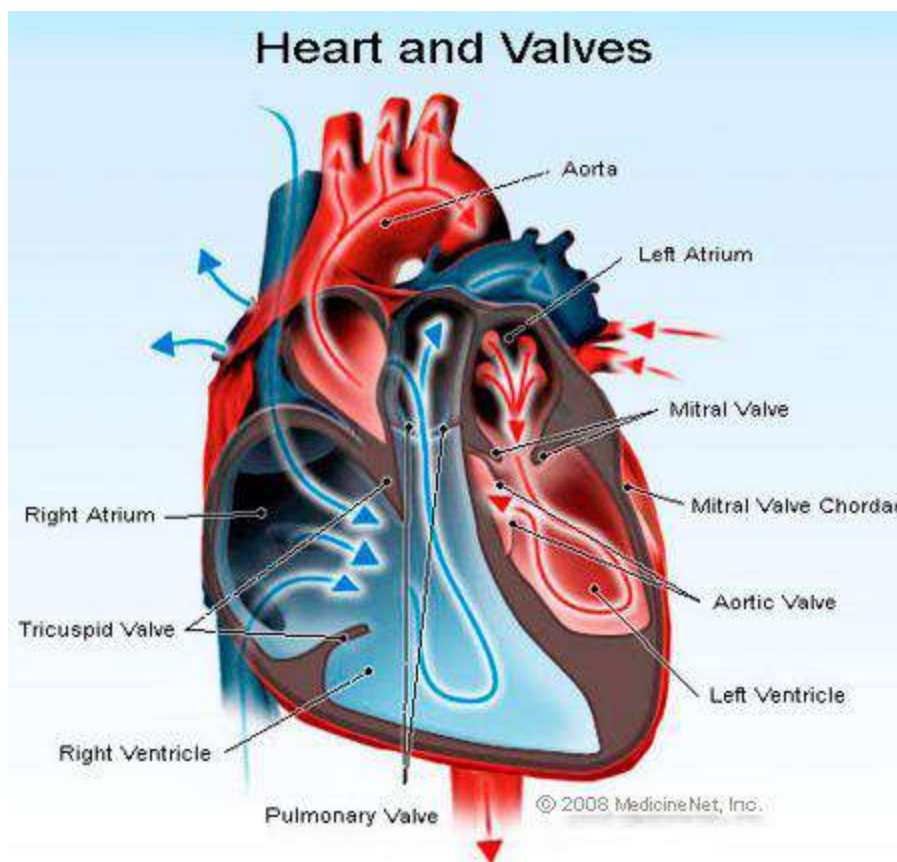


Figure 1: Diagram of the heart muscle and valves

What does valve repair/replacement involve?

Valve repair/replacement is the second commonest heart surgery performed not just in Northern Ireland but throughout the UK. From your perspective if you are to come in from home (elective procedure) you should expect to see your cardiac surgeon at the outpatient clinic anything up to 6 months before your surgery. Your case will have been discussed between you, your cardiologist and the cardiac surgeon and the when the time is right valve repair/replacement will be offered. Then you will attend pre-assessment where the rest of your past medical history will be looked at including your medication list and allergies. This is to allow for any further investigations or tests to be performed to help plan your operation correctly.

Normally then you should expect to be in hospital the day before the operation. You will be seen by nursing staff on the ward, the junior doctor, an anaesthetist (a doctor who gives an anaesthetic) and either the Consultant Cardiac Surgeon or his or her registrar. During this time you will have blood samples taken, a consent form signed and you will be prepared for surgery which involves shaving off body hair on the sites where incisions will be made and having a pre-operative shower. You will be fasted in preparation for surgery from a given time and after this we ask that you do not eat or drink. As part of the preparation for surgery you will be given a premedication which will make you feel sleepy and help you to relax as most patients are nervous at having this surgery.

What is my choice of valve replacement?

There are two main types of valves

- **Tissue Valves**

Made primarily from animal tissue [i.e., bovine pericardium (the sac surrounding a cow's heart), a pig's aortic (porcine) valve or human valves from cadavers]. These valves do not require you to take a tablet called Warfarin.



- **Mechanical valves**

Created from synthetic (man-made) materials. Requires you to take a tablet called Warfarin.

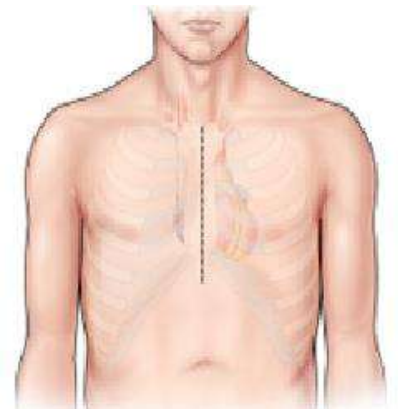


Is it better to have my valve repaired?

It is always better to have your valve repaired if it is technically possible and there is no leakage left after the repair. If the surgeon feels it is the best treatment strategy your valve will be repaired.

What is involved in the operation and what are the risks?

You should expect to have a midline scar down the centre of your chest and scars from the drains at the bottom of the wound



Please note some patients are re-explored on the night of surgery, in the region of 4-5% of patients and this is performed if there is a worry about the blood loss out of the drains after surgery. It is also common for you to have bad dreams or hallucinations after the operation. The doctor looking after you can give you medication for this and it is best to make sure you tell the staff looking after you if this happens.

What is the normal recovery?

Normally after surgery you will be monitored in intensive care. This means you leave theatre still under a general anaesthetic and on a ventilator. Once we are happy your heart is recovering and there is no need to return to theatre for blood loss, you will be woken up in the intensive care unit. You should expect to be monitored in the critical care environment for 24-48 hours before being transferred back to the ward. From there you will be encouraged to mobilise, taught how to support your breast bone when coughing and given physiotherapy to aid your rehabilitation. You will be weaned off morphine type painkillers onto more simple paracetamol and codeine and work-up in preparation for going home will be started.

Can I go home if I live alone?

We would normally recommend that someone stays with you for two weeks following heart surgery as you will have low iron stores and may need a hand with day to day activities. We ask that you look after your broken breast bone with no heavy lifting for three months until the bone is healed. If you do not have support please do not worry, we will arrange a placement close to your home for two weeks to aid your recovery. Please inform nursing staff on your admission and the ward social worker will speak with you.

Any questions?

If you are unsure about anything in this leaflet, or have any further questions please talk to.....