

Coronary Artery Bypass Surgery Information for patients and their carers

Why do I need coronary artery bypass grafting?

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 supplied by two main blood vessels or coronary arteries. You may hear your cardiologist or surgeon refer to these as the right and left coronary arteries. You may also hear them refer to the terms Left Anterior Descending, Circumflex, Diagonal, Posterior Descending or Left Ventricular Branch artery. These are all branches of the two main coronary arteries.

In patients with heart disease these blood vessels may become narrowed through a process that involves hardening and thickening of the arteries (called atherosclerosis). This can restrict the amount of blood entering the heart. When the heart muscle does not get enough oxygen-rich blood supply, the symptoms of angina (which is usually chest pain, chest tightness or shortness of breath) develop. On occasions the blood vessels may become completely blocked and cause a heart attack (also called a myocardial infarction). You are undergoing coronary artery bypass surgery, commonly referred to as CABG because it will give extra blood supply to the heart to improve the hearts ability to work. The aim is to relieve you of symptoms and in the majority of cases to reduce the chance of heart attack in the future and improve your life expectancy.

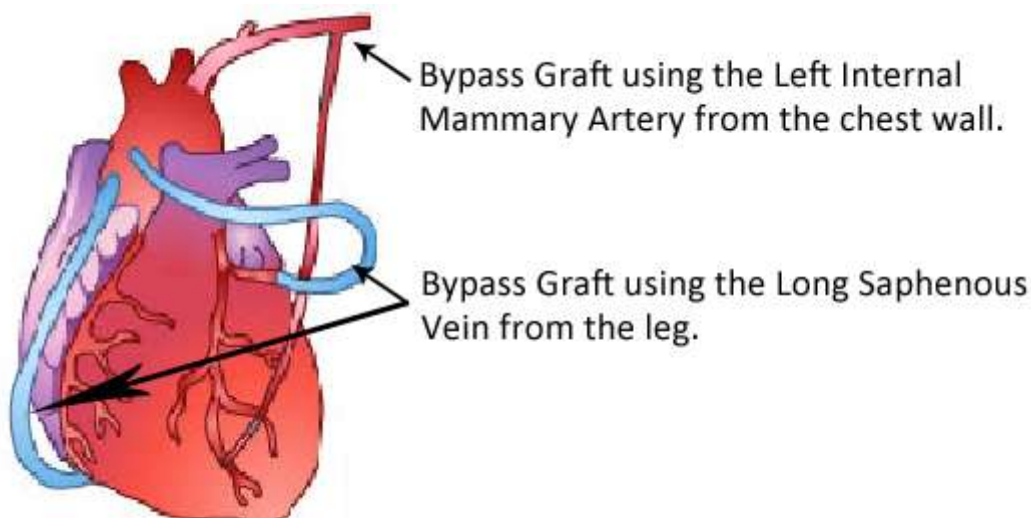


Figure 1: Diagram of the heart muscle after bypass surgery has been performed

What does coronary artery bypass grafting involve?

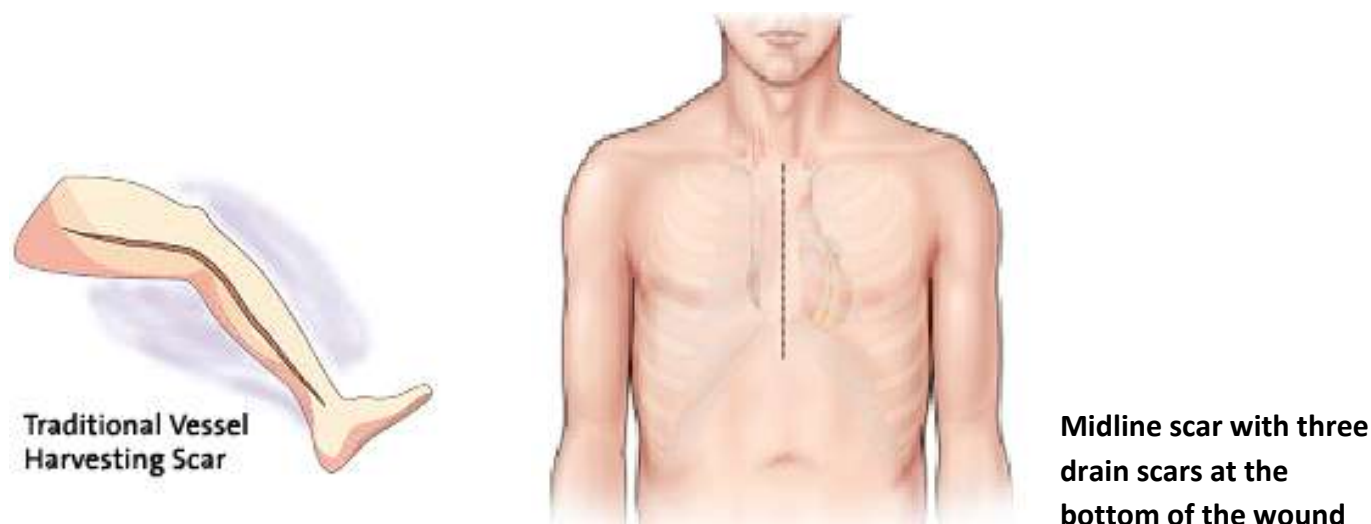
Coronary artery bypass graft surgery involves taking an artery or vein from either the leg, inside of the chest wall or arm and attaching (grafting) it to the diseased artery above and below the point of narrowing. This is what is shown in the diagram above. It is one of the commonest heart operations

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 best treatment option decided upon as bypass surgery. 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 scars and risks are involved in having coronary artery bypass surgery?

You should expect to have a midline scar down the centre of your chest and a scar in your leg, normally the inside of your left leg. After coronary artery bypass you will have drains placed and there will be incisions for these at the bottom of the midline incision, see below. If you need to have vein or artery harvest from your arm, this scar will also be present when you wake up.



The risks of having coronary artery bypass surgery are listed below but each patient will have an individual overall risk profile and your surgeon will be able to explain to you if you are overall at a higher or lower risk than most. The survival rate for patients having heart surgery in Belfast is excellent with nationally recorded data between 1st April 2009 and 31st March 2012 showing a survival rate of 97.77% for over 2500 patients operated on.

In general the risks of an operation like this are in the region of 1% and in order of severity are;

- Death
- Stroke
- Heart Attack
- Chest infection
- Kidney upset or failure
- Arrhythmias of the heart rhythm
- Impaired conduction system requiring a permanent pace maker
- Wound infection of either the chest or the leg wound
- Fluid around the heart or lungs requiring extra drain insertion after the operation.

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 so make sure you tell the staff looking after you if this happens.

What is the normal recovery?

Normally after coronary artery bypass surgery you will be monitored in intensive care. This means you leave theatre still under a general anaesthetic and on a ventilator. Once staff 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 mobilised, taught how to support 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 new bone is formed. 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.

When can I drive and go back to work?

You will be reviewed 6 weeks post-operatively. This appointment will be sent out by the appointments office and at this you will be assessed for driving and return to work. As a general rule you can drive once you feel able to tolerate an emergency stop and return to work should be graduated when you feel ready but is encouraged. Please remember that you should be fitter than before heart surgery as you will no longer have symptoms, so we encourage daily exercise and return to work as soon as you are able.

Any questions?

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