

Department of Cardiothoracic Surgery

Coronary Artery Bypass Grafting (CABG)

Information for patients



What is Coronary Artery Bypass Grafting

The coronary arteries carry blood and oxygen to the heart muscle. In people with coronary artery disease a fatty substance builds up in the walls of the arteries, making the space inside narrower. This makes it harder for the blood to pass through.

If the arteries become narrowed then the amount of oxygen delivered to the heart muscle may be reduced. This can cause chest pain, or other symptoms called angina, or lead to a heart attack.

The purpose of Coronary Artery Bypass Grafting (CABG) is to improve the flow of blood to the heart muscle. The surgeon uses sections of healthy vein or artery from the patient's own arm, leg or chest wall to go beyond (bypass) the narrowed segments of coronary artery and restore normal blood flow to the heart.

Benefits of Coronary Artery Bypass surgery

The benefits of CABG surgery vary from person to person. Your surgeon will discuss the expected benefits with you. CABG can:

- Reduce your angina
- Reduce the amount of medication you are taking
- Generally make you feel better
- Increase your chance of living longer

Bypass surgery cannot cure your coronary artery disease. It is possible to get new blockages. You can reduce this risk by stopping smoking, taking the tablets your doctor prescribes, adopting a healthy diet and exercising regularly.

What the operation involves

There are two stages to bypass surgery:

- **Stage 1** is where a healthy blood vessel (the graft) is removed from your leg, arm or chest wall.
- **Stage 2** your surgeon connects the healthy vessel to your coronary artery, 'bypassing' the diseased segment, and improving the blood supply to the heart.

To operate on your heart, the surgeon will use one of two techniques.

i) A heart-lung machine is used to circulate blood around the body, allowing the surgeon to operate on the heart.

or

ii) The 'beating heart' technique, where the surgery is performed while the heart is still beating and working. This is called 'off pump' surgery.

The operation usually takes between three and six hours.

Recovery after the operation

After the operation you will be taken to the Cardio Thoracic Critical Care Unit (CTCC) where we will give you intensive cardiothoracic and nursing care. You will normally be transferred to the Cardiothoracic Ward after 1-2 days. Most people stay in hospital for about 6-8 days in total. Full details of what happens during the recovery period, aftercare and rehabilitation are given in our booklet "Oxford Cardiac Surgery".

Risks of Coronary Artery Bypass Grafting

Assessing your individual risk of death and of complications

CABG surgery, like any other surgery, carries a risk of complications. The risk of complications varies from person to person and will depend on several factors including:

- Your age and sex
- Whether you are having additional surgery at the same time as your CABG
- Whether you have diabetes, lung problems, kidney damage or any significant problems with the circulation to your brain or legs
- The urgency of the operation
- Your weight
- Whether you are a smoker.

Your surgeon will take the above factors into account when assessing your individual risk.

Complications

Possible complications are:

- Death
- Stroke – which may be temporary or permanent
- Bleeding – you may need to be taken back to theatre to treat excessive bleeding.
- An irregular heart beat – this occurs in a third of patients and usually resolves in hospital with medication.
- A heart attack – on rare occasions during surgery the heart can suffer a heart attack
- Infection – this may involve the chest and leg or arm wounds, or the lungs, and will be treated with antibiotics.

- Pain – we will give you regular painkillers while you are in hospital and you may need painkillers for some weeks after your operation. You should tell your nurse straight away if you are in pain.
- Kidney problems. Bypass surgery can affect your kidney function. They usually recover within a few days.

All of these complications are uncommon and you should discuss your individual risk with your surgeon.

Alternatives to Coronary Artery Bypass Grafting

The alternatives to coronary artery bypass grafting are:

- Medical treatment
- Angioplasty – a procedure in which a doctor uses a tiny balloon to open up the narrowed parts of your arteries, which may be supported by placing a stent within the coronary artery.

Your cardiologist will have already discussed these alternatives, including the risks and benefits, with you and whether they are options for your specific condition and symptoms.

Consent

We will ask you for your written consent for the operation to go ahead. Your surgeon will discuss the risks, benefits and alternatives of the operation with you. If you have any questions, please talk to the doctor before you sign the consent form.

Further Information

If you have any questions, please ask your doctor or the nurses (see our contact details below). Further information may also be found at:

In our booklet 'Oxford Cardiac Surgery'

NHS Direct, Telephone 0845 4647, www.nhsdirect.nhs.uk

"Off-pump Coronary Artery Bypass" NHS National Institute for Clinical Excellence. January 2004. www.nice.org.uk (0870 1555 455 to order free copies)

British Heart Foundation booklet 10 'Coronary Angioplasty and Coronary Bypass Surgery' www.bhf.org.uk

How to contact us

If you have any queries or concerns, please do contact us:

Cardiac Surgery Preadmission and Discharge Liaison Nurses

01865 220274 (direct line)

01865 741166, ask for bleep 1184

Deputy Matron

01865 740418 (direct line)

01865 741166, ask for bleep 1185

Cardiothoracic Ward (CTW)

01865 2220565

References:

The information in this booklet is based on the following evidence-based material:

Coronary Artery Bypass. BMJ Best Treatments, September 2006.

Coronary Artery Bypass. NHS Direct. March 2006

If you need an interpreter or need a document in another language, large print, Braille or audio version, please call **01865 221473**. When we receive your call we may transfer you to an interpreter. This can take some time, so please be patient.

Sarah Malone / Jenny Mitchell / Mr C. Ratnatunga

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Oxford Radcliffe Hospitals NHS Trust

Oxford OX3 9DU

www.oxfordradcliffe.nhs.uk

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