Your Anaesthetic for Your Heart Operation

Information for Patients

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This booklet has been created to help you understand more about your anaesthetic and intensive care stay.

What is an anaesthetist?

An anaesthetist is a specialist doctor responsible for providing anaesthesia (controlled loss of consciousness) and pain management during and after your operation. They may also look after you in the intensive care unit.

Their primary role is to keep your body systems ‘stable’ and allow the surgery to be performed as efficiently and safely as possible. They also have a role in helping you understand the risks and benefits of your journey, particularly relating to anaesthesia and intensive care, to ensure this is the right plan for you.

Before your surgery

You will usually be admitted the day before your surgery. You will meet an anaesthetist that afternoon or evening who, along with you, will make a plan for your anaesthetic and intensive care stay.

Your medical conditions, medication, general health, investigation results and previous experiences of anaesthesia and/or intensive care are all relevant in guiding the best way to look after you. The anaesthetist will review all this information and might ask you for more details if needed.

Meeting the anaesthetist is an excellent opportunity to address any questions you have about your anaesthetic or intensive care stay. If you have any questions about the surgery itself, it's best to ask one of the surgical team, but if in doubt, the anaesthetist should be able to help provide an answer to these too.

You may also meet an anaesthetist as part of the pre-assessment process. In this instance, all the information from this appointment will be available to the anaesthetist looking after you on the day. You can of course still ask any questions you've thought of since that meeting.

Sedating ‘pre-medication’ are not routinely used as part of your anaesthetic. There is some evidence that these medications may increase confusion after an operation. If you are very anxious, you can talk to the anaesthetist about the relative risks and benefits of these.

Will the surgery always go ahead?

The vast majority of operations go ahead as planned. One of the roles of the anaesthetist is to ensure we are doing the operation in the safest possible way for you. This means maximizing the chances of a quick recovery and minimizing the risk of complications.

Occasionally, an acute illness (e.g. chest infection) or event may mean delaying your operation is the best way to ensure it is carried out safely. The urgency of your condition and your views are always taken into account.

The day of surgery

You will have met the anaesthetist the day before your surgery and they will have discussed an exact plan with you. This will include a plan for which medication to have on the day. This will also be documented on the computer system for the nursing staff so you don't need to remember it! If you are a person with diabetes using insulin, there should be a plan involving doses of this which has been discussed with you.

There are usually two 'cases' of heart surgery carried out in an operating theatre in a day. If your operation is scheduled as a 'morning case' you can normally eat up until midnight, drink as much 'clear fluid' as you wish until 06:00 and then have small sips of water occasionally until you are collected for your operation just after 08:00. If your operation is scheduled as an 'afternoon case' then you can have a 'light breakfast' (i.e. tea and toast) at 06:00 if you wish, clear fluid until 10:00 and then occasional sips of water until you are collected for your operation.

The reason for these 'fasting instructions' are to ensure your stomach is safely empty at the time of your anaesthetic. 'Clear fluid' means water or coffee/tea **without** milk. Sugary fizzy drinks are **not** included (e.g. lemonade).

In the anaesthetic room

You will meet the anaesthetist again in the anaesthetic room. This is next to the operating theatre and where you ‘go off to sleep’. The anaesthetist will have an assistant and may also have an anaesthetic registrar working with them.

The anaesthetist or assistant will check your details and your completed consent form.

Standard monitoring will be applied to your chest, hand and sometimes forehead. These just involve stickers.

They will place a ‘drip’ or ‘cannula’ in a vein (usually in your hand). This is how the initial anaesthetic is administered.

You will also a similar device (known as an arterial line) in one of your arteries (usually at the wrist or elbow). The arterial line allows your blood pressure to be monitored rapidly and accurately. It also allows sampling of your blood for tests without further needles.

Going ‘off to sleep’

You will be asked to breath in oxygen through a clear mask whilst the anaesthetic medicine is administered and you fall into a deep sleep. If you prefer, you can hold the mask yourself in most cases.

Once you are ‘under general anaesthetic’ (asleep), you will have some additional procedures. A breathing tube is placed into your windpipe (an endotracheal tube), a urinary catheter is placed into your bladder and a ‘central line’ is placed. The breathing tube allows you to be connected to the ventilator which breathes for you whilst you are under anaesthesia.

A central line is essentially a larger, longer cannula that sits in a large vein (usually in the neck but occasionally close to the shoulder or the groin). It is usually placed under ultrasound guidance to minimize the risk of any damage to other structures (such as arteries or the lungs).

In some cases you may also require a transoesophageal echocardiogram. This involves also inserting a tube into your oesophagus (gullet) while you are asleep. This can provide vital information to guide your surgery. All these procedures can have minor to serious complications, but overall, they are either essential or make your operation safer. The anaesthetist will have an individualised discussion about these with you and ensure you have all the information you need for you to be happy with the plan.

Into the operating theatre

You will be ‘asleep’ at this time. The surgeon and anaesthetist will work as a team to ensure your surgery and anaesthetic are conducted safely and efficiently.

The anaesthetist uses a variety of monitors to ensure you are ‘asleep’ and ‘stable’ during your procedure.

What happens after your operation?

You will be transferred to the Cardiac Intensive Care Unit (CICU, Ward 111) whilst still ‘asleep’. You will be kept ‘asleep’ for a short period (usually about 2 hours) until it is felt safe to wake you up. This is to ensure you do not need immediate further surgery (rare), that your heart and lung function is suitable to breath for yourself and that you are not very confused or agitated which can make keeping you safe more difficult. Most people are awoken at this point but occasionally people need to stay ‘asleep’ overnight or possibly longer. This is more likely where you have having very extensive surgery, you are very unwell before the operation or have the most serious health conditions. The anaesthetist can guide you on the likelihood of this.

You will then usually receive a strong pain killer from a pump called a PCA (Patient Controlled Analgesia). You can control this yourself once sufficiently awake but the nurse looking after you will guide you initially. Once your chest drains are removed, usually the first day after your operation, you will be switched to strong pain killers in oral form. These pain killers are effective, but have significant side effects, commonly constipation, nausea and vomiting, drowsiness, and itch. We therefore try to reduce and then stop these after a few days. It is important that pain does not limit you from coughing, breathing deeply and moving around (initially under the guidance of the clinical team). If it does, let one of the team know so that we can address it.

Below is a typical ICU bed

Why might my stay in intensive care be prolonged?

Bleeding and re-operation. Some bleeding into your drains is expected. It may result in you needing blood transfusions. Some patients have to return to theatre to check for new bleeding points which can develop after major surgery.

Lung support. It is routine to require some additional oxygen through a mask once the breathing tube has been removed. Some people will need more oxygen and for longer. Some people may need more lung support and so may need to stay on a ventilator for longer. If you need to stay on a ventilator for more than a week, it may be suggested you have a tracheostomy (temporary tube through the front of the neck) to allow you to be more awake whilst the ventilator support is slowly reduced.

Blood pressure and heart function support. It is very common to need some support for your heart function or blood pressure, in the form of a drug infusion, immediately after your operation. These can usually be weaned quite quickly. Some patients need a special pump (an intra-aortic balloon pump) to help the heart after surgery, particularly if the heart was weak before or during the operation. In very occasional circumstances, a patient may need to remain on a system called ECMO (Extracorporeal Membrane Oxygenation). This is similar to the heart-lung machine used during much of heart surgery. Both these therapies have significant risks and won't be used unless absolutely necessary.

Heart rhythm support. Temporary pacing wires are often placed at the time of surgery. These allow the heart rate to be set artificially, if needed, immediately after the operation. These are usually removed around 4 days after your operation. They are easily removed without a further operation or anaesthetic. Some people who have a prolonged slow or unstable heart rhythm may need a permanent pacemaker. This can happen during your stay in hospital if needed.

Kidney support. Some people will need support for their kidneys after an operation. A dialysis machine can be used to perform some of the functions of the kidneys if needed. This is usually temporary.

Delirium. This is a temporary state of confusion and/or agitation. It can involve feeling paranoid and having hallucinations (seeing or hearing things that aren't real). This can be distressing for patients and relatives. If you think you or a relative are experiencing these symptoms, then please let a member of the team know. It usually settles in a few days but medication can be used to help with the symptoms.

The likelihood of needing these additional supports and having a longer stay in the intensive care unit can be roughly assessed based on your medical conditions, surgery and baseline health. For example, if you have significant lung disease like COPD, your risk of needing more lung support is higher. Similarly, if you have pre-existing significant kidney disease, your likelihood of needing dialysis is higher. Rare events within surgery can also lead to the need for these supports where not normally expected.

You can speak to your anaesthetist and surgeon to ensure you have an individualised assessment and the right amount of information on these risks for you to be happy with your plan.

What happens after ICU?

Many patients will spend just one evening in the Cardiac Intensive Care Unit (ward 111) and will return to the standard cardiac surgical ward (ward 102) on the day after their surgery. Some patients will need to stay on Ward 111 for longer. Some patients, who are in between, will move to the Cardiac High Dependency Unit (Ward 112). These patients are generally making good progress but not quite ready for the ward.

Most people having heart surgery have a good result but there are inherent risks. The main role of this booklet is to ensure you understand the process, risks and benefits relating to anaesthesia and intensive care. Different people like different amounts of information. We aim to ensure you are empowered to get the right amount of information for **you** to be happy with your decision.

It's OK to Ask

When you understand what's going on with your health, you can make better decisions around your care and treatment.

www.nhsinform.scot/campaigns/its-ok-to-ask/

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Additional Resources

Your anaesthetic for heart surgery.A leaflet from the Royal College of Anaesthetists available at;

www.rcoa.ac.uk/sites/default/files/documents/2020-01/11-HeartSurgeryweb.pdf

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