

Anaesthesia for Heart Surgery

This leaflet will explain more about your anaesthetic pathway: before, during and after your cardiac surgery. At St George's Hospital (SGH) there are 900-1,000 heart operations performed each year and the anaesthetist will play a significant role during your patient journey.

When do I meet the anaesthetist?

Most of the patients who are having planned heart surgery are admitted to hospital the day before the operation. The anaesthetist will see you either on the day of admission or the morning before the operation. Your anaesthetist will come and find you on the ward, usually Benjamin Weir (BW) ward in the Atkinson Morley Wing (AMW) of SGH.

Where do I need to go?

On the day of your admission you will go to BW ward on the first floor of AMW at the time stated in the accompanying letter. This is not the time of your procedure, but allows extra time for you to be seen by your surgeon, anaesthetist and other members of the team.

Who is the anaesthetist?

Anaesthetists are doctors who form the largest hospital medical specialty and their skills are used in many aspects of the patient journey during an admission. Your anaesthetist will be specialised in cardiothoracic anaesthesia and in addition may also be specialised in intensive care medicine. They spend the majority of their time anaesthetising patients undergoing heart surgery and looking after these patients in the cardiothoracic intensive care unit (CTICU). Cardiac anaesthetists are trained to use special monitoring equipment during heart operations and to provide ultrasound examinations of the heart called transoesophageal echocardiography (TOE).

Whilst there will be a consultant anaesthetist allocated to your list, an anaesthetic registrar may also be involved in your care during your hospital stay.

Preoperatively, your anaesthetist will perform a preoperative anaesthetic assessment when they meet with you (see below).

Intraoperatively, your anaesthetist will induce anaesthesia in the anaesthetic room and maintain anaesthesia during surgery in the operating room (see below).

Postoperatively, anaesthetists form the majority of intensive care consultants and will be involved in your care within the CTICU.

What is General Anaesthesia?

General anaesthesia (GA) is a triad of unconsciousness, analgesia and amnesia. During your operation you won't be aware of what is going on around you (unconscious), you won't feel any

sensation or pain due to the operation (analgesia) and you won't be able to recollect any memories of the operation (amnesia).

Before coming to hospital

- If you smoke you should give up for at least several weeks before surgery and certainly not smoke on the day of an operation. It will reduce the risk of perioperative complications. The longer you can give up the better it is.
- If you have loose teeth or crowns see your dentist in order to reduce the risk of dental damage during anaesthesia.
- If you feel unwell, e.g. have a temperature or cough and cold, please telephone us before you come in to get some advice.
- You should have clear instructions with regard to what food and drink you can have. In general you can eat food up to six hours before having a GA and drink only clear fluids until two hours before.
- You should have clear instructions from your surgical team about what medications you should omit prior to surgery, particularly medicines that affect your coagulation and some blood pressure medications.

Anaesthetic assessment

Once your anaesthetist has reviewed your surgical preoperative assessment, he will discuss all aspects of your GA and the risks of anaesthesia with you. You will be asked about your general health and past medical history. In particular you will be asked about:

- medical issues such as diabetes, blood pressure, respiratory problems and of course a detailed cardiac history.
- previous GAs and operations.
- dental, neck and airway issues including an examination of the airway.
- post-operative care in the CTICU.

The preoperative anaesthetic assessment is an opportunity for you to ask any questions that you may have about your anaesthetic.

In the anaesthetic room

If you are a morning case at 8 am a nurse will walk with you to the anaesthetic room.

If you are an afternoon case then this will occur in the early afternoon. There are usually two heart operations per day in each theatre with operations taking around 4-5 hours. The ward nurse will formally hand over your care to the anaesthetic team in the anaesthetic room.

The anaesthetic team consists of a consultant anaesthetist, an Operation Department Practitioner (ODP) and an anaesthetic registrar. The formal handover will include confirming your identity and the site and type of heart surgery to which you have consented.

The team will monitor your heart rate, blood pressure (BP) and oxygen saturations. Prior to the administration of the GA, the anaesthetist will insert a cannula into a vein in the back of your hand or arm using local anaesthetic. This cannula will be used to administer fluids and anaesthetic medications. Following this your anaesthetist will insert another cannula into an artery in your wrist, again using local anaesthetic. The second cannula will be used to continuously monitor your BP throughout your operation and in the CTICU post-operatively.

Oxygen will then be given via a face mask and an anaesthetic drug will be given intravenously.

Once you are anaesthetised, a breathing tube will be placed into your trachea and another venous cannula will be placed into your neck vein. You will not be aware of this as you will be under GA. If a TOE is required for your surgery (usually all valvular heart surgery), your anaesthetist will insert this into your oesophagus at this point.

During surgery

The anaesthetist will maintain your GA by giving you anaesthetic medications throughout the operation. This will ensure that you are unconscious throughout the operation.

As well as maintaining your GA, the anaesthetist will monitor your vital parameters (breathing, heart activity, temperature, total body blood supply, blood biochemistry). If you are having valvular surgery your heart will be continuously monitored with a TOE, which is an echocardiography device that sits in your oesophagus.

If you require any blood or blood products during your surgery, this will be administered by your anaesthetist.

The anaesthetic team will transfer you to CTICU at the end of surgery and hand over your care to the intensive care team. You will still be asleep at this stage.

CTICU post-operatively

The CTICU team is made up of a number of CTICU nurses, intensive care registrars and a CTICU consultant, who is usually one of the consultant cardiac anaesthetists. You will still be asleep under GA when admitted to CTICU where you will be monitored. Usually you will be woken up 2-4 hours post-operatively and you will usually spend one night in the CTICU before being discharged to the ward the following day where you will be under the care of your surgical team.

Your relatives are allowed to visit you during your CTICU admission. They should liaise with the CTICU nursing staff prior to visiting.

Risks and complications of general anaesthesia:

These will be discussed at your anaesthetic pre-operative assessment.

1. Postoperative nausea (sickness) and vomiting (PONV).

Following general anaesthesia it is possible to have postoperative nausea and vomiting, therefore you will be given regular anti-sickness medications postoperatively. This is a common complication and can last from a few hours to several days.

2. Aspiration.

Before the operation you will be "nil by mouth" (NBM) meaning that you will be given specific fasting instructions by the anaesthetist and the nurse staff on the ward. The reason why you need to be NBM is because of life threatening complications due to the accidental passage of the gastric content into the lungs (aspiration) which could lead to a severe inflammatory reaction of your lungs leading to acute respiratory failure (aspiration pneumonitis). This is a very rare complication of elective planned surgery.

3. Dental damage, oral soft tissue injury, sore throat.

During the insertion of the breathing tube into your mouth your teeth, lips or tongue can be damaged. Once the operation is finished and the tube is out you might have a sore throat or hoarse voice. This is a common occurrence following a GA.

4. Dizziness and feeling faint.

Your anaesthetic may lower your BP and you might feel dizzy. This may also be caused by dehydration (when you have not been able to drink enough fluids). If needed, fluids or drugs will be given into your cannula to treat this.

5. Shivering

You might shiver after your operation because of the effect of the anaesthetic. Generally a hot air blanket is used to warm you.

6. Confusion or memory loss.

This might occur among elderly patients after GA and due to various causes. It is generally temporary.

7. Risk of central venous line insertion.

A potential risk of the insertion of the central venous line in your neck is the damage of the surrounding structures such as the carotid artery with risk of bleeding and the pleural space with risk of pneumothorax. These complications are very rare.

8. Risk of TOE probe insertion.

During the insertion of the TOE into your stomach, oesophageal damage may occur. This is a very rare complication.

9. Allergic reactions.

Minor or severe allergic reactions can occur during the administration of any medication with potential life threatening consequences. This is a very rare complication.

10. Awareness.

Accidental awareness during general anaesthesia occurs rarely but is often something patients worry about pre-operatively. It is very rare (1 in 19,000) but historical data may suggest that it is slightly higher during cardiac surgery (1 in 10,000).

11. Bleeding, Transfusion.

Nowadays blood transfusions are very safe as they are screened for viral infections such as hepatitis and HIV. There is also a very small risk of blood reactions due to incompatibility with your blood which can lead to cardiovascular collapse or organ dysfunction. These complications are extremely rare.

12. Death.

Deaths caused by anaesthesia are extremely rare. There are probably about five deaths for every million anaesthetics given in the UK.

In addition to the risks described above, you will be informed about the risks and complications of surgery by the surgeon before the operation. Some of these complications may become evident during your admission to the CTICU where any organ dysfunction will be treated.

Contact us

If you have any questions or concerns about your admission, you can contact us using the details on the accompanying letter.

For more information leaflets on conditions, procedures, treatments and services offered at our hospitals, please visit www.stgeorges.nhs.uk

Additional services

Patient Advice and Liaison Service (PALS)

PALS can offer you on-the-spot advice and information when you have comments or concerns about our services or the care you have received. You can visit the PALS office between 9.30am and 4.30pm, Monday to Friday in the main corridor between Grosvenor and Lanesborough Wing (near the lift foyer).

Tel: 020 8725 2453 **Email:** pals@stgeorges.nhs.uk

NHS Choices

NHS Choices provides online information and guidance on all aspects of health and healthcare, to help you make decisions about your health.

Web: www.nhs.uk

NHS 111

You can call 111 when you need medical help fast but it's not a 999 emergency. NHS 111 is available 24 hours a day, 365 days a year. Calls are free from landlines and mobile phones.

Tel: 111



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