

Your child's general anaesthetic

- information for families about what will happen, the potential side effects, and the risks involved

This information sheet from Great Ormond Street Hospital (GOSH) explains what to expect when your child comes for their operation or procedure under a general anaesthetic. It describes what will happen before, during and after an anaesthetic, and also explains the side effects and risks of a general anaesthetic.

A **general anaesthetic** involves giving medicines so that that your child will be unconscious and free of pain during an operation or procedure.

Anaesthetists are specialist doctors who give the anaesthetic medicines and look after the health of your child during surgery and recovery. They are also closely involved with your child's pain relief after surgery.

On the day of your child's procedure

We will give you clear instructions about when to stop your child from eating and drinking. It is important for you and your child to follow these. If there is food or liquid in your child's stomach during the anaesthetic, it could come up into the back of the throat and go down into their lungs.

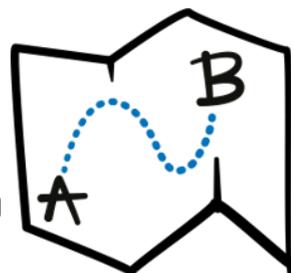
Your child should take their usual medicines on the day of surgery, unless you have had instructions not to do this.

When you arrive at the hospital, your child will be weighed and measured. A nurse will check their temperature, pulse and breathing rate, and measure their oxygen levels and blood pressure.

It is standard practice to do a pregnancy test for any girl aged 12 years old or more by collecting a urine sample. Please ask your daughter (if she is 12 or older) not to have a wee on arrival at the hospital without talking to the nursing staff first. Please see the Royal College of Paediatrics and Child Health website if you want more information:

<https://www.rcpch.ac.uk/resources/pre-procedure-pregnancy-checking-under-16s-guidance-clinicians>

An anaesthetist will visit you before the procedure to discuss your child's anaesthetic. This will happen even if you have already been seen in the Anaesthetic Pre-Operative Assessment clinic (APOA).



Preparing for an anaesthetic

The anaesthetist will ask you about your child's health and previous experiences of anaesthesia. This is a good time to talk about any particular worries you or your child may have about the anaesthetic. You may find it helpful to make a list of questions in advance that you want to ask.

If your child or other members of your family have had any previous difficulties with an anaesthetic, it is really important to tell the anaesthetist, and to bring any information about this that your family has.

Depending on the type of surgery your child is having, the anaesthetist may also be able to numb nerves with a local anaesthetic injection while your child is asleep to help with their pain relief afterwards. The anaesthetist will talk to you about the best type of pain relief for your child.

Premedication ('pre-med')

These are medicines that are given before an anaesthetic. These can include pain-relief medicines or extra treatment for conditions such as asthma (please bring inhalers if your child has them).

The anaesthetist may also discuss giving sedative medicine to help your child relax. These are not always given as they can make children drowsy after the operation, but can be helpful if a child is particularly anxious. Please ask APOA or your anaesthetist if you think this would help your child, or if any of the following apply:

- if either you or your child is very anxious about their procedure, or if they have been very upset about an anaesthetic in the past
- if your child has ever refused or spat out a sedative pre-med
- or if your child has had restraint for a procedure in the past.

Knowing about this in advance will help us to plan together to make your child's experience as good as possible.

Local anaesthetic cream

Many children will have 'magic cream' put on the back of their hands and covered with a clear dressing. This is a local anaesthetic cream (usually either 'Ametop' or 'EMLA') which numbs the skin to minimise any pain when a cannula is placed in your child's hand or arm (a cannula is a thin plastic tube that allows us to give medicines into a vein). The cream works well in nine out of ten children. If the cream cannot be used, a cold spray can be used instead.

Going to the operating theatre

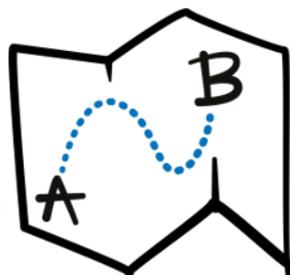
We will give you a gown for your child to wear when going to the operating theatre. If your child will be upset about wearing the gown, they may be able to wear their own clothes or pyjamas. They can wear a nappy or pull ups as needed. Your nurse will advise you what underwear can be worn.

Your child's anaesthetic

A nurse from the ward will accompany you and your child to the anaesthetic room. Your child will be able to take a toy or comforter. Mobile phones or tablets can be particularly useful to distract children with games or favourite films.

If you would like to, you are welcome to stay with your child to support them while they are given the anaesthetic. If you are feeling very anxious yourself, you do not have to do this. Another adult family member, a ward nurse, or a play therapist could go along instead.

The anaesthetic may be started while your child is lying on a trolley. Smaller children may be



anaesthetised sitting on your lap. Staff would then help you to lift them onto the trolley.

The anaesthetist will either use gas from a facemask or tubing, or inject a medicine through a cannula to start the anaesthetic. This will have been discussed with you beforehand, although sometimes the plan may need to change if your child is not able to cooperate.

Most older children have an injection through a cannula in their hand or arm. If a cannula is used, your child will normally become unconscious and floppy very quickly. Sometimes the injection can feel cold or prickly in the arm. The anaesthetist will then use a mask to continue the anaesthetic and provide extra oxygen for safety.

If the anaesthetic is started with gas, the anaesthetist generally uses a mask to give the gas, or they may pass the gas through a cupped hand placed gently near your child's nose and mouth. Anaesthetic gases smell a bit like felt-tip pens.

It usually takes a little while (anything from few seconds to a couple of minutes) for the anaesthetic to take effect. It is quite normal for children to become restless during this time or for their breathing to sound different. They may even snore loudly. Staff will help you hold your child gently but firmly.

It is normal to feel upset at seeing your child be anaesthetised. The nurse who has come with you from the ward is there to support you. As soon as your child is asleep, they will take you back to the ward to allow the anaesthetic team to care for your child.

What happens next?

When your child is asleep, the anaesthetist will usually place a breathing tube in their airway to help their breathing. The anaesthetist will also insert any more cannulas that are needed and may perform other procedures, as discussed with

you beforehand. Your child will then be taken into the operating theatre to have their operation or procedure.

An anaesthetist will stay with your child throughout the procedure and will monitor your child's blood pressure, pulse, breathing and oxygen levels closely, to help them stay safe and fully anaesthetised.

Now is a good time to go and have something to eat and drink yourself, but let the staff know that you are going, and provide them with your mobile phone number.

After the operation

Most children wake up in the recovery room. The anaesthetist is close by and will help if needed. Your child will have a bandage over the cannula in their hand, arm, or foot to keep it safe and out of sight while they wake up.

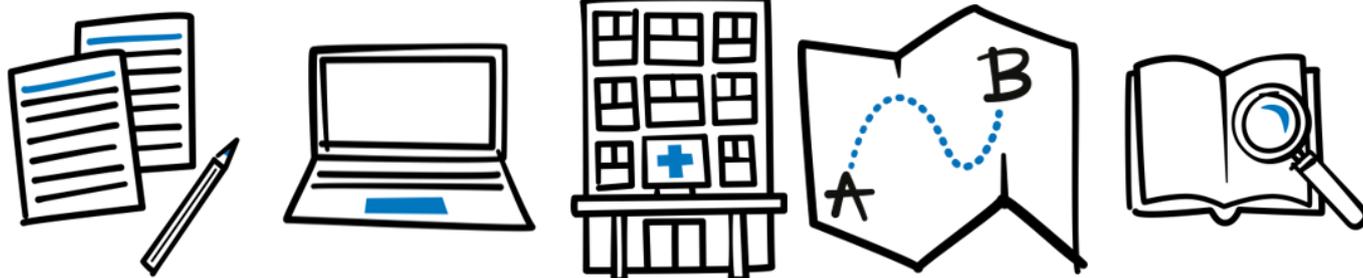
Each child is cared for by a specialist recovery nurse (or practitioner) who will check that your child is comfortable. They will give extra pain relief and anti-sickness medicines if needed. You will be called to be with your child at an appropriate point during the waking up process.

Going home

It may be possible for your child to return home on the day of the operation or procedure if the surgeon and anaesthetist are happy that this is a safe option and that your child is recovering well.

You will be given advice about how to give pain-relief medicines at home. You should follow this advice carefully.

Some children feel sick or may be sick on the journey home. It is useful to be prepared for this. If you are taking your child home on the day of the operation, you will be given advice as to what to do if you have concerns about your child at home.



Risks and side effects

Modern anaesthesia is generally very safe. Most children recover quickly and are soon back to their usual activities after an anaesthetic. Some side effects are common, and although serious problems are rare, it is important to be aware that they can occur.

Common side effects

It is very common to have some side effects after an anaesthetic. Feeling hungry or thirsty, having a headache or nausea (feeling sick, sometimes with vomiting), and a sore throat are the most common. These are generally mild and can usually be treated effectively. Minor grazes to the lips are also common.

Other side effects include tiredness, dizziness, and confusion on waking. These generally just need time to wear off.

Younger children particularly can be very upset or even angry immediately after an anaesthetic. When this happens, it can last up to about an hour but will usually settle by itself.

Anxiety and behaviour change

It is very common for children to be apprehensive or anxious about having an anaesthetic. Explanation and reassurance can help with this.

Some children's behaviour may change for a period after coming to hospital for a procedure – they may have separation anxiety, temper tantrums, eating disturbances, or sleep disturbances (this could include bed wetting or nightmares). These will generally settle in a few weeks, although for some children this can take longer.

Children who have multiple procedures and experience significant anxiety are more likely to

experience disturbances in emotions and behaviour for longer.

For more information, please see the separate information sheet, 'Emotional and Behavioural Changes after Surgery.' This is available on the GOSH website, or from the Anaesthetic Pre-Operative Assessment clinic (APOA).

Awareness during an anaesthetic

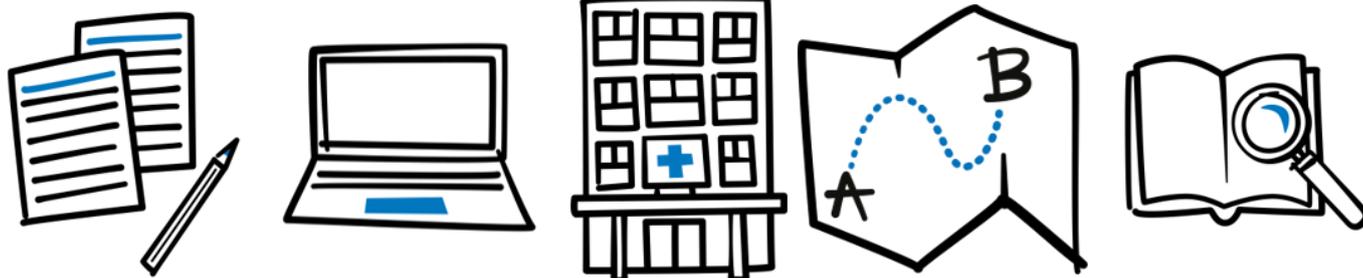
People often worry about the risk of awareness (being awake) during anaesthesia. This can happen in children but it is uncommon. When it does happen, it is usually an awareness of sounds or of touch that is not painful. It is rare for children to be upset by an episode of awareness, or to have subsequent ongoing distress. A large national study has shown that is very rare for a child to report a painful, distressing experience under anaesthesia.

For more information, please see the separate information sheet, 'Accidental Awareness during General Anaesthesia.' This is available on the GOSH website, or from the Anaesthetic Pre-Operative Assessment clinic (APOA).

Serious risks of anaesthesia

Serious problems are uncommon. These include damage to teeth, an allergic or other reaction to a medicine, or breathing difficulties - either during or after an anaesthetic. If a child does need more support with breathing, maintaining their blood pressure, or anything else after their anaesthetic, there is an Intensive Care Unit in the hospital where they would be looked after.

Very serious problems are rare. These include severe allergic or other reactions to a medicine, or injury to nerves. Nerve injury from an operation or procedure can cause numbness and/or weakness (this usually gets better over days or weeks but



can be long-term), visual loss, or, very rarely, hearing loss.

The most serious problems associated with anaesthesia are usually very rare indeed. Until recently these very rare risks were not routinely discussed. The General Medical Council (GMC) have updated their guidelines, and they are clear that we should make parents and older children aware of any risk of serious harm, however unlikely it is to occur.

These most serious harms can potentially involve brain damage, disability, or death. However, it is very rare for a problem related to anaesthesia to result in brain damage (which can lead to serious long-term disability), and it is extremely rare for a child to die. Deaths that do occur around the time of surgery are not usually directly caused by the anaesthetic but by other problems connected with the child's health or the operation they are having. The risk of death due to a general anaesthetic for a child who is otherwise healthy is thought to be somewhere between 1 in 100,000 and 1 in a million. This is similar to the lifetime risk of being killed by lightning.

In babies and in children with underlying health conditions, the risks may be substantially higher. This is particularly the case for children with significant heart disease.

If you are concerned about this, or want to discuss this or anything else in more detail, please ask us at your appointment with the Anaesthetic Pre-Operative Assessment clinic (APOA). We can also discuss any other worries or concerns you may have.

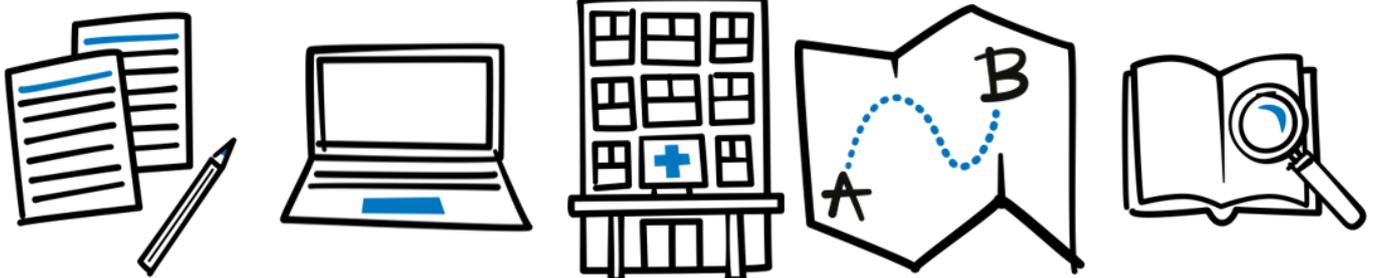
Additional information

There is ongoing research into possible long-term effects of anaesthesia in babies and very young children. At present there is no strong evidence that anaesthetics are harmful to development.

Anaesthetists are highly trained to avoid, anticipate and treat any problems that may arise. Risks cannot be removed completely but modern equipment, training and medicines continue to make anaesthesia safer.

An anaesthetist will be with your child throughout their anaesthetic to monitor their progress and to help them to wake up as comfortable as possible.

Risks should always be balanced against the overall importance of having a procedure or surgery.



Understanding risk

Risks are a normal part of life. Decisions we make every day involve balancing risk and benefit. For example: Should I cross the road here (quicker but more risky)? Or should I walk to the zebra crossing (safer but slower)?

Your decision will depend on many things. How busy is the road? Are you alone, or do you have your children with you? Are you in a hurry? As well as how you feel about taking risks generally.

Having a procedure or operation under general anaesthetic is no different. It will involve hoped-for benefits but will also involve some side effects and risks. You have to balance the potential benefits against the risks in order to come to your own decision. This leaflet is designed to help you with this by giving you information about anaesthesia.

Describing risks

People vary in how they interpret words and numbers. In this information sheet, we have linked numbers to words. For example, when it says that feeling thirsty after an anaesthetic is very common – you know that it means that the chance of feeling thirsty is more than 1 in 10. The definitions we have used are below, along with examples from everyday life:

Very Common - more likely than a 1 in 10 chance of happening

*For example, when flipping a coin, it is **very common** for it to land on 'Heads' (1 in 2)*

Common - less likely than 1 in 10, but more likely than 1 in 100

*For example, it is **common** for a pregnancy to be twins (1 in 65)*

Uncommon - less likely than 1 in 100, but more likely than 1 in 1,000

*For example, it would be **uncommon** for your child to have the same birthday as their anaesthetist (1 in 365)*

Rare - less likely than 1 in 1,000, but more likely than 1 in 10,000

*For example, it is **rare** for a pregnancy to be triplets (1 in 5,000)*

Very rare - less likely than 1 in 10,000, but more likely than 1 in 100,000

*For example, it would be **very rare** to be killed in a road traffic accident in a 12-month period (1 in 32,000 in the UK)*

Extremely rare - less likely than 1 in 100,000

*For example, it would be **extremely rare** to be killed by lightning in the UK (1 in 200,000 lifetime risk)*

More exact numbers are used in some places, to give you the best information available.

This information sheet includes text taken from the Royal College of Anaesthetists (RCoA) publication, 'Your child's general anaesthetic (2020)' but the RCoA has not reviewed this information sheet as a whole.

