

Your Child's General Anaesthetic



Information for Parents and Guardians

Developed by the Department of Anaesthesiology

Sláinte Leanaí Éireann



Children's Health Ireland

Plain
English
Approved by NALA

About the booklet

This booklet has information to help you understand what is involved in your child's planned visit to the hospital for an operation or a scan that requires general anaesthesia.

It answers some common questions parents and guardians ask us, so we hope you find the answers to these questions useful and reassuring.



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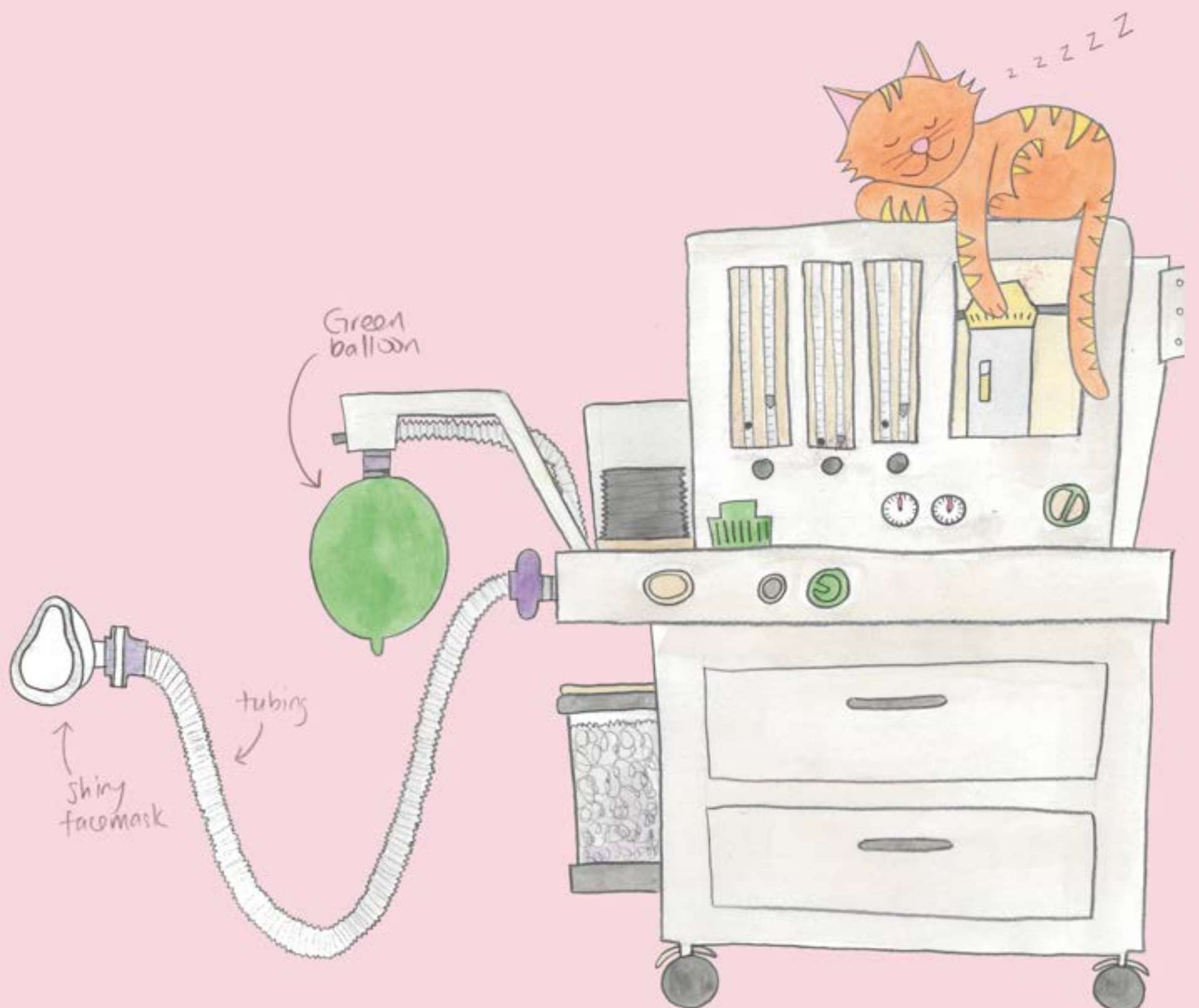
1. What is anaesthesia?

Anaesthesia is a special (kind of) sleep that allows an operation and other medical procedures to be carried out safely and without pain.

The word anaesthesia means ‘loss of sensation’.

The anaesthetist gives your child special anaesthetic medicines to cause unconsciousness or ‘induced sleep’. These medicines temporarily stop the nerve signals that normally keep your child awake from reaching the brain. This is known as a **“general anaesthetic”**.

While your child is in this state of induced (brought on) sleep, operations, or procedures like a scan can be carried out without your child feeling anything. After the anaesthetic has worn off, the nerve signals will be able to reach your child’s brain once more, and consciousness and feeling will return.



About a general anaesthetic

There are two ways to give medicines to induce anaesthetic sleep using a general anaesthetic.

The first, more commonly used option in children, is called a **“gas induction”**. This is when the child breathes anaesthetic gas through a clear mask that is attached through tubing to a balloon. The gas smells a little like colouring markers. It takes about 30 seconds for a child to go asleep once they start breathing the anaesthetic gas.

The second option is when different anaesthetic medicines are given as an injection through a cannula (a small plastic straw that goes over the needle into a vein under your child’s skin). This is called **“intravenous or IV anaesthesia”**.

Sometimes we also use a local or regional anaesthetic

In addition to general anaesthesia, anaesthetists sometimes also use a local or regional anaesthetic “nerve block”. This is where a different type of anaesthetic medicine is injected to numb just one part of the body. The medicine temporarily blocks the pain signals that pass along nerves. By injecting a local anaesthetic medicine near the nerves that are likely to cause pain after the operation, nerve blocks can be used to numb almost any area of the body that is operated on. After a child's operation, the medicine can be really helpful in improving pain relief after an operation.

Nerve blocks in children are mostly used in combination with a general anaesthetic. So we give the nerve block while a child is asleep as this helps reduce pain after operation.

Sometimes, we temporarily leave a catheter (tiny tube) in place beside the nerve. This allows us to give the local anaesthetic continuously, usually 24 – 48 hours after the operation. We take the tube or catheter out after this. It doesn't hurt.

The nerve block will provide targeted pain relief that will last for many hours after the operation, and often reduces the need for other pain relief. From experience, we believe that regional nerve blocks often improve the experience of children after an operation.

Alternative to general anaesthesia

Instead of anaesthesia, **sedation** may be used where appropriate for scans or other tests. With sedation, your child will be sleepy, relaxed, pain free and awake. A healthcare professional, usually a nurse trained in giving sedation, will give your child the sedative.

An anaesthesiologist or nurse trained in giving sedation will give your child the sedative.



2. What does an anaesthesiologist / anaesthetist do?

Anaesthesiologists are specialist doctors who are responsible for safely providing anaesthesia to your child for operations and procedures. They are closely involved in your child's pain management after an operation, and some anaesthesiologists also work in intensive care.



3. How do I prepare my child?

How your child reacts to coming to hospital for an operation, scan or other procedure, where they need to undergo general anaesthesia will depend on certain things. This includes your child's:

- age and developmental level
- temperament
- previous experience (if any) of getting an anaesthetic and
- how prepared your child is

Some children cope well and fall asleep easily, while others feel worried or anxious.

Feeling worried or anxious is a normal emotional response to an unfamiliar or fearful situation. Children typically worry about different things at different ages. Below are some things you can do to prepare them.

Tips to help your child prepare

Tell them in advance

Tell them about coming to the hospital and what to expect a week or more before the operation. Use words and ideas they can understand.

Allow your child to bring familiar items with them

Encourage them to bring items they are comfortable with (if they wish). This could be their phone or a toy or book. These item(s) can be used to distract themselves or you can use them to distract them (if needed). Toys are particularly helpful to have when you want a younger child to feel reassured.

Tell them that we are helpful

Please tell your child that we are here to help them and will talk to them about their operation.

We hope you find the tips and resources in this resource helpful. Remember: we are here to help so ask us questions and know we are used to talking with children and putting them at ease.

Tips to prepare yourself

Know what to expect

Reading this leaflet can help you prepare before the hospital visit. It will also help if you read the storybook 'Your Little Sleep' with your child. More information about this book is available on our website olchc.ie

Stay calm

Your child will watch you carefully as they get their anaesthetic. They will look for signs from you about how they should feel. It is usually very helpful when a parent shows their child that they are calm while the child is getting their anaesthetic.

The hospital play-therapy department is a valuable resource. Play therapists can help prepare children for an anaesthetic and engage children so that they are kept busy and occupied as they wait for their operation or scan.

Tell us about any support needs

If your child has a disability and requires more of an individualised approach, please let the hospital staff know. That way we can work together to make sure your child has a better hospital experience.

4. What are the fasting guidelines?

Please read the fasting guidelines and follow them carefully.

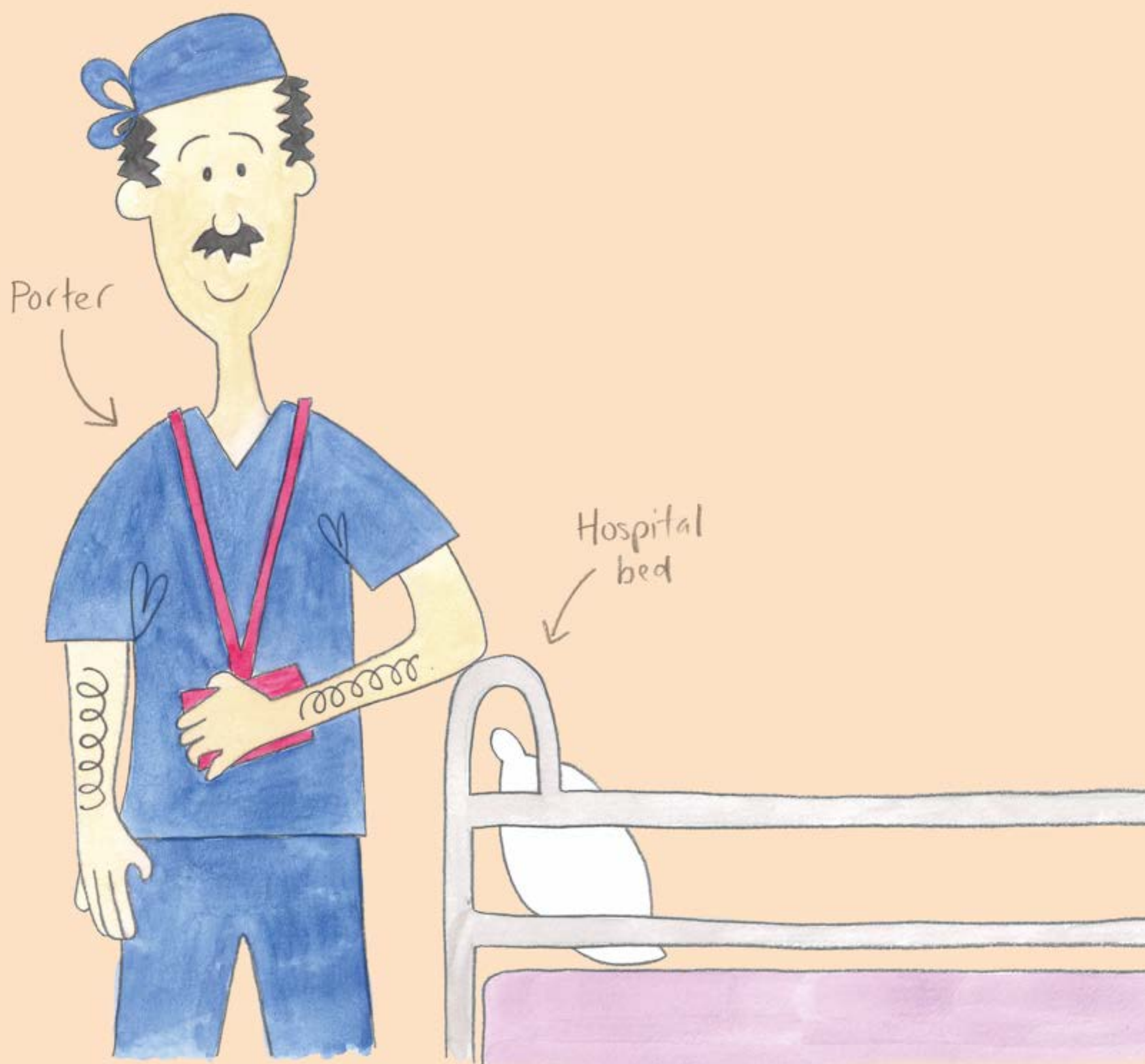
- 6 SIX HOURS** - your child can have their usual diet up to six hours before the operation. If your baby is formula bottle-fed, they must stop having their bottle feed six hours before the operation.
- 4 FOUR HOURS** - your baby can have breast milk up to four hours before the operation.
- 1 ONE HOUR** - your child should have a clear sugar containing drink up to 1 hour before an anaesthetic. 'Clear fluids' include Dioralyte, non-fizzy 7 Up, diluted blackcurrant or apple juice.

Why is it important to follow fasting guidelines?

It is important to follow fasting guidelines because general anaesthesia temporarily reduces your child's protective reflexes. During normal sleep these reflexes are still active and prevent food coming from the stomach into the lungs. So when your child is under anaesthesia, there is a small risk that any food in the child's stomach could lead to serious breathing complications. We can reduce this risk if your child follows the safe fasting guidelines.

Certain procedures may require special fasting. If you get separate instructions from your child's healthcare team, please follow them carefully.

A nurse or other member of the team will contact you and tell you about your child's fasting time before you come to the hospital.



5. What about my child's regular medications?

If your child is taking medications, they can take their regular medication with a sip of water at the usual time. However, if you receive separate instructions to stop certain medications before the operation, please follow those carefully. If your child is on any heart, blood pressure or blood thinning medications please let your team know.



6. What if my child is unwell before the procedure, or can't go to hospital?

Please contact the hospital if your child becomes unwell at home up to a few days before the planned procedure. If your child is sick or unwell, it may be safer to postpone (delay) the operation or scan until your child is well again. When you contact the hospital, we will be able to give you the correct advice.

It is particularly important to tell hospital staff if your child has or has had COVID-19 or recent chest problems like a:

- cough
- cold
- wheeze
- chest infection and/or
- high temperature

Chest problems can increase the risk of:

- breathing difficulties after anaesthesia
- a longer hospital stay or
- needing an unplanned stay overnight

If you can't come for the procedure for other reasons, please let the hospital know as soon as possible, as it will allow the hospital to schedule another child's treatment. We appreciate your co-operation.

7. What happens on the day?

Admission

When you arrive, a nurse will admit your child. We will weigh your child and give them an identification bracelet. Throughout your child's visit, we will regularly check this bracelet, along with your child's chart and other identifying documents.

Local anaesthetic cream

A numbing cream containing local anaesthetic may be applied to your child's skin (usually on the back of their hands or the inside of their elbows). It is not painful. The cream numbs the skin and is useful to comfortably insert a cannula (explained below) or take blood samples from your child while they are awake.

Pre-medication ('pre-med')

A sedative medicine can be used to reduce anxiety or stress in children. We give it to your child as a liquid to swallow, typically 15-30 minutes before their procedure. If your child is very anxious, or was upset when they had an anaesthetic before, then we might give them a medicine to relax them before the actual procedure or operation. This might be helpful. This medicine is called a 'pre-med'. Usually, a pre-med will not delay your child in getting home after the procedure.

Cannula or “Freddie” insertion

Cannulas are also known as “drips” or “freddies”. They allow us to do blood tests, or to give your child fluids and certain medicines (including anaesthetic medicines).



To insert a cannula, the nurse or doctor will put an elastic armband around your child’s arm. This helps them to find a suitable vein.

The numbing cream makes your child’s skin comfortable, so it is easier to insert the cannula. Your child will only feel (at most) a small pinch, but some children may still find this uncomfortable. Some children may be anxious about having a cannula inserted.

When your child has a cannula in place, it means we can use it to take a blood sample if your child needs blood tests before the operation or scan. We can also use it to give medicines and the anaesthetic medicines to induce anaesthesia later.

Routine pregnancy test

We will ask every female patient who has started having her periods, or is older than 12 years of age, about the date of their last period.

We will also ask them to give us a urine (pee) sample for a routine pregnancy test. This test is always done before undergoing general anaesthesia or having a scan involving radiation exposure.

Meeting the surgical team

If your child is having an operation, you will meet the surgeons on the ward. They will:

- talk with you about the operation
- outline specific risks related to your child's operation
- answer any questions that you may have

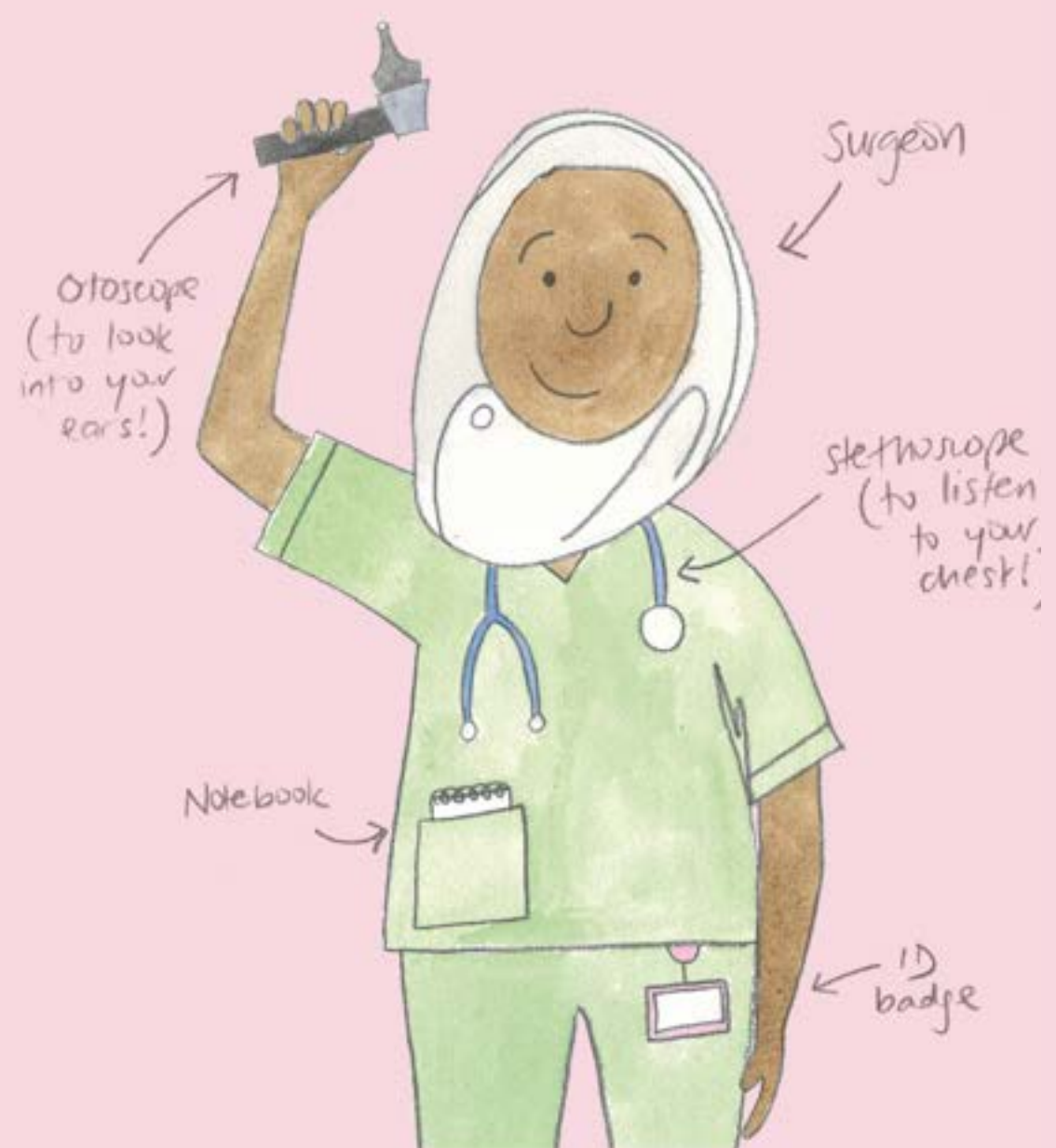
The surgeons will examine your child and may mark your child's skin with a pen to show where the operation is to take place. This marking will wash off afterwards.

Meeting the anaesthesiology team

You will meet the anaesthesiologist before your child's general anaesthetic. They will:

- ask questions about your child's health and previous experiences with anaesthesia
- discuss the anaesthetic technique that might best suit your child
- provide you with other information that you might need
- ask for your consent (agreement) for any specialised interventions such as nerve blocks and
- answer any questions you might have

They will stay with, and care for, your child throughout the anaesthetic. They will also help look after them for some time after the procedure.



8. What kind of questions will the anaesthesiologist ask?

Your child's past and present health is important in relation to anaesthesia. The anaesthesiologist will ask you questions about:

- past and present illnesses
- present and recent medications
- medicine allergies
- previous anaesthetics and any complications
- relatives who have had problems related to anaesthesia
- loose teeth
- your child's last meal and drink

Why might the procedure be delayed?

Occasionally, the team may learn something about your child that means it would be safer not to go ahead with the procedure on the day. If this happens, they will explain this to you and will answer any questions that you may have. Your child's safety is the team's top priority, and the procedure will go ahead when it is safe to do so.



9. What happens in theatre?

Theatre is the area in the hospital where operations take place. The hospital has several operating rooms and a recovery area for care after the operation.

You may be able to go with your child to the operating room, but this is not always possible. If you would prefer not to go with your child, you do not have to. Our team is happy to accompany your child as they make their way into the operating room.

As discussed, your child will go asleep by either:

- breathing anaesthetic gas through a clear mask or
- giving your child a different anaesthetic medicine (using an injection).



As your child drifts to sleep, they might cough, jerk their arms, or roll their eyes. They also might become restless or upset. This is normal, and sometimes we try to distract them while they drift off using a toy or a phone to help reduce their anxiety.

The anaesthesiologist is used to talking with children and will explain to you and your child what they are doing. They might try and distract your child with a story (or other method) to make the child feel good.

Once your child has fallen asleep, one of our staff will guide you out of the operating room. We understand that you may become emotional when leaving your child in the hands of others. Please remember that all theatre staff are highly trained and always have your child's safety as their priority.

What happens when my child is asleep?

An anaesthesiologist will stay with your child the entire time. They will ensure that your child will be asleep and comfortable. If a child has gone asleep by breathing gas, then a cannula will be inserted while they are asleep. This allows the anaesthesiologist to give your child pain relief, anti-sickness medicines, and fluids.

What about pain relief after the procedure?

We will carefully consider the most appropriate pain relief for your child. There are a few ways to deliver pain relief including:

- through the cannula (mentioned above)
- suppositories (soft medicines that are inserted into the child's anus or back passage)
- local or regional anaesthesia, (mentioned above) or
- a liquid your child can swallow after the procedure.

10. What happens afterwards?

The anaesthesiologist will wake up your child and bring them to the recovery room. Here, each child is cared for by specialist recovery nurses. If needed, they will give your child extra pain relief or anti-sickness medicine.

The anaesthesiologist is always close by and can help if needed. Once your child is awake and comfortable, the recovery nurse will contact you and the ward, and you can go with your child as they are returned back to the ward.

What to do when your child wakes up

Your child wakes up in an area called the recovery room. Nurses here will care for your child and ensure they are comfortable.

Sometimes children may be agitated or distressed when they wake up. This behaviour is called 'emergence'. It happens quite a lot and, and if it occurs, we will treat it appropriately. This may involve putting the child back to sleep very briefly.

Going home time

Most planned operations in CHI at Crumlin are performed as a day case procedure. This means it is usually possible for your child to return home on the same day.

The nursing staff will tell you about the pain relief to give your child when they get home. They will also tell you how to contact us if you need to.

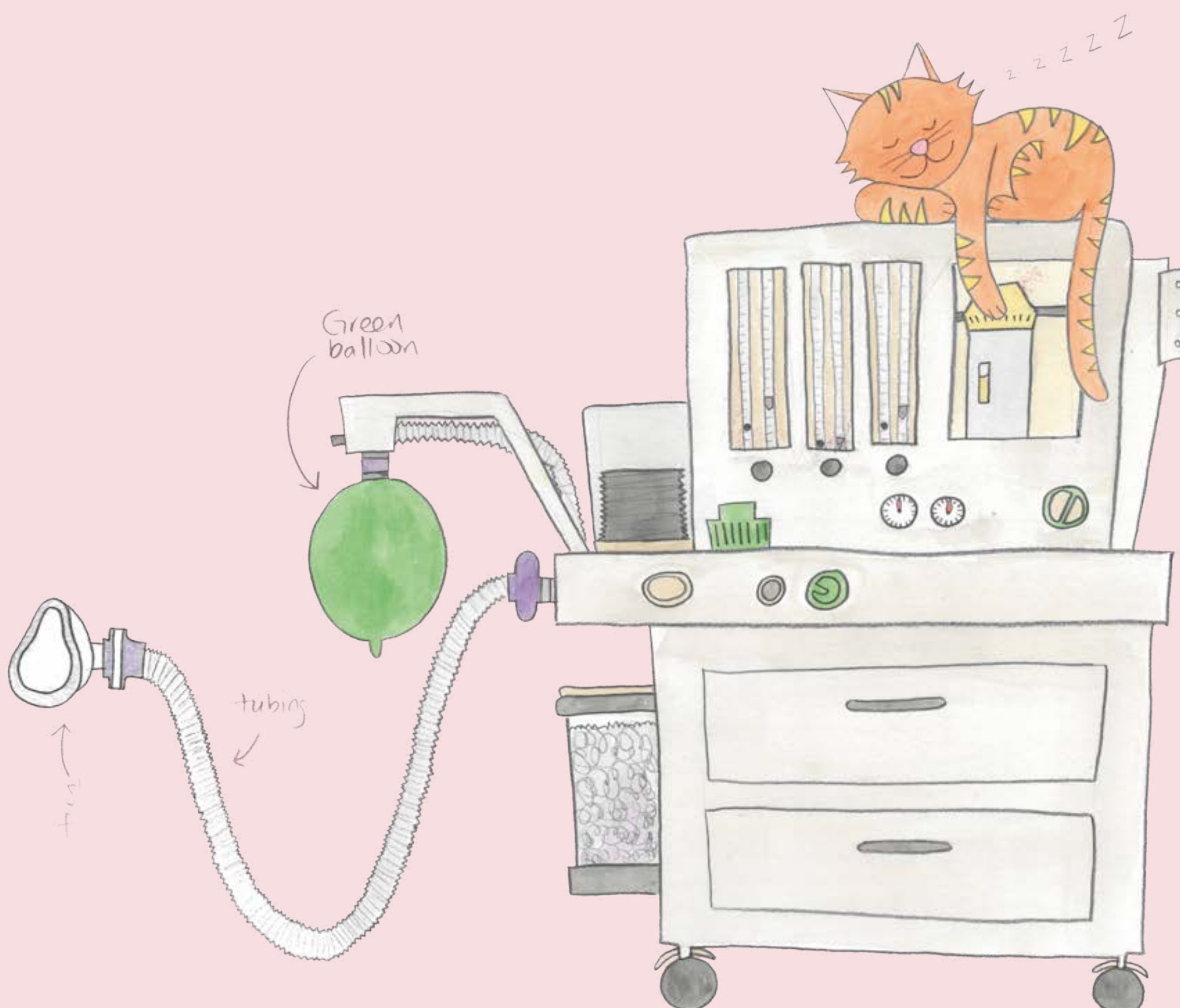
Sometimes, your child may need to stay in hospital overnight for further observation or treatment. This rarely happens.

Changes in your child's behaviour – usually short-term

Your child's behaviour may change after your child visits a hospital. These changes may include:

- attention seeking
- sleep disturbances
- bed wetting

These changes are usually short-term and mild, but it is useful for you to know about them. Talk to your GP if you are concerned about your child.



11. How safe is anaesthesia?

Modern-day anaesthesia is very safe and serious problems are rare. While the risk of complications cannot be completely removed, the degree of risk usually depends on a child's medical condition and the complexity of the operation. The anaesthesiologist can discuss any specific concerns with you before the operation.

Risks and side effects associated with your child's anaesthetic

Anaesthesia is very safe. In general, complications are rare. Most children recover quickly and are soon back to normal after their operation and anaesthetic.

We use the following colour-code scale to help you understand the words and numbers describing the risks and side effects of anaesthesia.



Very common (1 in 10) and common complications (1 in 100) include:

Before the procedure:

- discomfort during injection of medicines
- distress when being put to sleep with anaesthesia (such as crying or screaming)

After the procedure:

- sore throat
- shivering
- sickness and vomiting
- discomfort or pain
- distress or agitation when waking up ('emergence')
- minor lip or tongue injury

Uncommon risks (1 in 1000) include:

- minor nerve injury

Rare (1 in 10,000) or very rare (1 in 100,000) risks include:

- damage to teeth requiring treatment
- damage to eyes
- serious medicine allergy or anaphylaxis (a very serious allergic reaction which usually occurs within few seconds or minutes of exposure to allergic substances)
- stomach contents getting into the lungs (aspiration)
- injuries to vessels and nerves
- accidentally becoming aware of what is happening during a procedure

Severe complications such as brain damage, or death are extremely rare complications of anaesthesia.

Long-term effects

There is ongoing research into the possible long-term effects of anaesthesia in babies and very young children.

At present there is no strong evidence that anaesthetics are harmful to child development. Any risk of this should be balanced against the overall importance of providing anaesthesia for a procedure or operation. Below is a helpful reference: <https://bit.ly/3qeyKk7>



12. What other information is useful to look at?

Our thanks to the Royal College of Anaesthetists (RCoA) and the Association of Paediatric Anaesthetists of Great Britain and Ireland (APAGBI) who both provided useful resources for children, parents, and carers. We used some of these in this booklet.

- A Little Deep Sleep – an animated video (about 6 minutes long) is about children having an operation and what happens on the day of their hospital visit.
<https://youtu.be/NlV2zLkOqjI>
- The Royal College of Anaesthetists also provide information for children, parents, and carers:
<https://bit.ly/3u6ABZH>
- Association of Paediatric Anaesthetists of Great Britain and Ireland also have useful resources:
<https://bit.ly/3IpaUZs>

Useful contact details

If you have any other questions, please contact:

- Surgical Day Ward in CHI at Crumlin,
+353 (0) 1 428 2600
- Medical Day Ward in CHI at Crumlin,
+353 (0) 1 428 6525
- Anaesthesia Pre-assessment Unit,
+353 (0) 1 428 2606 or 428 2604

Please contact us if you have any further questions.

