Oxford University Hospitals
NHS Foundation Trust

Insertion of a Hickman Line

Information for parents and carers

**Children's Hospital,
Kamran's Ward**

This leaflet explains:

- what a Hickman line is
- why one is necessary
- what to expect when your child comes in for their Hickman line to be inserted.

What is a Hickman line?

A Hickman line is a long, hollow plastic tube made from silicon rubber. One end of the line is inserted through the skin on the chest. The line is then placed into a large vein above the heart. This type of line is often referred to as a 'central line'.

The other end of the line comes out of the body at an 'exit' site. It is held in place by a small felt cuff, which is attached to the Hickman line and sits under the skin, as well as a stitch on the outside of the body. The stitch will be removed after 6 weeks.

The visible part of the line has a small clamp on it to keep it closed when it is not being used. The line may have 1 or 2 ends (lumens) depending on the treatment your child needs. These ends are sealed with removable bungs.

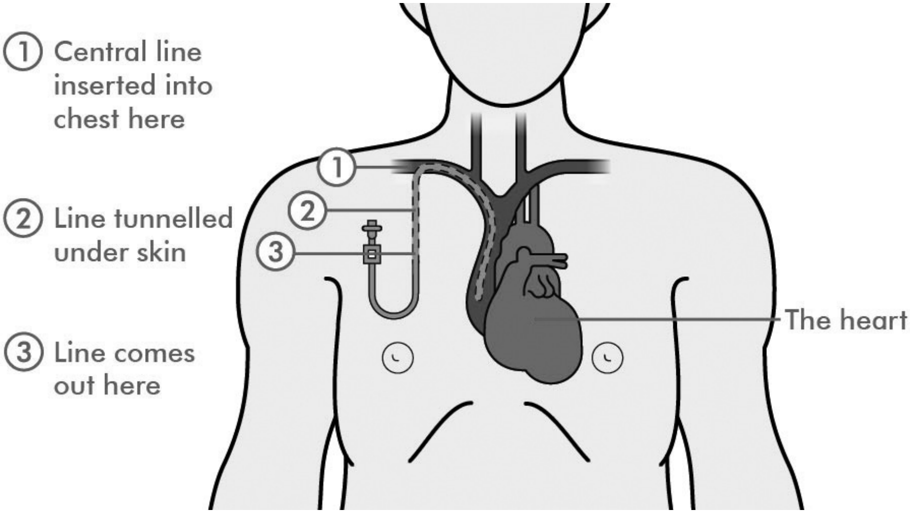


Image: kind permission from Macmillan Cancer Support

Why does my child need a Hickman line?

A Hickman line allows us to take blood for testing and to give your child medicines without the need for needles or cannulas.

Some medicines (such as chemotherapy), blood transfusions, antibiotics and other intravenous fluids can all be given easily and more safely through a Hickman line, rather than using the temporary cannulas that are usually placed in the back of the hand.

Are there alternative options?

We usually recommend a permanent indwelling line, such as the Hickman line, if your child needs frequent injections, as this can become distressing. It may also become difficult to insert cannulas, due to the damage to the veins from repeatedly inserting needles.

An alternative to a Hickman Line is a portacath. This is a central line like the Hickman Line, but is accessed with a special needle through a small port inserted under the skin. A portacath may be recommended depending on the age of your child and their treatment plan. Please ask us if you would like more information about portacaths.

How is the Hickman line inserted?

The line is inserted either in the operating theatre or in Children’s Radiology. The procedure will be carried out under a general anaesthetic, which means your child will be asleep.

Two small incisions (cuts) will be made; one above the collarbone and one where the line will come out of the skin.

The tip of the line will be threaded under the skin and into the vein towards the heart. The other end of the line will be secured at the point of exit by the ‘cuff’ and a stitch.

Throughout the procedure a type of X-ray (fluoroscopy) will be used to guide the surgeon and confirm the line is in the right place.

Fasting instructions

Please make sure that you follow fasting (starving) instructions that will be given to you by your medical team.

Fasting is very important before an operation. If your child has anything in their stomach whilst they are under anaesthetic, it might come back up while they are unconscious and get into their lungs.

Please do not give your child chewing gum or boiled sweets on the day of their operation/procedure, as this can make their stomach produce fluid.

When you arrive at hospital you must make sure your child has no further food or drink until after the procedure. If their operation is delayed, the nurses or doctor will let you know if your child can have anything to eat or drink.

Pre-operative washes

The night before your child's procedure they need to have a thorough wash in a bath or shower using a special antibacterial wash (chlorhexidine). This process should be repeated the following morning before to coming to hospital. You will be given the wash by the hospital.

If your child is too unwell to manage this, you will be given a wipe than can be used directly on their skin. This does not need to be washed or rinsed off.

If your child has an allergy to chlorhexidine the hospital will supply an alternative wash.

Your child will need to wear clean nightwear after the first wash and come to hospital in clean clothes after the second wash the next morning.

These washes can help minimise the risk of infection associated with any surgical procedure.

What will happen on the day

When you arrive, your child's nurse will greet you and show you to the waiting area. The nurse will check your child's paperwork and put some name-bands around their wrists or ankles. They will also check your child's temperature, heart rate and breathing rate. Your child will be given a special surgical gown to wear when they go for their operation.

Your child's nurse will look after you and your child until they are in theatre. Together with a health play specialist, they can help prepare your child for the operation. The play specialists, can do some preparation therapy with your child; they have special dolls with Hickman lines that your child can see and play with.

The nurse will make sure you understand the routine of the day and your child's care before the operation, and can answer any questions you both may have.

Consent

The surgeon will explain the operation to you and will confirm the risks and benefits. We will then ask you for your consent for the operation to go ahead. You will be given the chance to ask any questions you might have before we ask you to sign the consent form. If there is anything you are unsure about, or if you have any questions, please ask the surgeon before signing the consent form.

You will also see one of the anaesthetists involved in the operation. They will explain the anaesthetic process and risks to you, as well as any pain relief your child will have after the operation.

Anaesthetic risks

In modern anaesthesia, serious problems are uncommon. Risk cannot be removed completely, but modern equipment, training and drugs have made general anaesthesia a much safer procedure in recent years. Throughout the whole of life, a person is at least 100 times more likely to suffer serious injury or death in a road traffic accident than as a result of anaesthesia.[1]

Most children recover quickly and are soon back to normal after their anaesthetic. Some children may suffer side effects such as sickness or a sore throat. These usually last only a short time and there are medicines available to treat them if necessary.

The exact likelihood of complications depends on your child's medical condition and on the nature of the surgery and anaesthesia your child needs. The anaesthetist can talk to you about this in detail before your child's operation.

In the anaesthetic room

A nurse and one parent/carer can come with your child to the anaesthetic room. Your child can also take a toy or comforter.

It may be possible to give the anaesthetic with your child sitting on your lap. Your child may either have anaesthetic gas to breathe, or an injection through a cannula (a thin plastic tube that is placed under the skin, usually on the back of the hand). Local anaesthetic cream (EMLA or Ametop, sometimes known as 'magic cream') can be placed on their hand or arm before the injection so they don't hurt as much. This works well for 9 out of 10 children.

If the anaesthetic is given by gas, it will take a little while for your child to be anaesthetised. They may become restless as the gas takes effect. If an injection is used, your child will normally become unconscious very quickly. Some parents may find this frightening.

Once your child is asleep you will be asked to leave quickly so that the medical staff can concentrate on looking after them.

Your child will then be taken into the operating theatre to have their operation. The anaesthetist will be with them at all times.

After the operation

After the operation your child will return to the recovery room whilst they come round from the anaesthetic. You will then be collected to go with the nurse to the recovery room where you will be able to see them.

A recovery nurse will look after your child until they are ready to come back to the ward. The nurse will make regular checks of your child’s pulse, temperature and wound. They will also make sure your child has adequate pain relief. The nurse will then bring you and the child back to the ward.

Once your child is awake from the anaesthetic they can start drinking and, if they are not sick, they can start eating their normal diet.

Your child will need to stay on the ward for a minimum of two hours to recover from the anaesthetic before they can go home or back to their usual ward.

Your nurse can take out the cannula left in from the operation once they know the Hickman line can be used. Your nurse will also make sure that your child has received pain relief, if they need it.

Before you leave the ward the nurse will flush the line with saline (salt water solution) then a solution called heparin. This solution help prevents blood clots from forming in the line.

There will be a dressing over the line exit site, which will be changed after 7 days by either a nurse at the hospital or your local community nurse.

Discharge advice – Leaving hospital

Your child may need some paracetamol during the next 24 hours after the procedure. This can be given as long as they do not have a fever (a temperature greater than 37.5°C). Always check their temperature before giving them paracetamol.

Follow-up

Within 24- 48 hours after you leave hospital the new Hickman Line will be checked and the dressing over the Hickman Line will be changed by a community nurse who will visit your child at home. This will be done in hospital if your child is still an inpatient.

Weekly care

The Hickman line dressing will need to be changed weekly, or if it becomes dirty, wet or starts peeling off. The Hickman line will also need to be flushed each week and the bungs on the ends changed. This is often done at home by your community nurse, but you may wish to learn how to do this yourself.

Once the old dressing is removed, the skin around the exit site will need to be cleaned and covered with a new clean dressing. The line will be looped under the dressing for added security, so that your child cannot catch or pull on it. The stitch will be removed in hospital after a minimum of 6 weeks. This will be carried out during one of your other visits to the hospital.

A water resistance transparent dressing will need to be used, which will be supplied by the hospital or your community nursing team. This allows the line exit site to be looked at without removing the dressing. On rare occasions children can react to the dressing, in which case a different one will be used.

At the end of the Hickman line there is a special ‘needleless bung’. This allows the line to be used without any needles. A small green cap may also be applied to the end of this needleless bung, to prevent foreign objects being put into the end and to reduce the risk of infection.

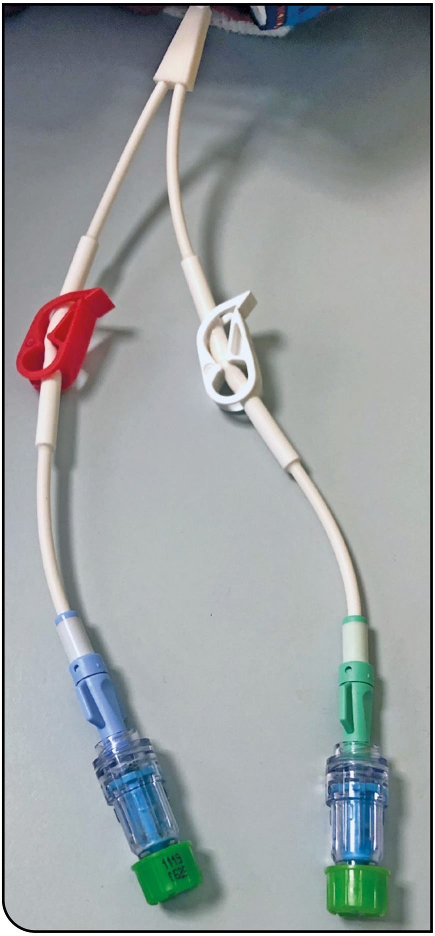
These green caps must never be applied directly onto the Hickman line, as they are not designed for this purpose. They could allow blood to leak from the line and could also let in an infection. Please contact your local hospital if you ever notice the needleless bung is missing.

The small white clamps on the Hickman line must be closed at all times, to reduce the risk of them leaking blood or blood clots forming within the line. If you see the clamps are open, simply click them shut again immediately. If this keeps happening, speak to your home nursing team or the hospital nurses.

Below check are some pictures of the end of a Hickman line, showing the clamp, needleless bung and green cap. If you are concerned at any time that the line does not look like this, contact your local hospital immediately.

Single Lumen Hickman Line

Double Lumen Hickman Line



Washing and water

It is best to avoid getting the exit site wet. The dressing is splash proof, so your child can still have a bath. The end of the Hickman line will need to be taped up and out of the way, so it doesn’t get wet. For top tips on bathing with a Hickman Line please ask your nurse.

It is very important to avoid getting the bungs on the end of the line wet or dirty, as this increases the chance of infection. Let the community or ward nurse know if this happens, so they can change the bungs.

Unfortunately your child cannot go swimming, as the ends of the Hickman line would get wet.

Blood clots

A blood clot (thrombosis) can occasionally develop at the end of the line under your child’s skin. If you notice swelling in their neck or arm (on the side of the line) or they are in any pain, you should contact Kamran’s ward (contact numbers are at the back of the leaflet).

We will see your child to check whether a clot has developed and how best to treat it. We may give them medication to dissolve the clot.

Break or cut in the line

Keeping the Hickman line in a special small bag (supplied by Kamran’s Ward) or under a vest can prevent your child from playing, pulling or damaging their line. Try to keep the clamps on the thicker part of the line, to avoid damaging the thinner section of the line.

Occasionally a small break may appear in the line, due to wear and tear. If this happens, try to clamp or tie the line above the break and contact the ward or your community nurse straight away. Often this can be repaired, but it may mean your child will need a new line.

Having the Hickman line removed

At the end of treatment the line will be removed with your child asleep under general anaesthetic. This is a much shorter procedure than when the line was inserted and usually takes less than an hour.

The site needs to be kept dry for 3 days. The wound will then be checked by the community nurse. It is safe for your child to swim and bathe after 10-14 days. Unfortunately you will not be able to keep the line once it has been removed, as this is a potential infection risk.

How to contact us

If you have any concerns about your child's line or questions about the procedure please call us.

Kamran's Day Care

Tel: **01865 234 061/2**
(Monday to Friday, 7.30am to 6.00pm)

At night or at the weekend please call:

Kamran's Ward

Tel: **01865 234 068/9**

Email: **kamransdaycare@ouh.nhs.uk**

This email is checked every weekday.

Further information

You may find further useful information on the following website:

www.macmillan.org.uk/Cancerinformation/Cancertreatment/Treatmenttypes/Chemotherapy/Linesports/Centrallines.aspx

Please bring this leaflet with you on the day of your child's admission.

We hope that this information is useful to you and would welcome any comments about the care or information you have received.

Further information

If you would like an interpreter, please speak to the department where you are being seen.

Please also tell them if you would like this information in another format, such as:

- Easy Read
- large print
- braille
- audio
- electronic
- another language.

We have tried to make the information in this leaflet meet your needs. If it does not meet your individual needs or situation, please speak to your healthcare team. They are happy to help.

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