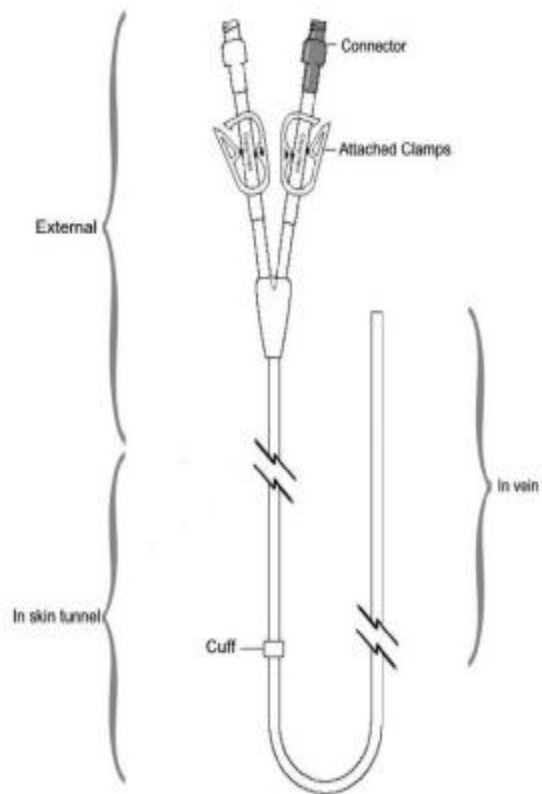


Hickman Line Insertion

What is a Hickman Line?

A Hickman line is a long thin tube made out of silicon. It is inserted so that one end lies in a large vein in the chest, with the other end lying outside of the body. A portion of the line, between the two ends, is tunnelled under the skin of the upper chest. It has a cuff attached to it, which ultimately anchors the line in place and acts as a barrier to infection from the outside.

A single line can contain 1, 2 or 3 separate internal channels, each of which has an opening inside and outside the body. These provide a route for taking blood samples and giving intravenous (i.e. directly into a vein) treatment, and avoids the need to repeatedly puncture veins in the arms for this purpose. A clamp, and a connector to which a bung is attached, protect each of the openings on the outside of the body.



Hickman lines are used if it is thought your treatment is required for more than a couple of weeks. The type of line required is determined by your treatment. The duration of your treatment will determine how long the line is left in for. Care of the line is very important (other leaflets deal specifically with this). Your doctors and nurses will be able to give you further help and guidance if required.

How is it inserted?

Hickman lines are inserted by specialist doctors (radiologists) or trained radiographers in the X-ray department, using ultrasound and x-rays as guidance. Generally, the line is put in through either the jugular vein at the bottom of the neck, or the subclavian vein below the collar-bone.

You will be asked to lie on your back on the X-ray table. You will be connected to monitoring equipment to check your heart tracing, blood pressure and blood oxygen levels.

It is very important to insert Hickman lines under sterile conditions to avoid infection. Hair on the skin at the entrance or exit sites may be removed. The radiologist will put on a sterile gown, theatre cap and mask, and you may need to wear a theatre cap also. The skin on one side of your upper chest and neck is cleaned with antiseptic. You will then be covered in sterile towels.

Local anaesthetic is used to numb the skin over the vein (the 'entrance site') and a point lower down the front chest wall (the 'exit site'), as well as the skin in between (which will form the tunnel).

A small incision is made at the entrance and exit sites. The vein is then punctured with a needle. One end of a special wire is passed through the needle into the vein, along the course that the line will eventually take; the other end of the wire remains outside of the body.

The Hickman line is tunnelled under the skin from the exit site to the entrance site. Your line is then measured and cut, to fit the length of your body's vein. A short tube (sheath) is placed over the wire into the vein at the entrance site, the wire is then removed, and the free end of the Hickman line is placed down through the sheath. The sheath is specially designed to be removed, leaving the line in place. The position of the line can be adjusted until it is satisfactory, and then it is secured at the exit site, using a stitch. A further stitch is used to close the small incision at the entry site. A small dressing is placed over each of the entrance and exit sites, and each internal channel is flushed via its external connector to ensure there is no clotted blood within it. They are then clamped and a bung attached. This end is wrapped in clean gauze, and the line will be taped in a short loop to the chest.

How do I prepare for insertion of my Hickman line?

Generally, little preparation is required. There are no requirements to starve before insertion. If you are taking warfarin or other blood-thinning treatment, you should tell your doctor, as it may be necessary to alter your dosage beforehand. You should also tell your doctor if you have any allergies.

Will it hurt?

Local anaesthetic may sting when it is first injected, but this wears off after a few seconds. The anaesthetic should remove any sharp sensations, but you may still be aware of some pressure on the skin during the procedure, particularly if working at the bottom of the neck. Most people tolerate this well, although it feels slightly strange. Occasionally, people find it more uncomfortable and if that is the case, please let a member of staff know.

What happens afterwards?

If you are an inpatient, you should be well enough to return to the ward in the same way you came to the X-ray department. If you attend as an outpatient, you may be asked to remain in the department for an hour or so for routine observation, before being discharged.

The Hickman line can be used immediately following insertion. Care must be taken not to tug on the line, particularly in the first 2 – 3 weeks following insertion, as the stitches holding it in cannot be tied too tightly (else they may block the internal channels).

The entrance site stitch can be removed at 7-10 days, and the exit site stitch at 20-21 days, either by one of the hospital or district nursing staff.

Further information on safety, care of your Hickman line and troubleshooting is given in other leaflets which you should be provided with.

Are there any risks or complications associated with insertion?

Hickman line insertion is a very common procedure. It is generally very safe, because of the use of ultrasound and x-ray machines to guide the person who is putting the line in.

However, complications do occasionally occur.

You may experience some bruising related to the insertion site, which usually settles with time.

It is possible to inadvertently puncture the artery which runs close to the vein – this is usually apparent to the operator, and is treated by pressing on the artery for a few minutes. It is very rare for more intensive treatment to be required.

The vein also lies close to the surface of the lung, and it is remotely possible that the lung could be punctured during Hickman line insertion. If this unlikely event were to occur, you might start to experience some shortness of breath and/or chest pain. If a punctured lung were to occur, a small drainage tube may need to be inserted into the chest, to allow the air leaking from the lung to escape.

Finally, the heart rhythm can rarely be altered by the presence of a wire in the vein. Your heart tracing should be monitored during the procedure for this complication, and very rarely is any treatment required, other than to adjust the position of the wire.

Despite these potential risks, the vast majority of patients experience no problems whatsoever, and Hickman line insertion is a very safe and well tolerated procedure.

What else do I need to know?

Proper care of the Hickman line is very important after it has been inserted, particularly to stop it becoming infected or being pulled out. The medical and nursing staff should be able to help and advise you regarding your Hickman line, and other leaflets are available, dealing with these issues in more depth.

It is important that you understand the potential benefits and risks of the procedure before you consent to it – if you have any questions or concerns, do not hesitate to ask your doctor or nurse.