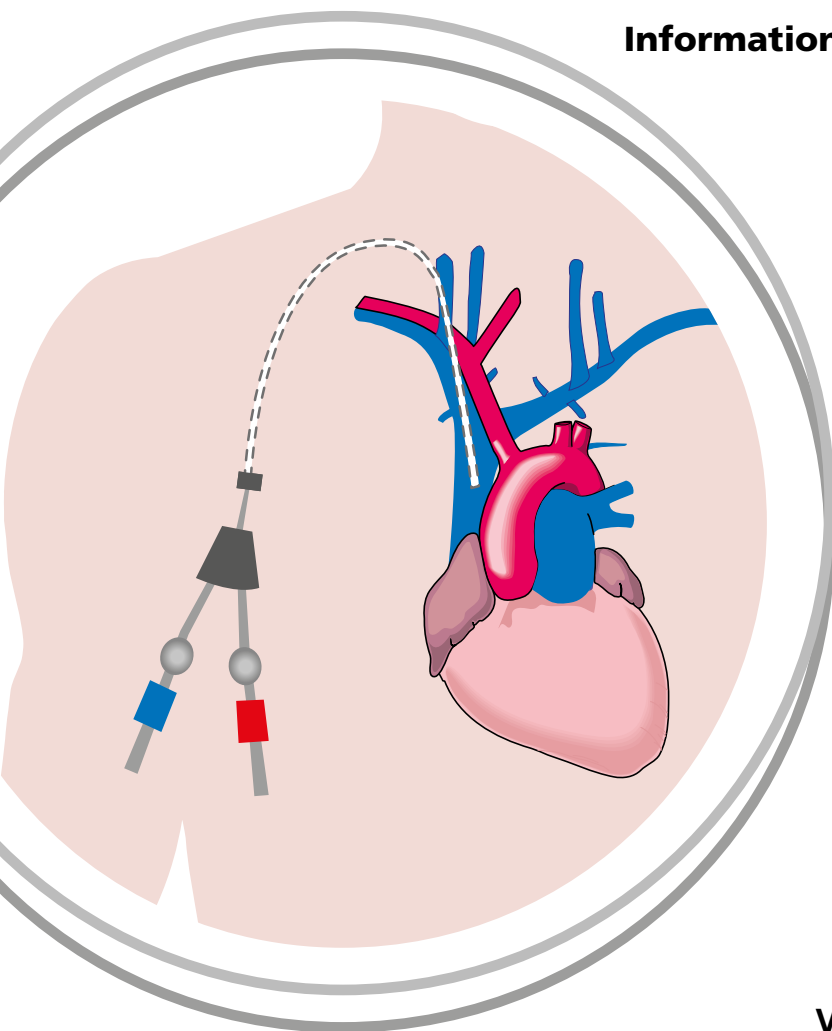


# Insertion of a tunnelled central venous catheter

Information for patients



# What is a tunnelled central venous catheter (CVC)

A CVC is a long, narrow tube called a catheter, which is put into a vein in the chest. A CVC is also sometimes referred to as a central line, or by its trade name - a Hickman line.

A CVC is usually recommended for people who need certain types of medicines or treatments that can irritate or damage smaller veins. It is also recommended if you need to have repeated injections over a long period of time, to help prevent damage to your veins.

The CVC will be inserted through a vein in your neck or at the top of your chest. The tip will lie in the large vein, just above your heart. It is "tunnelled" under the skin in the fatty tissue and comes out on your chest wall (exit site). At this end there is a cuff. This allows the surrounding tissue to grow around it, so that the CVC stays firmly in place throughout your treatment. The tunnel and cuff also help to prevent infection. The CVC can stay in place for months or years.

The hollow space in the centre of the CVC is called the lumen. Your catheter may have between 1 and 3 lumens (sometimes referred to as 'tails') depending on your treatment; this allows you to have different treatments at the same time. At the end of the tube outside your body, each lumen will have a special cap, to which a drip line or syringe can be attached.

## Risks

You will need to give your written or verbal consent before we can insert the CVC. The vascular access practitioner (VAP) will discuss the risks and benefits of the procedure with you beforehand. They will also answer any questions or concerns you may have.

There are some risks involved in this procedure, but they are all rare:

- damage to the lung (pneumothorax)
- bleeding
- infection
- thrombosis (blood clot)
- the line going into the wrong vein. If this happens, we will use X-ray to move it into the right place.

## Preparing for the CVC

The VAP will assess you to see whether it's appropriate to have the CVC inserted.

A blood sample will be taken before they start the procedure, to check the clotting speed of your blood. If you are taking warfarin or any other medicines to thin your blood, you will be advised to stop these beforehand. The doctor or nurse will discuss this with you.

You will have been instructed by your doctor or VAP to fast (have nothing to eat) for 6 hours before the procedure. You may have water up to 2 hours before. This is because you will be given a sedative during the procedure, which may make you feel sick.

# What happens during the procedure?

You will be given a sedative through a small, plastic tube (called a cannula) which will be put into a vein in your hand or arm. This will make you feel relaxed and sleepy. You may remain awake, but you will not be able to remember much about the procedure afterwards. You may not be able to drive or use machinery for more than 24 hours if you feel that the effect of the sedation has not worn off.

While you are sedated we will monitor the oxygen levels in your blood and give you extra oxygen through a mask if necessary.

The VAP will decide on which side of the neck to insert the CVC. They will use an ultrasound machine to find the vein. The ultrasound machine uses sound waves to show a picture of your veins, through a probe that is rolled over your skin.

Once they have found the vein, the VAP will clean the area using antiseptic solution and will give you an injection of local anaesthetic to numb the area where the CVC will be inserted. The injection may sting a little but will soon go numb.

The VAP will then insert the CVC. You may feel a “tugging” sensation, but you should not feel any pain. The CVC will be stitched in place. You will not feel anything during the stitching.

# What happens after the procedure?

We will take an X-ray of your chest, to make sure that the CVC is in the correct place, and also to make sure that there is no damage to your lung. The doctor will check the X-ray before the CVC is used.

If you have been given sedation, you will feel sleepy for a short time. A nurse will look after you until you recover from the sedation.

It is important that you stay lying down for about an hour. This is because you may feel a little unsteady until the effect of the sedation has completely worn off.

There may be some bleeding from around the insertion site (where the CVC was put in). This is quite normal. The nurse looking after you will apply further dressings when necessary.

It is normal to feel a little discomfort or aching around the site of the CVC for the first 24 hours. It is normal to have some bruising. Mild painkillers will usually be enough to ease this.

A nurse at your GP surgery will remove the stitch at the insertion site after 7 days. The stitches that hold the CVC in place at the exit site can be removed after 3 weeks. However, they can be left in for the entire time you need your line if they are not irritating your skin.

## Signs to look out for

Any pain, redness or swelling in your arm or neck on the side the line is placed must be reported immediately to the department where you are receiving your treatment (for example, the Day Treatment Unit).

**If you develop a dry cough, become breathless or experience excessive pain, you should seek advice from your nearest accident and emergency department at your local hospital immediately.**

## Aftercare

The two dressings on the CVC should be changed 24 hours after the insertion and then every 7 days or sooner if the dressing becomes loose, wet or blood stained. It is important to keep the CVC exit site covered for the first three weeks.

Dressing changes can be done by nurses at the hospital or by a district nurse/practice nurse at your GP surgery. You may decide you would like to learn to look after your own catheter. We can help you to do this, with plenty of support and guidance from nurses in the hospital and at home.

If you are showering or bathing, ask the ward nurse to cover your dressing with a waterproof dressing. Never allow the tails of the CVC to go completely underwater in the bath. After a bath or shower, change the dressings immediately if they are wet, as this is a risk of infection.

At all times the CVC tails should be supported within a tape necklace, to prevent it moving out of place.

**Do not hesitate to remind any healthcare practitioner who handles the line to wash their hands, wear gloves and clean the caps thoroughly before and after use. This will help to prevent infections.**

# Activities and sports

You should avoid sports such as tennis, golf and vigorous gym exercise to prevent the CVC becoming dislodged. Please do not swim whilst you have your tunnelled CVC as this will increase your risk of infection.

# Removing the CVC line

You will need a blood test before your line is removed, to make sure that your blood is clotting properly. A VAP or doctor will remove the line. This can be done at your bedside or on the Day Treatment Unit.

The cuff in the tunnel can stick to the lower layer of skin. This means that the CVC will need to be gently released. The area of skin around the cuff will be cleaned and made numb with a small injection of local anaesthetic. The VAP or doctor will then make a small incision (cut) in your skin. This will allow the cuff to be loosened from under your skin. You will feel a bit of pressure when this is done, but it will not hurt.

Once the cuff is free, the line will come out easily. Gentle pressure will then be applied where the line went into your vein, to stop any bleeding.

You will have 1 or 2 stitches in your skin to close the incision. Once the CVC has been removed and you have had your stitches you will need to rest on the bed for a while before leaving. This is to make sure there is no bleeding.

The stitches will have an airtight dressing over them and this should remain in place for 48 hours. Your stitches will need to be removed in 7-10 days by a nurse or doctor at your GP surgery.

If you have any concerns before the stitches are removed, please contact your GP surgery.

# How to contact us

If you have any questions or concerns, or need any further information, please contact:

## Vascular Access Department

Tel: **01865 221 653**

(Monday to Friday, 9am-5pm)

An answering machine is available for you to leave a message. We will try to respond to you within two working days.

## Further information

For further information on how ultrasound is used to place your CVC go to [www.nice.org.uk](http://www.nice.org.uk) and search for 'TA49 – Information for the public'.

If you need an interpreter or would like this information leaflet in another format, such as Easy Read, large print, Braille, audio, electronically or another language, please speak to the department where you are being seen. You will find their contact details on your appointment letter.

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