

[illegible]

Patient Name: _____

Patient MRN:

Department:

Date of Insertion:

Type of Central Line:

Size of Central Line:

Signed: _____

Hospital Telephone No:

Ward Telephone No: _____

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This image shows a single page of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page, leaving small margins at the top and bottom. There are no vertical margin lines, no text, and no other markings on the page.

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NOTES

WHAT IS A TUNNELLED CENTRAL LINE?

A central line is a small narrow tube made of a non-irritant material such as silicone rubber. It is called a central line because it is placed in one of the central/main veins in your chest. It is called a tunnelled central line because it is tunnelled along under the skin of the chest before it enters the vein (see diagram 1).

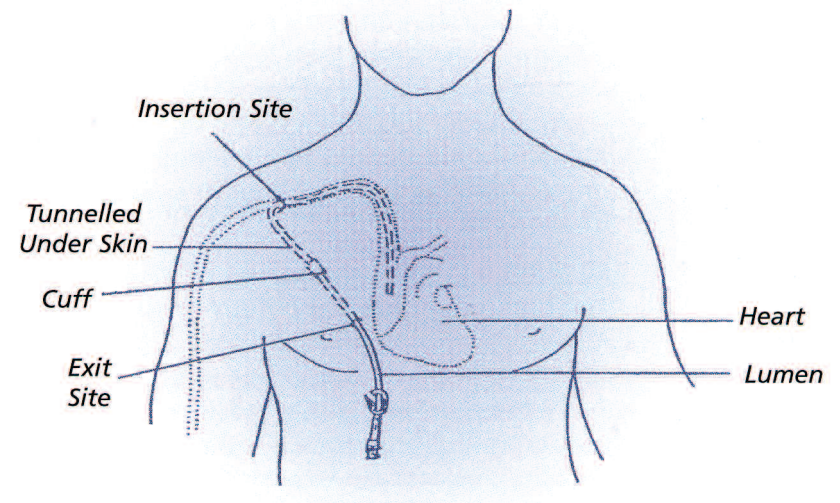


Diagram 1. Central line tunnelled under the skin of the chest.

The line is sometimes called a catheter or a tunnelled central venous catheter. You may also hear it being referred to as a Hickman line or Permcath. The channel in the middle of the line is called the lumen. The line may have one, two or three separate lumen/channels within. At the end of each lumen/channel i.e. outside the body, the line has a special cap/bung to which a drip line or syringe can be attached. There will also be a clamp to keep the line closed when it is not being used (see diagram 2).

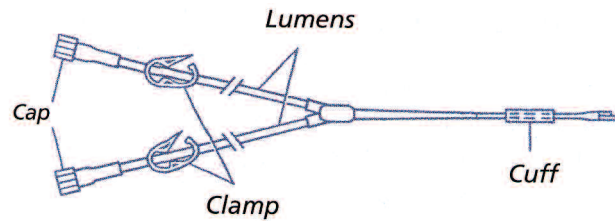


Diagram 2. A Central line before it is inserted.

WHY DO I NEED A CENTRAL LINE?

Many patients who need antibiotics, chemotherapy, nutrition or dialysis may need access to their veins for several weeks or months (that is for the duration of their treatment). The central line can be used for giving fluids and drugs and taking blood samples. This should save you from having repeated needles in your arms during the course of your treatment.

HOW IS THE CENTRAL LINE PUT IN?

A specialist doctor will put in your central line at the hospital. The procedure is usually carried out in the x-ray department but occasionally it may be done in the operating theatre. The patient is usually given some medication to help them relax (sedation) and a local anaesthetic. Because you will be given some sedation you may not be allowed to eat or drink for a few hours before the procedure or to drive home afterwards.

Insertion procedure

First a scan machine is used to locate a vein at the side of your neck. Your chest and neck is then cleaned with an antiseptic solution and some local anaesthetic is injected under your skin. Once the skin is numb a small cut is made near the collarbone and the tip of the line is threaded into the large vein. This is called the insertion site. The other end of the line is tunnelled under the skin to reach the "exit site". The "exit site" is the place where the line actually comes out of your body; this is usually on the chest wall (see diagram 1).

Glossary of terms.

Catheter or line: Flexible tube inserted into a vein.

Central venous line: A line, which has been placed in a large vein above the heart.

Exit site: The location on the chest wall where the line comes out of the body.

Insertion site: The location where the line enters the vein.

Intravenous (IV): Within the vein.

Vein: Blood vessel that carries blood to the heart.

References and Bibliography.

Bard Access Systems, (1994).

How to care for your Hickman catheter. Patient Guide.
Salt Lake City, USA.

Catheter Innovations.(1999).

Pressure activated Safety Valve (PASV) Catheter Patient Information Guide.
Salt Lake City, USA.

Dougherty L.and Lamb], (1999).

Intravenous Therapy in Nursing practice.
Chapter 11 Long Term Venous Access. London.
Churchill Livingstone.

"Management of a central line" The CancerBACUP Factsheet.
www.cancerbacup.org .uk (24 February 2003)

If you do get a cut or a split in the line, clamp the line near your body between the exit site and the damaged part of the line; come to the hospital immediately.

The line may need to be removed although sometimes it can be repaired.

HOW IS THE LINE REMOVED?

When you no longer need the line it will be taken out by a doctor or nurse. Occasionally local anaesthetic is required. Your chest will be cleaned with antiseptic and the line will be gently but firmly pulled until it loosens and comes free. Sometimes a small cut may be made over the cuff to loosen/remove it. A dressing will be put over the exit site and you will be asked to remain lying flat until the bleeding stops.

We hope this information answers some of your questions.

If you have any other questions please do not hesitate to ask your nurse or doctor.

A stitch is temporarily used to secure the line at the exit site and there are also one or two stitches in the insertion site at the base of the neck. The stitches at the base of the neck do not need to be removed; they should dissolve themselves over time. The stitch at the exit site should be removed after approximately 6 weeks. When not in use, your clothes will hide the line.

COULD ANY COMPLICATIONS OCCUR AT THE TIME OF THE PROCEDURE?

As with any procedure there are always risks and although this is a safe procedure there is a small chance of complications occurring. Bleeding can occur at the site of insertion; sometimes puncturing of the lung can occur; and very occasionally air/blood can get into the lungs or heart. Please discuss these possible complications with your doctor.

WHAT STOPS THE CENTRAL LINE FALLING OUT?

There is a small “cuff” around the line, which can be felt under the skin near the exit site (see diagram 1). The tissue under the skin grows around the cuff over approximately 3-6 weeks; this cuff then holds the line safely in place. The stitch at the exit site will hold the line in position until the tissue has had time to grow around the cuff. Therefore, for the first 3-6 weeks, it is especially important to keep the line as stable and secure as possible and not allow the line to be dragged or pulled. It is only after this tissue has been given time to grow that the stitch will be removed (usually after 6 weeks).

BATHING AND WASHING

You should have a shower using an antiseptic soap the night before and on the morning you are scheduled to have the line inserted.

You should have a shower or all over body wash every day to keep your skin generally clean.

When showering please try to keep the line dry. In particular; stand with your back to the shower, thereby not allowing the water from the shower to fall directly onto the line or exit site.

If you are having a bath do not immerse your body totally in the bath, the line and exit site should not go under the water.

After washing pat the area dry with a clean paper towel or tissue.

Swimming is not allowed with a central line in position.

ONGOING CARE OF THE CENTRAL LINE

The line must be kept clean and dry around the exit site. A dressing is used to cover the exit site.

Types of dressings and when to change:

Transparent dressing (see through) is usually changed once a week.
Gauze dressing should be changed every second day.

However if the dressing gets wet or starts to fall off it will have to be changed more often.

If you need to change your own dressing at home the nurses looking after you will show you how to do this properly. If you prefer, you may leave the dressing off once the exit site is healed.

Flushing

When the central line is not being used there is a slight risk that it may become blocked. To stop this happening the Central Line is rinsed or flushed with a small amount of fluid in a syringe. This is done regularly, usually once a week. Your doctor or nurse will talk to you about how and who will perform this.

If there are clamps on your line they should always be closed when the line is not in use.

Dialysis patients please note: Your central line is to be used for haemodialysis only and therefore should only be used and flushed by the specialised dialysis nurses and doctors.

POSSIBLE PROBLEMS WITH THE CENTRAL LINE

The most common complication after central line placement is infection. Great care is taken to prevent this so it is important that you help by keeping the line and exit site clean to decrease the risk of infection occurring. However you should be aware that in certain medical conditions infection can occur even if full precautions have been taken.

You should make time every day to have a good look at the line and the exit site.

Dialysis patients please note: the nurses in the dialysis unit will do this inspection when you attend for your dialysis.

You should contact the hospital immediately if:

- The exit site becomes red, swollen or hot to touch.
- You notice any fluid coming from the line or the exit site.
- You develop a temperature and feel unwell.
- You experience any shivering/shaking any time after your line has been flushed.
- You experience pain or discomfort or any new symptoms during the injection of fluid.
- You notice a change in the location of the cuff under the skin.
- You experience pain, discomfort or swelling in your arm, neck or chest areas.

Infection

If you get an infection you may need antibiotics. However, if the infection is serious, occasionally the line may have to be removed or replaced.

Blocked Line

It is possible for clots to form in the vein at the tip of the line. If this happens some medication may be given to dissolve the clot or the line may have to be removed.

Damaged Line

It is important that you do not get a break or cut in the line or that air does not get into the line. If there is a clamp on your line it should always be closed when the line is not in use.

Do not use a scissors or wear sharp jewellery near the line.

(cont.)