UZ LEUVEN

Tunnelled catheter

Patient Information

Introduction

The treatment for your illness necessitates frequent insertions into the blood stream. A tunnelled catheter is the most suitable device as it will remain in place for the duration of your treatment. This brochure provides more detailed information on the use of a tunnelled catheter.

Please do not hesitate to contact a doctor or nurse should you have further questions. They will be happy to provide more detailed information.

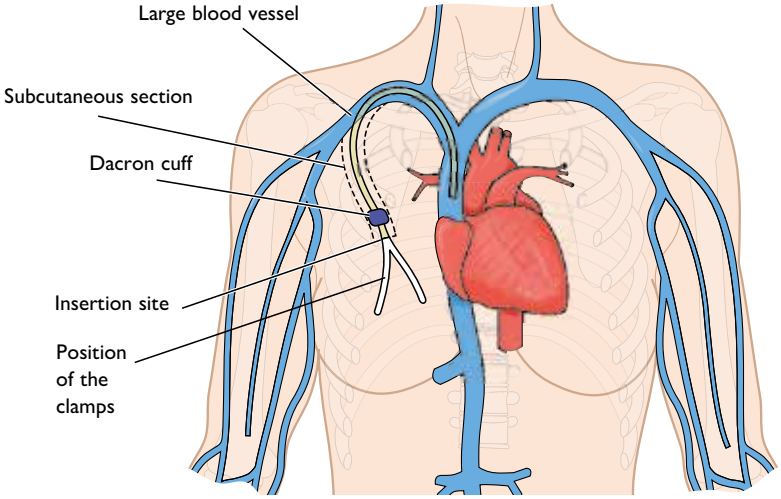
Intravenous catheter care reference team

WHAT IS A TUNNELLED CATHETER?

A tunnelled catheter is made of silicone and consists of an external and an internal element.

The internal element of the catheter is located in a central vein just before the heart. The central section of the catheter runs through a subcutaneous tunnel and is fitted with a cuff (made of Dacron), which ensures that the catheter is securely fixed in the subcutaneous adipose tissue. This will keep it in position and prevent it from sliding further inwards or outwards.

The external element of the catheter is located outside the body and fitted with a clamp and insert to which the drip lines can be connected.



Example of a tunnelled catheter implant site

Tunnelled catheters are available in different versions. The length, diameter and number of lumens are determined on the basis of your treatment.

ADVANTAGES OF A TUNNELLED CATHETER

On the one hand, this type of catheter is appropriate for your therapy because it makes it easier to administer medication. On the other hand, a tunnelled catheter allows us to take blood samples easily and painlessly. Most blood samples can be taken using this system. Obviously, it will always be possible to take a blood sample via a vein, e.g. in the arm.

By using a tunnelled catheter surface veins can be spared and the therapy is administered via a deeper, large blood vessel.
This way products are immediately significantly diluted without adverse effects on the blood vessel wall.

INSERTING A TUNNELLED CATHETER

A tunnelled catheter is inserted in the operating theatre, usually under local anaesthetic. With children the procedure is performed under general anaesthetic.

A tunnelled catheter is usually inserted in the chest, into a large blood vessel and moved forward until the tip is positioned just above the heart. The intervention takes approximately 60 minutes.

Once the tunnelled catheter has been inserted, there will be an insertion site below the collar bone on your chest, where the catheter exits the body, and an incision in your neck.

You may experience some pain or discomfort around the incision, or in your neck or shoulder, during the days following the procedure. You can take paracetamol-based painkillers for this (e.g. Dolprone®, Dafalgan®, Perdolan Mono® etc.).

Do not take painkillers based on acetylsalicylic acid (e.g. Aspirine®, Aspegic®, Aspro® etc.).
Ensure that the catheter is not pulled in any way.

TAKING CARE OF THE INCISION

The neck wound and catheter insertion site must be taken care of and covered again within 24 to 48 hours after insertion using a sterile dressing.

If moisture escapes from the incision, the wound will be treated daily.

If there is no leakage or bleeding after the procedure (dry, sealed wound) the insertion site will be covered with a transparent, water repellent dressing such as Tegaderm®.

Because a tunnelled catheter is often inserted in patients with a weakened immune system, aseptic care is of the utmost importance.
This means that with children a second person needs to be present when providing care.

In normal circumstances the external suture knots are removed after 10 to 14 days. Subcutaneous sutures disappear after a while. Once the incision is dry and has completely healed, wound care will no longer be necessary at the neck.

TAKING CARE OF A TUNNELLED CATHETER

The catheter dressing and StatLock® need to be changed on a weekly basis. If it is damp, has become loose or is visibly contaminated, the dressing needs to be changed earlier. The insertion site and wider area around it (everything covered by the dressing) need to be disinfected with an alcohol solution (e.g. Chlorhexidine 2% in alcohol).

During the initial 8 weeks the catheter will be fixed more securely with a StatLock®, i.e. an adhesive fixing system that prevents the catheter from sliding in or out. After 8 weeks the cuff (material around the catheter) will have knitted into the subcutaneous tissue so that the StatLock® are no longer be required.

If the catheter is not in use, each lumen must be flushed with a pulsating motion once a week using a physiological salt solution (NaCl 0.9%). This can be done by the home nurse or during a consultation at the hospital.

POTENTIAL PROBLEMS WITH THE CATHETER

❶ Damage to the external part of the tunnelled catheter

If a leak develops as a result of damage to the external part of the tunnelled catheter, it needs to be fixed as soon as possible in order to prevent infection.

- The catheter should no longer be used.
- Position a clamp on the catheter between the damaged section and the skin and close it, even if this means that the clamp needs to be placed on the narrow section of the catheter. This aims to prevent air being sucked into the catheter during breathing or blood escaping via the damaged section.
- Pack the damaged section with sterile compresses soaked in an alcohol solution and secure with sticking plaster to prevent bacteria from entering the catheter. In most cases a tunnelled catheter can be repaired without a completely new one having to be applied.
- Arrange an appointment with the catheter team as soon as possible, during working hours (08.30 – 16.00 hrs) on 016 34 08 64 or go to A&E after office hours or on Sundays and public holidays.

❷ The catheter has moved

If the tunnelled catheter has partially slipped out, the section of the catheter that is protruding must never be pushed back in. You can easily check the internal catheter tip position in the blood stream. When switching on and off, draw a little blood and then flush the catheter again.

It can be flushed using pre-filled syringes (= saline syringes) or you can draw 10 ml NaCl 0.9% into a syringe.

With a tunnelled catheter there is no need to draw blood every time you switch on and off. If you suspect that your tunnelled catheter has moved, contact the catheter team as soon as possible on 016 34 08 64 or go to A&E after office hours or on Sundays and public holidays.

❸ Redness, swelling, pus or pain near the insertion site

Always contact the catheter team during working hours (08.30 - 16.00 hrs) on 016 34 08 64. Go to A&E if you have particular complaints outside working hours.

❹ Resistance when flushing the catheter or when the therapy is dispensed

- If the therapy is dispensed more slowly or doesn't empty at the normal time.
- If it is more difficult or no longer possible to flush the catheter when switching on or off.
  This may indicate a problem with the infusion tube (kink, filter in the line, closed clamps, etc.) or the catheter (closed clamp, catheter problem, etc.).

What should you do?

- Whilst the therapy is being dispensed – if the therapy is infusing more slowly or hasn't emptied when the catheter is normally closed:
  - Check that there isn't a kink in the infusion tube or catheter.
  - Check the position of the roller and catheter clamps. Are they open?

- Is the flow controller correctly adjusted?
- Flush with 10 ml NaCl 0.9% or one extra saline syringe via the infusion tube or a three-way valve, or when disconnecting.

If all these interventions are unsuccessful, keep hold of the infusion tube packaging and flow controller if necessary. It is advisable to pass on the details on the packaging directly to the hospital pharmacy (if you are being fed via the catheter). Contact the catheter team (tel. 016 34 08 64) during office hours (08.30 - 16.00 hrs).

- When closing the catheter:
  - If you notice that it is more difficult to flush the catheter, use one or more extra saline syringes. Never apply additional pressure when flushing.
  - If the therapy is no longer being dispensed or the catheter can no longer be flushed.

Check the following items or ask for assistance from the home nurse:

- Check that there isn't a kink in the infusion tube or catheter.
- Check the position of the roller and catheter clamps and the flow controller.
  - ✔ Are all the clamps open?
  - ✔ Is the flow controller adjusted correctly?

If all these interventions are unsuccessful, contact the catheter team as soon as possible (tel. 016 34 08 64) during working hours (08.30 - 16.00 hrs) or go to A&E outside office hours.

REMOVING A TUNNELLED CATHETER

A tunnelled catheter can remain in place for the duration of your treatment. A tunnelled catheter is always removed in the hospital. The procedure will be performed in the patient's room rather than in the operating room. If necessary or desirable, a local anaesthetic can be administered to make the removal less painful.

ENGAGING IN SPORTS AND TRAVELLING WITH A TUNNELLED CATHETER

SPORT

In most cases a tunnelled catheter will not prevent you from engaging in sports. However, you need to be vigilant when engaging in water and/or contact sports, as the insertion point needs to be kept dry and free from water to prevent infection. When engaging in contact sports you must ensure that the catheter is not subjected to tensile forces to prevent it from accidentally sliding out.

TRAVEL

Tunnelled catheters are used throughout the world. In most countries you will find doctors who have experience with this system and can assist you.

LEISURE TIME

You must not use a sauna or sunbed whilst the catheter is in place. Swimming and bathing are also not recommended due to the increased risk of infection. You can take a shower though.

USEFUL TELEPHONE NUMBERS

In the event of problems you can contact the following services during office hours:

✗ **the nurses of the intravenous catheter care reference team**
- tel. 016 34 08 64
- e-mail intraveneuze_katheterzorg@uzleuven.be

✗ **the surgical oncology secretariat**
- tel. 016 34 68 32
- tel. 016 34 68 31
- tel. 016 34 68 29

OTHER QUESTIONS RELATING TO YOUR CATHETER

Make a note of any questions you might have here so that you can discuss them with your doctor during your next appointment. If you require a quick response to your catheter problem, you can obviously always contact the hospital by telephone.

Design and implementation
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You can also find this brochure at www.uzleuven.be/en/brochure/701014.

Please send comments or suggestions relating to this brochure to communicatie@uzleuven.be.

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