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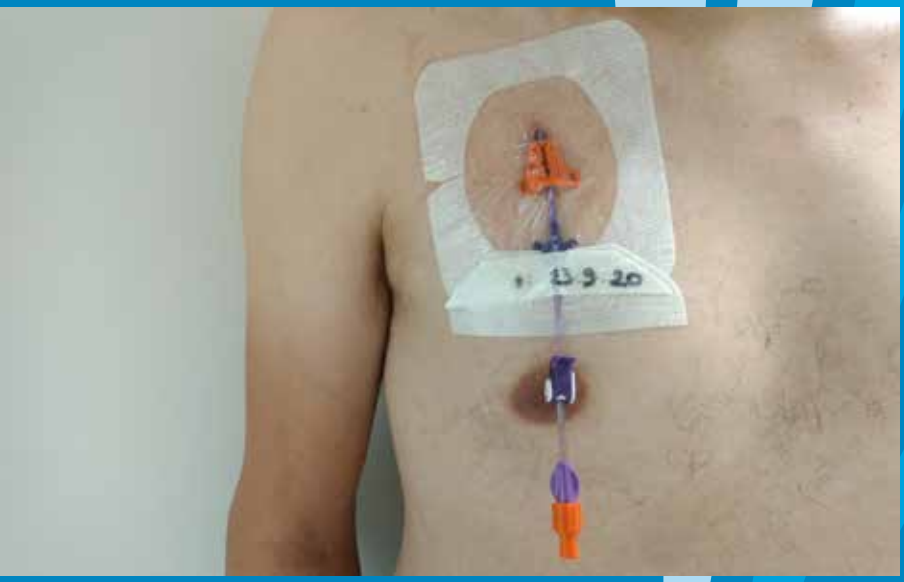

Tunnelled catheter without cuff

Patient Information

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Introduction

The treatment for your illness necessitates frequent puncturing of the blood vessels. A tunnelled catheter without cuff is the most suitable device in your situation, as it will remain in place for the duration of your treatment.

This brochure provides more detailed information on this type of 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 WITHOUT CUFF?

Medication can be administered intravenously (= into the blood stream) and blood samples can be taken via the catheter, which reduces the number of times the nurse has to insert a needle into your arm. A tunnelled catheter without cuff is attached to the chest and remains in place for the duration of your intravenous treatment.

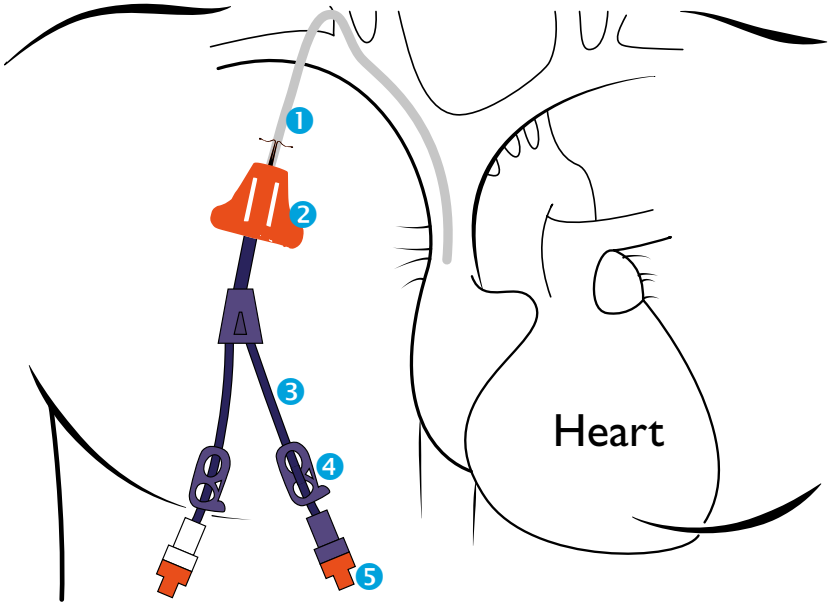
The catheter is made of polyurethane and consists of an external and internal element. The tip of the catheter is positioned in a central vein right before the entry to the heart. This is a relatively large blood vessel so that medication and intravenous fluids can be administered easily. The middle section of the catheter runs through a subcutaneous tunnel (hence the name 'tunnelled' catheter). The external element of the catheter, which consists of several tubes, is located outside the body. Each tube or 'lumen' is fitted with a clamp to open and close the catheter and an insert to which, for example, other infusion tubes can be connected.

In addition to a tunnelled catheter 'without cuff', another type of catheter, i.e. a tunnelled catheter 'with cuff', is also available. A cuff is a small piece of material on the catheter that knits into the subcutaneous skin after a while, thus limiting the risk of the catheter sliding.

A tunnelled catheter without cuff is not fitted with a cuff because it is mainly used for a limited time. It is attached with a SecurAcath® instead, which is an orange coloured system with small metal hooks (see illustration page 5) that are used to fix the catheter below the skin at the insertion site to prevent it from sliding.

A tunnelled catheter without cuff is available in different versions. The number of tubes or lumens is determined on the basis of your treatment.

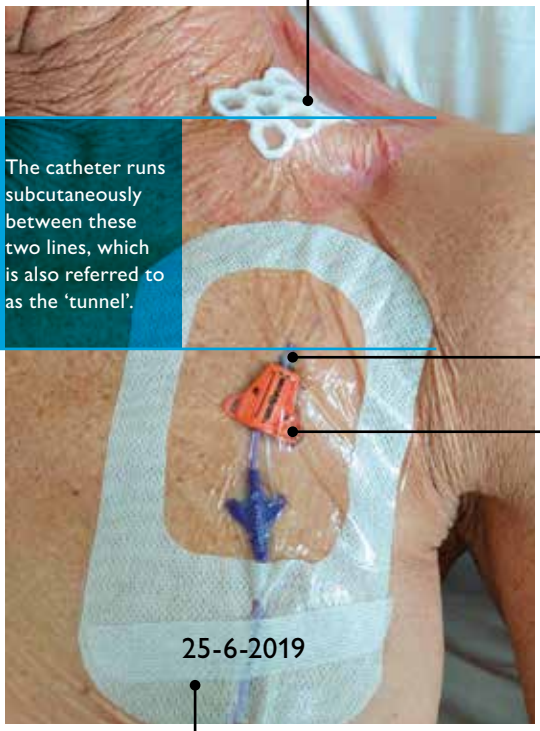
EXAMPLE OF THE POSITION OF A TUNNELLED CATHETER WITHOUT CUFF IN THE BODY



1. Subcutaneous tunnel between internal and external element
2. Subcutaneous fixing system (SecurAcath®)
3. Two lumens or tubes (purple and white), depending on the type of treatment
4. Clamp to open and close the lumen or tube
5. Orange sealing caps or (where applicable) a different type of cap (e.g. needleless connector). The cap is attached to the insert.

EXAMPLE OF A TUNNELLED CATHETER WITHOUT CUFF, WITH INDICATION OF ALL EXTERNAL ELEMENTS

An incision is made into the neck to insert the catheter into the blood stream. The neck wound is sutured with stitches and sticking plasters. The wound on the photograph is covered with a PostOp Visible® dressing.



The catheter runs subcutaneously between these two lines, which is also referred to as the 'tunnel'.

The insertion site is the location where the catheter exits the body. It is important to keep this dry, which is why the insertion site must always be covered with a sterile, preferably transparent, dressing (e.g. Tegaderm®).

SecurAcath®, the orange fixing system that fixes the catheter subcutaneously with two small metal hooks.

Date on which the dressing was applied, to make it easier to remember when it should be changed.

ADVANTAGES

A tunnelled catheter without cuff is suitable for the administration of your intravenous (via a vein) therapy. Blood samples can be taken easily and painlessly via the catheter. Most blood samples can be taken via this system. Obviously, blood can also still be taken via another vein, e.g. in the arm.

Surface veins can be spared by using a tunnelled catheter and the therapy will be administered via a deeper, large blood vessel. The products will immediately be significantly diluted due to the increased blood flow in the deeper blood vessel, without any adverse effects on the blood vessel wall.

INSERTING THE CATHETER

A tunnelled catheter without cuff is inserted in the operating room, usually under local anaesthetic. With children the procedure is performed under general anaesthetic. The catheter is inserted into a large blood vessel and moved on until the tip is positioned just above the heart. The intervention takes approximately 45 minutes.

If the operation is performed under local anaesthetic, you will not have to fast beforehand.
If you are taking anticoagulants (blood thinning medication), always ask your doctor beforehand whether you should stop taking them before the operation.

Once the tunnelled catheter has been inserted, there will be an insertion site on your chest, where the catheter exits the body, and an incision in your neck. You may experience some pain or discomfort around the insertion site during the days following the operation, i.e. at the incision in your neck, on your chest where the catheter runs subcutaneously or at the shoulder on the side where the catheter was inserted.

You can take paracetamol based painkillers for this (e.g. Dolprone®, Dafalgan®, Perdolan® Mono). **Do not take painkillers based on acetylsalicylic acid (e.g. Aspirine®, Aspegic®, Aspro®), as they increase the risk of haemorrhaging.**
Ensure that the catheter isn't pulled (accidentally) to prevent it from partially sliding out or dislodging.

TAKING CARE OF THE INCISION AND INSERTION SITE

INCISION WITH SUTURES

The neck wound (incision) is closed with sutures and often with additional sticking plasters. Depending on the type of dressing applied by the surgeon, subsequent wound care will be required. The surgeon will explain what is needed. The wound needs to be looked after daily for as long as moisture/blood escapes from it. When any leaks have stopped, a transparent, sterile dressing will suffice and can remain in place until the stitches are removed.

In normal circumstances the external knots (if present) of the sutures will be removed after 10 to 14 days. The remaining subcutaneous, sutures will disappear naturally. Once the incision in the neck is dry and has completely healed, wound care will no longer be necessary.

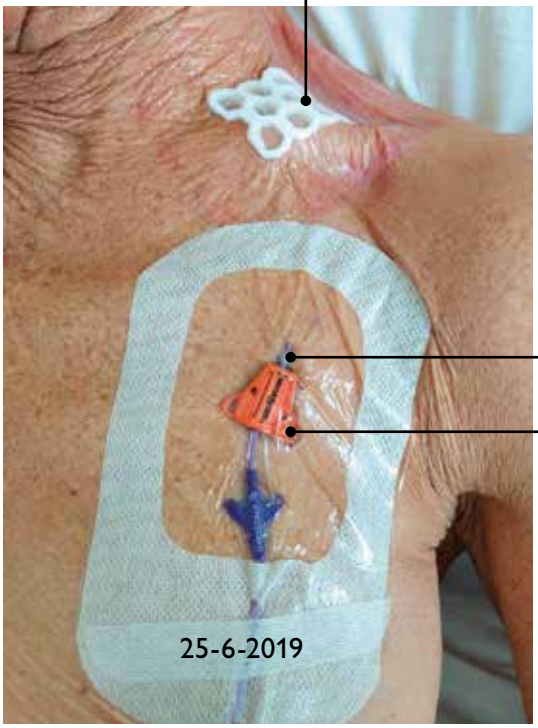
CATHETER INSERTION SITE

The catheter insertion site must be taken off and covered again with a sterile dressing within 24 to 48 hours of the insertion. If moisture/blood escapes from the insertion site, daily care will be needed using a sterile, absorbent dressing.

If there is no leakage or haemorrhaging the insertion site will be considered a dry, healed wound. A transparent, water repellent sterile dressing will be applied (e.g. Tegaderm®), which can remain in place for maximum 7 days providing it is not dirty or damp and hasn't come loose.

The insertion site and fixing system need to be disinfected at least once a week with an alcohol solution (e.g. Chlorhexidine 2% in alcohol) and the sterile catheter dressing needs to be changed at the same time. Whilst providing care always check that the two elements of the fixing system are properly clicked together.

Incision, closed with sutures and sticking plasters, covered with a sterile transparent dressing, which can remain in place until the sutures are removed.
If it is dirty, damp or has come loose, the dressing must be changed.



Insertion site, disinfect weekly and always cover with a sterile transparent dressing.

Fixing system, disinfect weekly and check that the 2 system elements are properly clicked together.

TAKING CARE OF THE CATHETER

CHANGING THE CATHETER DRESSING

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

The fixing system will remain in place as long as the catheter is applied. It is important to disinfect this system during the weekly care sessions. Also check during the care sessions that the two elements of the fixing system are completely closed (the procedure is explained with illustrations on pages 13 and 14).

FLUSHING THE TUBES

If the catheter is not in use, each lumen on the catheter needs to be flushed with a pulsating motion every week using a physiological salt solution (NaCl 0.9%). The lumen then needs to be closed correctly under positive pressure (the catheter clamp needs to be closed when injection the last millilitre of flushing liquid). A new sterile cap needs to be fitted on the end of the catheter. During this procedure sterile compresses soaked in an alcohol solution must always be applied below the connection site of the catheter end.

Changing the dressing and/or flushing will be performed by a home nurse or during a consultation at the hospital.

Remember: because a catheter is often inserted in patients with a weakened immune system, aseptic care and manipulation of the catheter are of the utmost importance. This means that due care should be taken concerning aseptic practices and the use of sterile materials and compresses during a care session. Hand hygiene is particularly important.

Materials needed for weekly care sessions:

- ✔ dressing set with tweezers and sterile compresses
- ✔ disinfectant, e.g. Chlorhexidine 2% in alcohol
- ✔ transparent sterile catheter dressing
- ✔ pre-filled syringe with 10 ml NaCl 0.9% OR 10 ml vial of NaCl 0.9%, 10 ml syringe and fill needle (1 per lumen)
- ✔ new sterile cap (1 per lumen)
- ✔ alcohol gel for hand hygiene

These materials will be provided by the nurse.

DRESSING CARE TUNNELLED CATHETER WITHOUT CUFF
(information for the home nurse)


1


2

1 Gather the materials.

2 Disinfect your hands.


3

3 Remove the dressing. Dispose of it together with the gloves.
Disinfect your hands again and put on new gloves.
Disinfect the insertion site with chlorhexidine 2% in alcohol 70%.

4 Disinfect the SecurAcath® (top and bottom) Disinfect the skin underneath the SecurAcath®.

5 Disinfect the wider area around the insertion site.
Always allow the disinfectant to dry properly. Also check during each care session that the two elements of the SecurAcath® are fitted together correctly and that the fixing system is fully closed.

6 Apply a polyurethane dressing: minimum 2 cm around the insertion site and avoid the SecurAcath® from being pressed into the skin.
Date the dressing.

This is an example of an incorrectly fixed catheter. The 2 SecurAcath® elements are not clicked together correctly. Always check during each care session that the SecurAcath® has been clicked together correctly.

POTENTIAL CATHETER PROBLEMS

1. The catheter is blocked

If it is difficult or even impossible to flush the catheter or take a blood sample, the catheter is blocked.
Medication (urokinase) can be administered, but only in the hospital, to get the catheter to work properly again.

To arrange this contact the catheter team during working hours (08.30 16.00 hrs) on 016 34 08 64. In the event of urgent problems after working hours and on Sundays and public holidays, go to A&E.

2. Redness, swelling, leakage of moisture/pus or pain near the insertion site

These are potential signs of a local infection or central venous thrombosis (blood clot in the vein). The problem needs to be investigated and it needs to be ascertained whether the catheter can remain in place, if necessary, with additional measures to prevent the problem from getting worse.

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 severe complaints outside working hours and on Sundays and public holidays.

3. 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. This should not immediately present a problem providing the catheter keeps working. The home nurse can check this easily by drawing a little blood and flushing the catheter again with a 0.9% physiological salt solution.

If you suspect that your tunnelled catheter has moved and have identified an additional functional problem, it is advisable to contact the catheter team on 016 34 08 64. After working hours or on Sundays and public holidays go to A&E. An X-ray will be made to check whether the catheter is in an acceptable position and can still be used or needs to be changed.

4. Damage to the external part of your tunnelled catheter

If the external part of the tunnelled catheter is damaged (e.g. a hole or crack, with potential leakage) the problem has to be dealt with as soon as possible to prevent infection.

- Stop using the catheter.
- Place the catheter clamp between the damaged section and the place where the catheter enters the body and close the clamp. This will 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 plasters. This will prevent bacteria from entering the catheter and potentially also the blood stream.

- 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.

REMOVING THE CATHETER

A tunnelled catheter without cuff can remain in place for the duration of your treatment. This type of catheter is always removed in the hospital by a doctor or nurse.

The procedure will be performed in the patient's room or in the consultation room rather than in the operating room. If necessary or desirable, a local anaesthetic can be administered to make the removal procedure less painful.

Once the catheter and fixing system have been removed, local pressure is applied to the insertion site and blood vessel. You will then have to lie down for 10 to 15 minutes to prevent any haemorrhaging. The opening will be covered with a sterile gauze bandage, which should be left in place for a few days until the insertion site has healed.

SPORTS AND LEISURE

SPORT

In most cases the presence of a tunnelled catheter will not prevent you from engaging in sports. With contact sports you will have to avoid traction (= tension) being applied to the catheter to prevent it from moving.

LEISURE

You must not visit a sauna whilst the catheter is in place. Swimming is also not advisable because of the increased risk of infection. You can take a shower or bath, but make sure that the insertion site stays dry. When bathing the insertion site and catheter ends must not be below the water level. If the dressing is wet it must be changed.

If you do decide to swim, although we advise against it, the catheter needs extra protection with an additional water repellent dressing (e.g. Secuderm®), which should be applied on top of the catheter dressing. Both the insertion site and catheter ends need to be wrapped to make them watertight.
If you would like more information on this please consult the catheter team on 016 34 08 64.

RADIOGRAPHY AND MRI

A tunnelled catheter without cuff can be used to administer a contrast medium during medical examinations (CT scan, MRI scan or other examinations).

USEFUL TELEPHONE NUMBERS

In the event of problems you can always contact the nursing staff of the intravenous catheter care reference team.

They can be contacted during office hours (08.30 16.00 hrs) on 016 34 08 64, or via the surgical oncology secretariat, tel. 016 34 68 32, or 016 34 68 31 or 016 34 68 29.

Email address: katheterzorg@uzleuven.be

OTHER QUESTIONS RELATING TO YOUR CATHETER

Make a note of any questions you might have here so 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.

SUGGESTIONS

If you have any suggestions that might improve the content of this information brochure, please let us know. Matters that are unclear or missing can then be adapted or added in a future edition. This information is provided to support our patients. Your input will help us gain an insight into our patients' needs and enable us to adapt our information accordingly.

Please e-mail your suggestions to katheterzorg@uzleuven.be.

NOTES

Design and implementation
This text was written by the intravenous catheter care reference team in cooperation with the communications department.

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

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