

All About Your Tunneled Catheter



Your doctor has chosen a Tunneled Catheter for you based on your treatment needs. Because a tunneled catheter can be left in place for a long time (years) it is important that you know how to take care of it.

As a patient or support person, you will receive individual instructions from your nurse on how to care for the catheter. This booklet will guide your care and can be used during teaching and follow up care. Follow these instructions carefully; they are designed to prevent problems.

It is important that you or your support person feel comfortable with the information and instructions you have received to take care of your tunneled catheter. If you have any questions please ask either your doctor or nurse.

What is a Tunneled Catheter?

A Tunneled Catheter is a flexible tube made of soft material. The catheter may have one, two, or three openings (lumens). Once the catheter is inserted, you will see the catheter extending from your upper chest, on either the right or left side. The Tunneled Catheter is made for long term use, and can be left in place for many years, if needed. The catheter can be used to give fluids, medications, blood or blood products, or IV nutrition. The catheter can also be used to take blood samples.

There are two main types of Tunneled Catheters.

1. Non-Valved (eg. Hickman®)

- This catheter is completely hollow, and has external clamps attached to the part of the catheter that extends outside of your body. It can have one, two or three lumens.

2. Valved (eg. Groshong®)

- This catheter has a valve built into the internal portion of the catheter (you won't see the valve). This catheter *will not* have external clamps attached to the part of the catheter that extends outside of your body. It can have one or two lumens.

Some Tunneled Catheters are power injectable, and these catheters are designed to be able to receive a high pressure injection of medication, which occurs for certain medical scans. Check with your doctor or nurse to see if you have a power injectable catheter. The care of your catheter does not change if your catheter is power injectable.

What to expect when a Tunneled Catheter is inserted

A Tunneled Catheter can be inserted either in the operating room or in the X-Ray department during a short procedure. You will receive medications that will relax you and help to block the pain. You will also have freezing injected into the insertion area (like the freezing you get at the dentist's office) to keep you comfortable. The doctor (radiologist or surgeon) will place the catheter into your chest, and insert the end of the catheter into a large vein in your upper body.

An ultrasound machine will be used to see your vein. Two very small incisions are made. One incision is made in your upper chest or neck and is called the entrance site (A). This is where the catheter is put into a vein. A second incision is made in your lower chest and is called the exit site (B). This is the place where the catheter exits your lower chest.

A tunnel is made under your skin from the entrance site (A) to the exit site (B). You may feel some pressure when the doctor creates this tunnel, but should not feel pain. The catheter goes through the tunnel under your skin. (See Diagram 1 and Diagram 2)

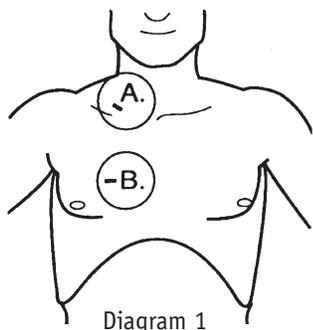


Diagram 1

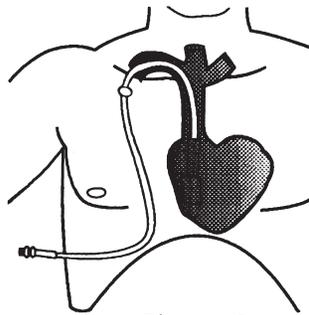


Diagram 2

After your tunneled catheter is in place, the incisions are closed with stitches or surgical tapes, and covered with bandages. A chest x-ray is then taken to check that it is in the right place.

What to expect the first few days

There will be a dressing covering both incision sites. The dressings need to be checked within 48 hours. If you or your support person are unable to change your dressings, you will need to make an appointment to see your GP or family clinician, clinic nurse, or the specialist who requested to have the Tunneled Catheter inserted. Your neck incision (insertion site) may be covered with small tapes called steri-strips, which will fall off during the next several days. If you have stitches on your neck incision, these will be removed within one to two weeks by your family clinician, clinic nurse, or specialist.

The chest wall site (exit site) will have stitches that stay in place for 2–4 weeks, depending on your healing process.

A Tunneled Catheter comes with a cuff, which is part of the catheter that is placed in the tunnel under your skin. Your tissue will grow around the cuff and will secure your catheter in place. You may feel a small bump under the skin on your chest where the cuff is located. (See Diagram 3).

There may be some swelling or bruising present, and the area may be tender. This will get better after a few days. Patients often describe this tenderness as a bruised feeling or stiff neck. Your doctor may recommend taking pain medication for the first few days after your

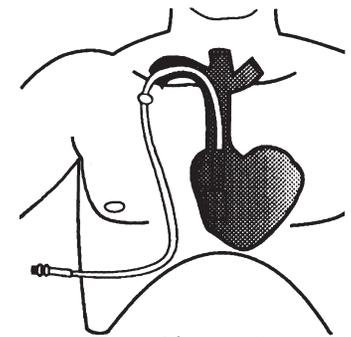


Diagram 3

Tunneled Catheter is inserted. See your doctor if pain or bruising continues one week after your Tunneled Catheter insertion.

Taking care of your Tunneled Catheter

- Your Tunneled Catheter can be used immediately after insertion.
- Your Tunneled Catheter needs to be flushed at least once a week. This can be done by a nurse at the clinic where you receive treatment, or by a Home Health Nurse at your Community Health Clinic.
- Look at your Tunneled Catheter site (chest site) every day. Your site should not be tender, red, swollen or have drainage. Contact your nurse or doctor if you find a problem.
- You and/or a support person may be taught how to care for your catheter at home. Your nurse will help you learn how to:
 1. Flush the catheter
 2. Change the cap(s)
 3. Change the dressing
- It is important not to use anything on the catheter other than the supplies you are given by the health care team. Nail polish remover and tape removers are especially harmful and must not be used.

Are there restrictions to my daily living?

1. Avoid carrying bags or purses over your “Tunneled Catheter” shoulder.
2. Avoid strenuous activity or activities that have repetitive arm movement, such as moving heavy objects over 4.5 kilograms (10 lbs), weight lifting, or golf. Performing these activities may cause the Tunneled Catheter to malfunction.
3. Activities that do not involve a lot of upper body movement will not harm your Tunneled Catheter.
4. Some people with a tunneled catheter report that the seatbelt bothers the site. If this happens to you, discuss options with your care provider (padding to make or purchase).
5. Sometimes, the Tunneled Catheter may be detected by security systems at the airport. If you are planning to travel, be prepared to show your identification card.

Be able to detect problems and know what to do

Do not expect problems, but be ready if they happen.

The following is a list of potential problems with specific information about each one.

1. How will I know if I have an infection?

What you will see or feel:

- Fever or chills
- Temperature above 38°C or 101°F
- Flu-like feeling, lack of energy
- Redness, swelling, pain, or drainage (pus) at your catheter site
- Your catheter site may feel warm to touch

What to do:

- Call the clinic where you receive treatment immediately, and speak with your health care provider
- If you are unable to reach your health care provider, go to the nearest Hospital Emergency.

How to avoid it:

- Wash hands before doing any catheter care
- Keep fingers away from sterile points and connections on your catheter
- Keep your cover dressing dry
- Look at your catheter site once a day. The skin around the site should be healthy and not have any open areas
- If you are trained to do so, change your Tunneled Catheter dressing if it is wet, loose or you see drainage
- Keep your supplies clean and dry
- Remind health care professionals who do not use proper technique that you are concerned about infection. Your tunneled line is your responsibility

2. What if the cap comes off the end of my catheter?

What you will see or feel:

- The cap will either be loose or disconnected

What to do:

- If your catheter has clamps attached, be sure that it is clamped
- Scrub the open end of your catheter with an alcohol swab as you have been taught, then change cap and flush catheter
- Call your health care provider if you have not been taught how to change the cap

How to avoid it:

- Always secure catheter to clothing or skin
- Avoid tugging or pulling at catheter
- Hold onto the cap when you are attaching or removing syringes or IV tubing.
- Make sure the cap is firmly attached to the catheter when you finish flushing it

3. How will I know if my Tunneled Catheter is broken?

What you will see or feel:

- Pain or swelling in your arm or chest when medication is running
- The catheter is leaking – fluid may collect under your chest dressing , or you may notice a leak from the catheter outside of the dressing

What to do:

- **CLAMP OR KINK CATHETER IMMEDIATELY**
- Clamp or kink catheter above site of leak or break
- Stop any medication that may be running through your Tunneled Catheter
- Wrap broken area with sterile gauze and secure with tape. This will prevent infection.
- The catheter will need to be repaired: Call the clinic where you receive treatment immediately and speak with your health care provider
- If you are unable to reach your health care provider, you will need to go to the nearest Hospital Emergency

How to avoid it:

- Do not pull or tug on your Tunneled Catheter or IV tubing; always secure catheter to clothing or skin
- If your Tunneled Catheter has clamps attached, only clamp over reinforced clamping sleeve, and rotate the spot where you clamp
- Never use scissors near the catheter
- Never use excessive force to flush the catheter
- Always use a 10 mL syringe or larger to flush the catheter
- Do not insert needles into catheter
- If your tunneled line has clamps attached, you will be given an extra clamp which you must carry with you at all times to use in case of a catheter break

4. What if the IV will not run, or I can't flush my catheter?

What you will see or hear:

- IV medication will not run, or is running slowly (or if there's a pump, it is alarming)
- You can't flush your catheter using normal pressure

What to do:

- Check to ensure catheter is not clamped when running medications, or flushing
- Look at your Tunneled Catheter dressing and the whole length of your catheter and IV tubing to see if there are any kinks
- If you can't find any visible problem, call the clinic where you receive treatment, and speak with your health care provider. You may be given a special medication through your Tunneled Catheter by a specially trained nurse that will help open up your catheter for flushing
- If your infusion is chemotherapy, and your health care provider is not available, go to the nearest Hospital Emergency, or your Chemotherapy Unit
- If your Tunneled Catheter is being used for antibiotics and your health care provider is not available (eg. during the night), follow the instructions to stop the pump, and clamp your line if you have clamps attached. Contact your health care provider first thing in the morning

How to avoid it:

- Flush your Tunneled Catheter well before and after each use
- If your catheter has clamps attached, and you have been taught to do so, you must use heparin after each time you use your catheter
- Keep track of your flushing dates. Your Tunneled Catheter must be flushed every 7 days when not in use.

5. What if see air in my catheter?

What you will see or feel:

- A great length of air in the IV catheter or in the tubing attached to your catheter. Talk with your health care provider about this when your medication infusion is being set up
- You may see a break in the catheter (as above)
- You may have shortness of breath or chest pain – THIS IS AN EMERGENCY

What to do:

- Stop the medication if it is running
- CLAMP the catheter immediately above the break if the catheter is broken
- If you are short of breath or have chest pain, call 911 right away and lie down on your left side
- Otherwise, call your health care provider and ask to see them today

How to avoid it:

- Check that the IV tubing is free of air when you set up a medication
- Check that every connection and cap is secure
- If your catheter has clamps attached, always clamp your catheter between infusions and before changing caps
- If your tunneled line has clamps attached, you will be given an extra clamp which you must carry with you at all times to use in case of a catheter break/air in line

6. How will I know if there is a blood clot in my vein?

What you will see or feel:

- Swelling of your hand, arm or neck on the same side as your Tunneled Catheter
- Pain in your arm or shoulder on the same side as your Tunneled Catheter
- You may feel shortness of breath or chest pain – THIS IS AN EMERGENCY

What to do:

- Call 911 immediately or go to your nearest Hospital Emergency

How to avoid it:

- Do not use force to flush your catheter
- Follow instructions given in this booklet for safe care and activity limits

7. What if my catheter has come out (or is longer)?

What you may see or feel:

- Your catheter may be further out than usual (it will be longer)
- You may see the cuff at your chest site (exit site)
- You may feel discomfort when flushing

What to do:

- Call your health care provider and let them know and ask to see them today

How to avoid it:

- Always secure catheter to clothing or skin
- Avoid tugging or pulling at catheter

Common questions other patients have asked

Can I bathe or swim?

- It is recommended that you do not immerse your catheter in water, however talk with your nurse or doctor. The answer will depend on your general health and general risk of infection. It will also depend on how long you have had the catheter in place.

If I forget to flush on time, what should I do?

- You should flush as soon as you remember. Never use force to flush the catheter, especially if it has been a while since you last flushed it. If you experience difficulty flushing, inform your nurse or doctor immediately.

If blood backs up into the catheter, is something wrong?

- If you are using a clear cap, you may notice blood in the cap. This will not hurt you, but it can cause the growth of bacteria and increase the risk of infection or clotting. Blood usually backs up into the catheter only when there is an increase in internal pressure created by some form of physical activity or bending over. If blood is noticed, flush with flushing solution as soon as possible. If your catheter has clamps attached, check daily to be sure the clamps are engaged.

Will having the catheter affect my sex life?

- Having the catheter in place will not interfere with your ability to be intimate with your partner. Please do not hesitate to discuss this with your doctor or nurse.

What do I do if my catheter clamp (the one attached to my catheter) breaks?

- If your catheter has clamps attached, you may be given a special clamp to use over the reinforced area on the catheter (see Diagram 4). These extra clamps are generally provided during your hospital stay. If you don't have a special clamp you may bend the catheter in half and wrap a rubber band around it as a temporary measure. A catheter clamp should be obtained as soon as possible.

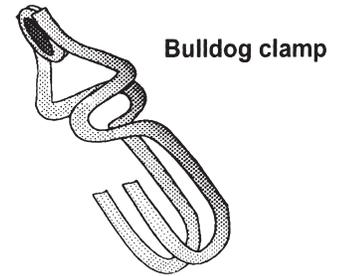


Diagram 4

What should I do if my skin is sensitive to the cleaning solution or tape?

- There are other choices of solutions and tape that can be made. It is important to be aware of any skin problems near the chest site (exit site) because the danger of infection increases if there is skin irritation. Discuss with your doctor or nurse if this occurs.

Do I always have to cover the catheter site with a dressing?

- This question is best asked of your nurse or doctor. The answer will depend on your general health and risk for infection.

How is the catheter removed?

- It depends on how long the catheter has been in place. If it has been in a short time, the doctor will pull it out. If it has been in for a longer time the doctor will make a small cut over the cuff then pull the catheter out.

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