

# Caring for My Chest Tenckhoff Catheter

## For patients who had their Tenckhoff catheter inserted in Interventional Radiology

You are leaving the hospital with a Tenckhoff catheter. The doctor has put in a Tenckhoff catheter to drain the fluid from around your lung.

This booklet has information you need to know to help you care for a Tenckhoff catheter at home. You can use it to learn more about:

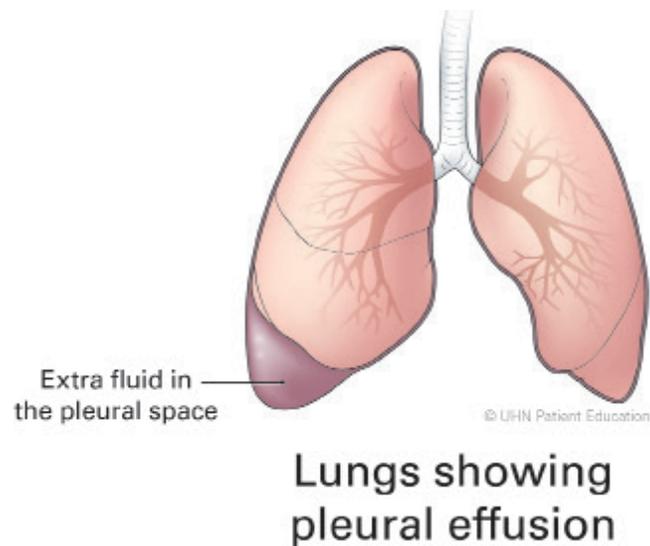
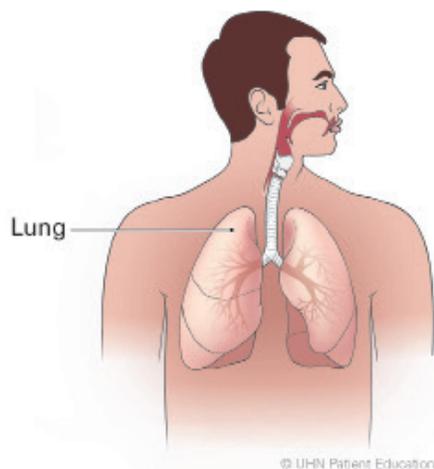
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## What is a pleural effusion?

There is a small space between the outside of your lung and the chest wall (ribs). This space is called the “pleural space.” There is always a small amount of fluid in the pleural space. This is normal.

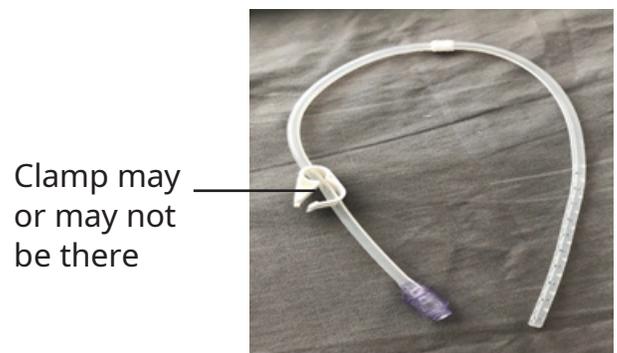
- If too much fluid gathers in this space, it is called a **pleural effusion**.
- If there are cancer cells in the fluid, it is called a **malignant pleural effusion**.



## What is a Tenckhoff catheter?

A Tenckhoff catheter is a soft, see-through rubber tube. A doctor puts it into your pleural space to drain fluid from around your lung.

The catheter is tunnelled under your skin and then brought out. The place where it comes out of your skin is called the **exit site**. There is a special cap at the end of the Tenckhoff catheter that prevents the pleural fluid from leaking out.



## Who helps me to take care of my Tenckhoff catheter?

Your health care team arranges for a community nurse to visit you and help you take care of your Tenckhoff catheter. The nurse teaches you and your family or caregiver what you need to know. Once you are comfortable taking care of the Tenckhoff yourself, the community nurse will not visit as often.

## What happens when my Tenckhoff catheter is first put in?

### For the first 3 days

- Your Tenckhoff catheter is attached to a drainage bag. The bag holds the fluid leaving your pleural space.
- While you are in the hospital your health care team will teach you how to empty the drainage bag in case it gets full overnight.
- The drainage bag should stay attached for the first 3 days unless someone on your health care team has told you differently.
- **Important:** You may leave the hospital with your catheter capped (you do not have a drainage bag attached). A community nurse will visit you and assess if you need to be connected to a drainage bag. The community nurse will also help you empty the bag and change the tubing if needed.

### After the first 3 days

On the third day your Tenckhoff catheter is disconnected from the drainage system. You will sleep without draining and then attach the Tenckhoff catheter to the drainage system in the morning, or when needed. Based on the amount of drainage, you can follow the schedule below.

### Drain your Tenckhoff catheter using this schedule

Fluid collected on last drain?	How often should I drain?
More than 300 millilitres	Drain every day
Between 100 to 300 millilitres	Drain every other day
Less than 100 millilitres	Drain it twice a week

## Important information about your drainage

1. The drainage bag must be lower than your chest. This lets gravity help to drain the pleural fluid.
2. The amount of fluid that drains will be different each time. Use the amount of fluid that drained the last time as a guide.
3. The colour of your pleural fluid can range from a pale yellow to orange to cranberry red. This is normal.



**If you have any of these symptoms below, drain the fluid from your chest using your Tenckhoff catheter.**

You may feel:

- short of breath
- chest feels full and you have a cough
- discomfort

## How do I drain my Tenckhoff catheter?



Use the equipment that drains your Tenckhoff catheter only once. This means if you need to drain more than one bag or bottle, you need a new bag or a bottle and new tubing.

### Option 1: Using vacuum drainage bottle

**Gather your supplies. You will need:**

- drainage bottle
- alcohol swab or chlorhexidine swab
- saline flush in case the catheter needs to be flushed



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## Follow these steps:

1. Remove the gauze and tape from the needleless adaptor.
2. Wipe the needleless connector for 15 seconds. Rub it very well.
3. Take the bottle out of the package, close the roller clamp and set it on the side.
4. Attach the needleless connector at the end of the Tenckhoff catheter to the drainage bottle.
5. Open the roller clamp of the tubing attached to drainage bottle and the clamp on the Tenckhoff catheter (there may not be a clamp on the Tenckhoff catheter).
6. Once the drainage stops or if the bottle is full, close the roller clamp of the bottle and the Tenckhoff catheter.
7. Disconnect the bottle from the Tenckhoff catheter. If more fluid needs to be drained, connect an empty Drainage bottle.

For more support on how to use the bottle, watch:  
<https://www.youtube.com/watch?v=m6vhc2i78ew>

## Option 2: Using saline bag and tubing

**Before you start to drain the fluid, gather your supplies. You will need:**

- sterile secondary intravenous (IV) tubing
- sterile IV bag
- alcohol or chlorhexidine swabs



**Important!**

The IV bag will be supplied to you full of fluid. You must drain this fluid first. **The community nurse will teach you how to do this.** It is very important to keep everything clean and free of germs.

## Step 1

### To drain the IV bag, you must:

1. Wash your hands.
2. Close the roller clamp on the IV tubing.
3. Remove the cap on the end of the IV bag. Do NOT touch the end of the bag once the cap is removed.
4. Remove the cap from the pointed end of the IV tubing. Do NOT touch the end of the IV tubing once the cap is removed.
5. Insert the IV tubing into the IV bag port.
6. Open the roller clamp and let the fluid drain into the sink. You want the IV bag empty.
7. Close the roller clamp.



## Step 2

**Once your IV bag and tubing are prepared, you are ready to start.**

### **To drain the fluid:**

1. Get into a comfortable position.
2. The cap on the end of the Tenckhoff catheter is called a **needleless adaptor**. Clean the end of the needleless adaptor (or MaxZero Connector) well with an alcohol or chlorhexidine swab. Let it to dry for 30 seconds.
3. Remove the cap at the end of the IV tubing.
4. Attach the IV tubing to the needleless adaptor (or MaxZero Connector).
5. Put the IV bag lower than your chest. This lets gravity help to drain the pleural fluid.
6. Open the roller clamp on the IV tubing.
7. Take a few deep breaths and cough.
8. If the fluid does not drain, look at the tubing and needleless adaptor (or MaxZero Connector) carefully. Check for blood strands or fibrin. If blocked, follow the steps to "Change the needleless adaptor" on page 14 or "Flush my Tenckhoff Catheter" on page 15 of this booklet.
9. Leave the bag attached and wait for 5 minutes after the fluid stops draining.
10. Close the roller clamp on the IV tubing.
11. Unscrew the tubing from the needleless adaptor cap. The cap seals automatically.
12. Measure the amount of fluid in the bag.
13. Mark down the amount of fluid that drained on the sheet at the back of this booklet. Keep a record of how much drains each time.
14. Throw out the pleural fluid and equipment in the garbage.

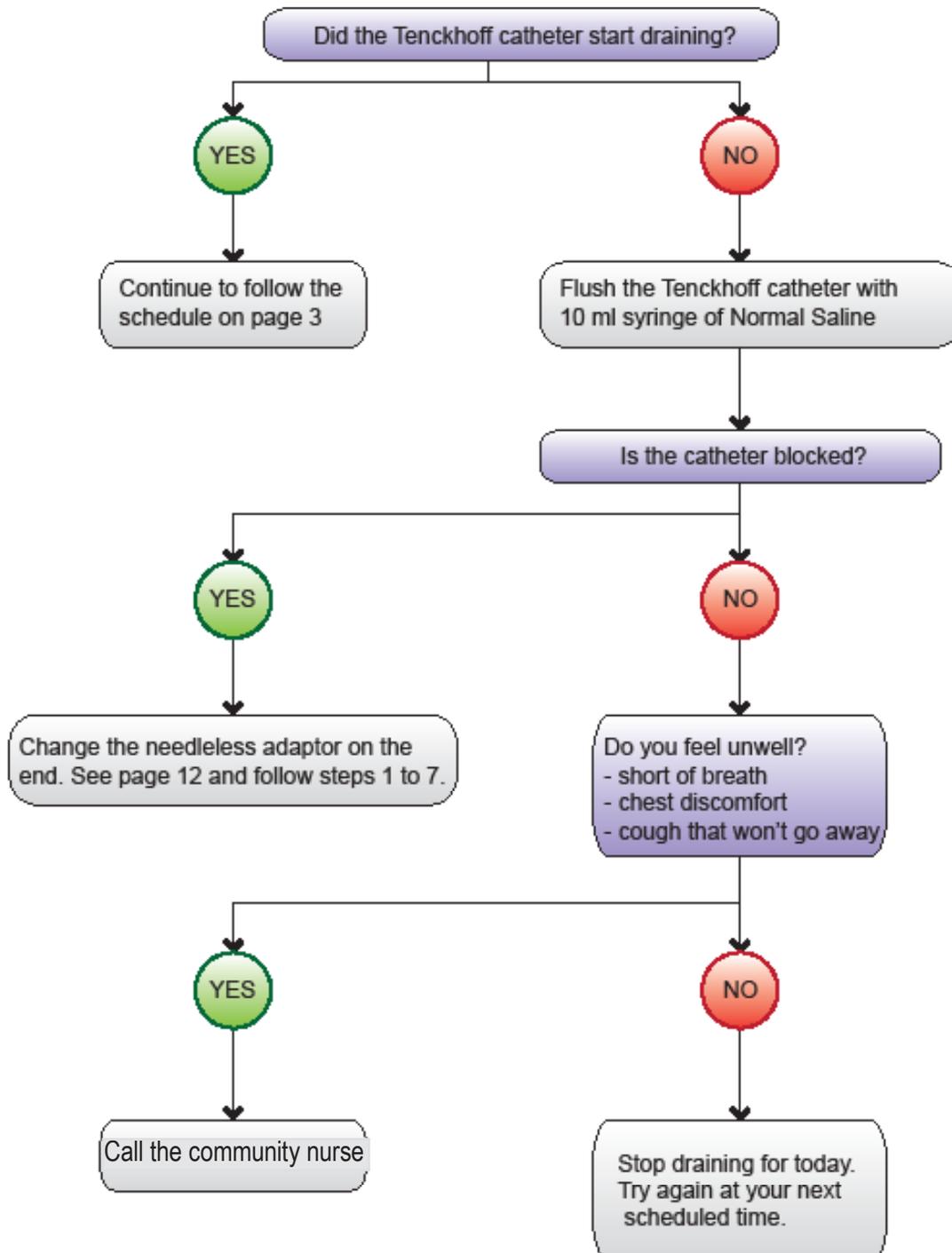
**Your community nurse will show you how to throw out the fluid and equipment safely.**

## How long does it take for the fluid to drain?

The fluid usually takes from 15 to 90 minutes to drain each time.

**The fluid should run freely.**

## What should I do if I attach myself to the catheter but no fluid comes out?



Sometimes people with Tenckhoff catheters have these symptoms when fluid is draining:

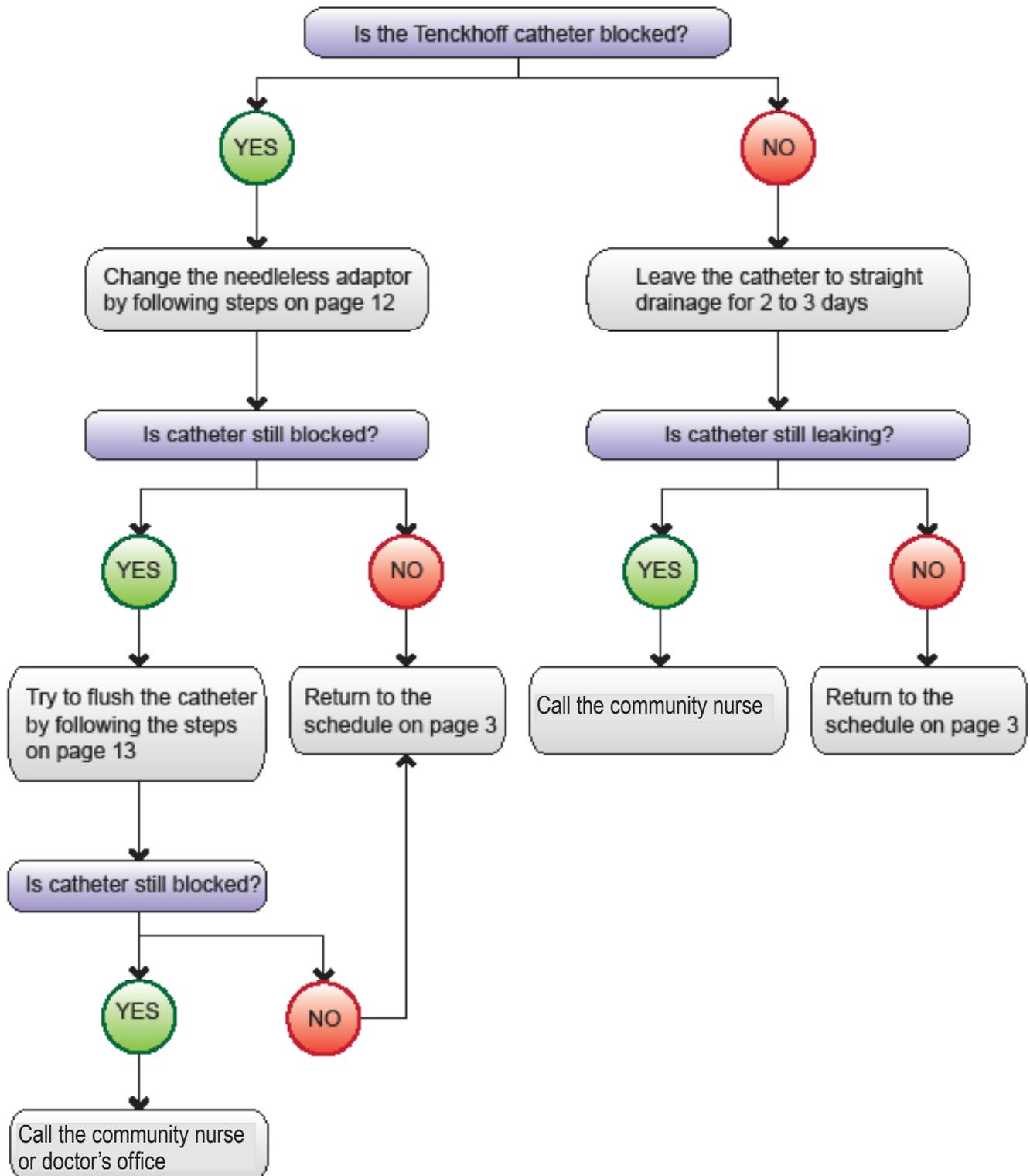
- discomfort in their chest
- shortness of breath
- a cough that won't go away while the fluid is draining

Any of these symptoms may happen because the fluid is being drained quickly. Slowing down the fluid as it drains can help.

**To slow down the fluid as it drains:**

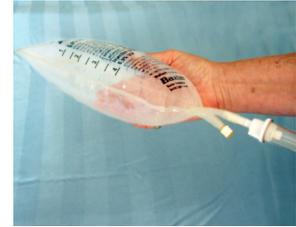
- Partly close the roller clamp.  
You may need to close the roller clamp completely. This stops the fluid from draining.
- Wait 15 to 30 minutes, then open the roller clamp only part way.
- Let the fluid drain very slowly.

# What should I do if my Tenckhoff catheter is leaking at the insertion site?



## What should I do if the drainage bag attached to my Tenckhoff catheter fills with air?

Sometimes the drainage bag can fill up with air. This air must be let out of the bag. If it is not let out, your Tenckhoff catheter will not drain properly.



You may also get some air caught under the skin. This will look like the area is swollen. It will start around the area where your Tenckhoff catheter comes out of your chest. This swelling is not dangerous, but it will keep getting worse if the problem is not fixed. We call letting the air out of the bag, **“burping”** the bag. Your community nurse will teach you how to do this yourself at home.

### To **“burp”** the bag, you must:

1. Wash your hands.
2. Close the roller clamp on the IV tubing.  
This will stop air from entering your chest.
3. Everything must be kept clean. Carefully pull the tubing out from the drainage bag. Do not touch the end of the tubing or the end of the drainage bag.
4. Gently squeeze the air out of the bag.  
Once the air is out, put the tubing back into the bag.
5. Open the roller clamp on the tubing.



## When can I shower?

- You can shower 48 hours after the procedure if the incision is healing well and not oozing. Do not scrub the area and the catheter hard. After you shower, dry the area well and re-apply the dressing.
- If the incision is oozing, appears slightly red, or if you are not sure, cover the dressing with waterproof plastic before you take a shower.
- It is very important to always keep the area and the dressing clean and dry.
- Do not take a bath tub and no swimming as long as you have the Tenckhoff catheter.

## Changing the dressing

You will have 2 dressings at first.

- **The insertion site dressing** covers the area where the Tenckhoff catheter was put in. Usually this dressing is a small bandage or small gauze and tape.
- **The exit site dressing** covers the area where the catheter comes out of the skin.

Check both dressings for any leaking. Make sure the dressings are taped well to your skin. If the dressings are clean and dry, they do not need to be changed for the first 48 hours. If they are wet or coming off, your community nurse can change the dressings as needed.

**When to change the insertion site dressing (smaller dressing):** Change the dressing 48 hours after the catheter is inserted and then every second day. After 7 days, if there is no fluid or leaking and the site has healed well, you can remove the dressing and leave it open to air.

**When to change the exit site dressing:** Change the dressing every 2 days for the first 2 weeks after your catheter is inserted, and then twice a week and whenever the dressing gets dirty or wet.

## Follow these steps to change the dressing:

1. Wash your hands.
2. Remove the old dressing.
3. Wash your hands again.
4. Check the catheter exit site. Look for any bleeding, leaking, swelling, redness, bad smell or increased pain. This may mean the site is infected. If it looks like the site may be infected, your community nurse can send a sample to the laboratory to see if you have an infection.

5. Clean around and under your Tenckhoff using a lot of sterile saline.
6. Let the skin dry completely.



7. Apply a drain gauze dressing around the exit site. Place a sterile gauze on top.

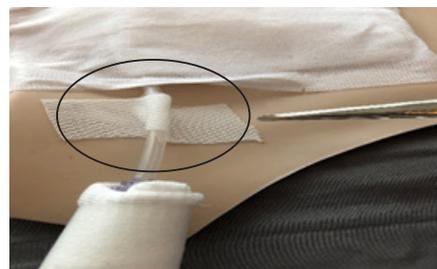


8. Turn the Tenckhoff catheter in a loop. Cover with a gauze and secure them with Medipore or other soft-cloth surgical tape. Do not put too much tape or it will irritate the skin. You may also use a barrier wipe before applying the tape to protect the skin.

9. If you need to drain fluid every day, you can leave the tip of the catheter out and secure it to the skin. Leaving the tip out reduces how often you need to pull the tape from your skin, which causes skin irritation. Make sure you cover the tip with gauze and tape it to keep the tip clean.



10. Tape the Tenckhoff catheter to the skin below the dressing to stop the Tenckhoff from pulling. Do not over-tape the area or it will irritate your skin.



11. After 2 weeks and once the site is healed, change the dressing twice a week.

## How do I change the needleless adaptor (also called MaxZero Connector)?

The needleless adaptor (or MaxPlus Connector) should be changed:

- every 7 days, and earlier
- if the needleless adaptor is blocked or it looks dirty

You must keep the end of the Tenckhoff catheter and needleless connector clean and free of germs.

### To change the needleless adaptor, follow these steps:

1. Wash your hands.
2. Remove the tape holding your Tenckhoff catheter to your side.
3. Open up the needleless adaptor package. Loosen the cap on the end of the needleless adaptor. Do not remove the cap yet.
4. Bend the Tenckhoff catheter over on itself.



**Never use any kind of clamp on the Tenckhoff catheter. The tubing is very soft and a clamp may cause a hole (unless the clamp is on the tube when the catheter is inserted).**

5. Unscrew the old needleless adaptor from the luer lock adaptor.
6. Remove the cap on the new needleless adaptor and screw it into the luer lock adaptor.



**Remember, do not touch the ends of the needleless adaptor or luer lock adaptor.**

7. Tape your Tenckhoff catheter to your side using fresh tape.

If you are changing the needleless adaptor because the Tenckhoff catheter is blocked, and it is still blocked after changing the needleless adaptor, try flushing the Tenckhoff.

## How do I flush my Tenckhoff catheter?

The Tenckhoff catheter should be flushed **ONLY** if it is blocked.  
Do not flush the catheter at any other time.

### Equipment you need:

- 10 cc pre-filled normal saline syringe
- alcohol swabs or chlorhexidine swabs

Always keep the end of the needleless adaptor clean and free of germs.



### To flush my Tenckhoff catheter follow these steps:

1. Wash your hands.
2. Clean the end of the needleless adaptor with an alcohol swab or chlorhexidine swab for 15 seconds.
3. Let the needleless adaptor dry for 30 seconds.
4. Remove the cap from the end of the syringe filled with saline.
5. Screw the luer lock sterile syringe onto the needleless adaptor.
6. Slowly inject the saline into the Tenckhoff catheter.
7. Unscrew the syringe from the end of the needleless adaptor.
8. If the saline flushes easily and you have no shortness of breath, pain or discomfort, attach new IV tubing and bag. Open the roller clamp. Drain the pleural fluid as usual.
9. If there is very little or no drainage once the drainage tubing and bag are connected and you feel well, detach the drainage system from the needleless adaptor and leave it until your next scheduled drainage time.



## Taking out my Tenckhoff catheter

It might be time to take out your Tenckhoff catheter if there has been less than 50 to 100 ml of drainage from your Tenckhoff catheter for 3 consecutive weeks. Here's what to do:

1. Call your doctor's office and make an appointment to be seen in the Thoracic Surgery Clinic on the 10th floor.
2. Your Tenckhoff catheter is usually removed in the clinic and 1 or 2 sutures are put in. You will not need a chest x-ray afterwards.
3. You will be given a suture removal kit for your family doctor or community nurse to remove your stitches in 10 days.
4. You do not need a follow-up appointment in the Thoracic Surgery Clinic.



### When to seek medical help

Call your community nurse or doctor's office if you are having any of the symptoms below:

- you drain the fluid and still feel short of breath
- you have chest pain and a cough
- there is redness and pain at the insertion site
- the site is leaking fluid even though you drained the fluid and followed the steps on page 10
- you are not able to drain any fluid and you followed the steps on page 8

**Important:** If it's after hours or if you are not able to get help, go to closest emergency department.

## Who can I call if I have questions?

Call your clinic or surgeon if you have questions about your catheter or follow-up appointment.

- Patients of the Rapid Assessment of Complex Pleural Effusion (R.A.C.E.) Program **only**, call 416 340 4290
- Patients of Princess Margaret Cancer Centre or Princess Margaret Palliative team, call your cancer team for any questions and follow-up appointments.
- Patients discharged from another UHN clinic or service, please call that clinic or service.

This guide does not include a full list of brands, vendors or products. The University Health Network does not recommend one brand over another and is not responsible for any products listed. Please contact each company directly to find out more about their products.

## Keep a record of your fluid drainage and adaptor change

Remember to change your needleless adaptor every 7 days.

Date	Amount of fluid drained from the catheter	Adapter changed (check yes or no)
1.		
2.		
3.		
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Form: D-5678 | Authors: Marilena Ruthka and Emily Macleod and Medical Imaging - Interventional Radiology | Revised: 02/2021