Caring for a Tenckhoff Catheter

A guide for Thoracic clinic patients and their caregivers

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:

- Pleural effusion and Tenckhoff catheter ........................................ page 2
- Draining your Tenckhoff catheter .................................................. page 4
- Changing your dressing ............................................................... page 11
- Flushing and taking out the Tenckhoff catheter .............................. pages 13, 14
- Who to call if you have questions.................................................. page 14

We hope this booklet gives you the important information you need.
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 tunneled 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 nurses from the Community Care Access Centre (CCAC) team to visit you. They come to your home to help you take care of your Tenckhoff catheter. They visit you every day in the beginning. The nurses teach you and your family how to take care of your Tenckhoff catheter.

Once you are comfortable with taking care of the Tenckhoff yourself, the visiting nurses do not visit as often.

What happens when my Tenckhoff catheter is first put in?

For the first 3 days

The Tenckhoff catheter is attached to a drainage bag. This is used to hold the fluid leaving your pleural space through the Tenckhoff catheter.

The catheter will drain all the time for the first 3 days, unless your medical team specifies otherwise. You will attach a new drainage tube and bag each day for the first 3 days or when the drainage bag fills up.

After the first 3 days

On the 3rd day your Tenckhoff catheter will be disconnected from the drainage system. You will sleep without draining and then attach the Tenckhoff catheter to the drainage system in the morning. Based on the amount of drainage, you can follow the schedule below.

Drain your Tenckhoff catheter using this schedule

<table>
<thead>
<tr>
<th>Fluid collected on last drain?</th>
<th>How often should I drain?</th>
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<tbody>
<tr>
<td>More than 300 millilitres</td>
<td>Drain every day</td>
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<tr>
<td>Between 100 to 300 millilitres</td>
<td>Drain every other day</td>
</tr>
<tr>
<td>Less than 100 millilitres</td>
<td>Drain it twice a week</td>
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**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.

<table>
<thead>
<tr>
<th>Warning: If you have any of these symptoms below, drain the fluid from your chest using your Tenckhoff catheter.</th>
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<tbody>
<tr>
<td>You may feel:</td>
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<tr>
<td>• short of breath</td>
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<tr>
<td>• increasing chest fullness</td>
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<tr>
<td>• discomfort</td>
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</table>

**How do I drain my Tenckhoff Catheter?**

Use the equipment that drains your Tenckhoff catheter **only 1 time**. This means you must use a **new tubing set and new bag each time**. Sometimes your bag may fill completely during one drainage session.

If this happens, you need to attach a new bag and tubing.

Before you start to drain the fluid, gather all of your equipment.

**You will need:**

- sterile secondary intravenous (IV) tubing
- sterile IV bag
- alcohol or chlorhexidine swabs
The IV bag will be supplied to you full of fluid. You must drain this fluid first. The CCAC 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 MaxPlus 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 MaxPlus 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 MaxPlus Connector) carefully. Check for blood strands or fibrin. If blocked, follow the steps to “Change the needleless adaptor” on page 12 or “Flush my Tenckhoff Catheter” on page 13 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 CCAC nurses 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?

Did the Tenckhoff catheter start draining?

YES
- Continue to follow the schedule on page 3

NO
- Flush the Tenckhoff catheter with 10 ml syringe of Normal Saline

Is the catheter blocked?

YES
- Change the needleless adaptor on the end. See page 12 and follow steps 1 to 7.

NO
- Do you feel unwell?
  - short of breath
  - chest discomfort
  - cough that won’t go away

YES
- Call your CCAC Nurse

NO
- Stop draining for today. Try again at your next scheduled time.
Sometimes people with Tenckhoff catheters have these symptoms when fluid is draining:

- discomfort in their chest
- short 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 those 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?

Is the Tenckhoff catheter blocked?

- Yes
  - Change the needleless adaptor by following steps on page 12
  - Is catheter still blocked?
    - Yes
      - Try to flush the catheter by following the steps on page 13
      - Is catheter still blocked?
        - Yes
          - Call the CCAC Nurse
        - No
          - Return to the schedule on page 3
    - No
      - Return to the schedule on page 3

- No
  - Leave the catheter to straight drainage for 2 to 3 days
  - Is catheter still leaking?
    - Yes
      - Call your CCAC Nurse
    - No
      - Return to the schedule on page 3

Call the CCAC Nurse
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 CCAC nurses 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?
Once the incisions have healed, you may take a shower with the dressing off. Let the water run over your incisions. After you shower, put on a new dressing.

Changing the dressing
You will have 2 dressings at first.

1. **Insertion site dressing** that covers the place where the Tenckhoff catheter was put in.
2. **Exit site dressing** that covers the exit site.

Check the dressings for drainage or leakage. Make sure the dressing is taped well to your skin. If the dressings are clean and dry, they do not need to be changed for the first 3 days. If they are wet or coming off, your CCAC nurse changes the dressings each day and as needed.

After the first 3 days, your CCAC nurse takes off the dressing at the insertion site. If the site looks like it healed well, you no longer need a dressing on this area.

After the first 3 days, your CCAC nurse changes the dressing at the exit site. This dressing is changed every 2 days. It will be changed more often, if needed. After 2 weeks, it can be changed once a week.

To change the dressing, follow these steps:

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 that there is an infection at the site. If it looks like the site may be infected, your CCAC nurse can send a sample to the laboratory to see if you have an infection.
5. Clean around and under your Tenckhoff. Use sterile saline or chlorhexidine.
6. Apply a dry 2x2 gauze dressing over the exit site. Cover it with tape.
7. After 2 weeks and, once the site is healed, change the dressing each week.
A piece of Opsite® (a clear, see-through dressing) can be put on directly over the site. You don’t need to put gauze. The Opsite® lets you see the exit site easily and any signs of an infection.

8. Tape the Tenckhoff well to the skin below the dressing. This stops the Tenckhoff from pulling.

**How do I change the needleless adaptor (also called MaxPlus Connector)?**

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

- Every 7 days, or whatever the manufacturer recommends
- If the needleless adaptor is blocked with fibrin or a blood clot

You must keep the end of the Tenckhoff catheter and needleless adaptor 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. A clamp may cause a hole.
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, not to 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 other times.

**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 swabs.
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 ml of drainage each time you try to drain fluid from your Tenckhoff catheter for 3 consecutive weeks. Here's what to do:

1. Call your physician’s office and make an appointment.

2. Come into the Toronto General Hospital and we will arrange a chest x-ray for you. Go to: **Medical Imaging**
   Munk Building – 1st floor

3. On the same day (after your chest x-ray), go to the 10th floor to the Thoracic Surgery Clinic. Your doctor or Nurse Practitioner will see you. If it is safe to do so, the physician will either remove the Tenckhoff catheter in the clinic or the ITSS Suite.

**Who can I call if I have questions?**

If you have any questions about your clinic appointment, please call your physician's office.

Dr. M. Cypel  416 340 5156
Dr. K. Czarnecka  416 340 4290
Dr. G. Darling  416 340 3121
Dr. M. DePerrot  416 340 5549
Dr. S. Keshavjee  416 340 4010
Dr. A. Pierre  416 340 5354
Dr. T. Waddell  416 340 3432
Dr. K. Yasufuku  416 340 4290
Keep a record of your fluid drainage and adaptor change.

Remember to change your needleless adaptor every 7 days.

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<th>Amount of fluid drained from the catheter</th>
<th>Adapter changed ☑ (check yes or no)</th>
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