

Preparing for your Pleural Catheter Placement

**Division of Pulmonary and Critical Care
Medicine**



MICHIGAN MEDICINE
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What is a pleural catheter?

A tunneled pleural catheter (TPC) or indwelling pleural catheter (IPC) is a flexible tube that is placed in your chest so that you can drain fluid from around your lungs at home. Draining this fluid helps you feel more comfortable with your breathing. Michigan Medicine currently uses catheters by the brand name PleurX™

This guide is for patients who are going to have pleural catheter procedure. It answers some of the most commonly asked questions. If you have additional questions, talk to your doctor or nurse for more information. You can find more information on the PleurX™ catheter system at bd.com/PleurXpatient, including:

- A 12-minute video demonstration on how to **drain the catheter**
- **Instructions for Use and Drainage Instructions**

You can also visit: <http://careguides.med.umich.edu> and type the keywords **Pleural Catheter** in the search box to access these materials.

Your Interventional Pulmonary team includes your pulmonary doctor, pulmonary nurses, medical assistants, and schedulers. We will coordinate your care and communicate with you

My procedure date: _____

My procedure location: _____

Call us right away if you have any change to your condition or if you are having new or worsening symptoms before your procedure.

- During business hours (Monday – Friday, 8 am to 5 pm): Call the Interventional Pulmonary Program at **(888) 287-1084**.
- After business hours, on weekends or holidays: Call the paging operator at **(734) 936-6267** and ask for the Interventional Pulmonary physician on call.

How should I prepare for the procedure?

Please read the instructions below carefully to prepare for your procedure. If you have any questions about these instructions, please contact us.

- During business hours (Monday – Friday, 8 am to 5 pm): Call the Interventional Pulmonary Program at **(888) 287-1084**.
- After business hours, on weekends or holidays: Call the paging operator at **(734) 936-6267** and ask for the Interventional Pulmonary physician on call.

Transportation to the appointment

- You must have a driver on the day of your procedure and you will need someone to stay with you at home overnight.
- A responsible adult (age 18 years or older) should come with you on the day of your procedure because you will be sedated.
- Your procedure will not begin until the adult who is with you is present, and your transportation has been confirmed. This person should plan to remain in the waiting room during your entire visit.
- You may not travel by taxi or bus unless you are accompanied by a responsible adult, and you may not walk home after the procedure.

Blood Thinners

If you are taking any blood thinners (anticoagulant medications), your pulmonary team will discuss this with you at your clinic visit. Your clinic team will tell you if your medication needs to be adjusted or stopped before your procedure.

Diabetes

If you have diabetes, any procedure that causes you to miss a meal or change your usual meal plan will require special planning to safely manage your blood sugar. We will discuss a plan for managing your blood sugar at your pulmonary visit.

Before your procedure

The **day before** the procedure:

- You may eat your normal diet the day before the procedure.
- Your doctor may instruct you to shower with an antibacterial soap.

Starting at **midnight** on the day of the procedure:

- Do not eat or drink anything, except for your medications, after midnight the day of surgery. This means no coffee, hard candy, gum, food, water, or liquids of any kind.
- Take your necessary medications with enough water (small sips) to swallow them.

The day of your procedure

- Remove all jewelry, hair clips, and body piercings before coming to the hospital.
- Do not wear makeup, deodorant, lotion, or powder.
- Bring the following with you on the day of your procedure
 - List of all medications you are taking
 - List of allergies
 - Health insurance cards
 - Advance directives, if applicable
 - A case for your eyeglasses or contact lenses.
 - Do not bring jewelry or other valuables
 - Please note, small children will be more comfortable at home

Where will I have the procedure??

Your procedure will be performed in one of our Medical Procedures Units (MPU) or University Hospital operating rooms located at 1500 E. Medical Center Drive, Ann Arbor MI 49109. Your team will tell you which location to report to when they arrange the procedure with you. Detailed driving instructions, parking information, and maps are available on our website at:

<https://www.uofmhealth.org/patient-visitor-guide/patients>.

How long is the procedure?

The length of the procedure will generally be about 35-40 minutes. Plan to be at your procedure visit for a total of 3-4 hours to allow for pre-procedure and post-procedure evaluation and monitoring.

What can I expect during the procedure?

A doctor specially trained in interventional pulmonary procedures will perform the procedure.

1. In the reception area you will answer questions about your health history, current medicines and allergies.
2. You will review the procedure risks and sign a consent.
3. After you change into a hospital gown, a nurse will start an intravenous line (IV). The IV is used to give you medication to make you more comfortable during the procedure. The procedure is performed in a room specially designed for pulmonary procedures.
4. The nurse and doctor will use equipment that will help monitor your heartbeat and breathing.
5. You will get a chest x-ray and a nurse will monitor you for about an hour after the procedure.

What can I expect after the procedure?

1. When you are ready to go home the nurse will tell you your discharge instructions and answer your questions.
2. You may **not** drive yourself home and you may want a family member or friend to stay with you for the remainder of the day.
3. For at least 12 hours after the procedure, do not drive a vehicle, operate machinery, or drink alcoholic beverages.
4. Do not make any major legal or financial decisions the day of the procedure.

What are the risks?

Complications after a procedure to insert a pleural catheter are extremely rare, but all medical procedures have a risk for complications. We will explain the risks and complications of the procedure at the time you sign your consent for the procedure.

How will I care for myself after the procedure?

We encourage you and your caregiver to carefully review the information below that explains your after care.

Care from the visiting (home) nurse

The day after your procedure, a visiting nurse will come to your home. The nurse will:

- Change your dressing.
- Drain your catheter.
- Teach a friend or family member how to drain the catheter.
- Remove your sutures after 5-7 days.

Drainage supply kits

You will receive a starter kit of supplies for your catheter when we discharge you from the procedure area the day of your procedure. These will include PleurX™ drainage bottles and dressing supplies you can use until additional supplies are delivered to your home. The Interventional Pulmonology Program team will arrange for additional drainage kits to be delivered to your home directly from the manufacturer. The kit includes these items:

- Vacuum bottle with attached drainage line
- Blue wrapping
- Alcohol pads
- Gloves
- Gauze pads
- Valve cap
- Blue emergency slide clamp
- Foam catheter pad
- Self-adhesive dressing



Bathing instructions

- After 24 hours, you may shower carefully with the dressing and catheter in place.
- Do not submerge the catheter in water (i.e. bathtub, pool, hot tub).
- Change the dressing if it becomes soiled.
- Do not move the catheter in any way.

Starting normal activity

Unless otherwise instructed:

- You may resume your normal diet immediately after the procedure.
- You may resume your medications immediately after the procedure. Your doctor will tell you when to resume your blood thinners.
- In most cases, you may resume normal activities and return to work or school the day after your procedure.

How do I drain my catheter?

Your doctor will tell you when to drain the catheter:

- Monday - Wednesday - Friday
- Tuesday - Thursday - Saturday
- Daily

Drainage procedure reminders

Drainage instructions are on the next page. The drainage usually takes 5-15 minutes after the flask is connected to the catheter. Do not drain more than once per day from each catheter site.

You may stop the drainage if any of the following occurs:

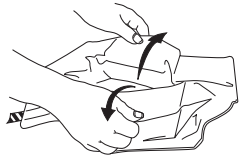
- You have discomfort which was not relieved by slowing the fluid
- Brisk flow of fluid stops
- You have pain, chest tightness, or cough.

At any one time, do not drain more than 1000 mL from the chest. If **less than 50 mL fluid** is drained in 3 consecutive drainage procedures, contact your physician to make sure that the tube is not clogged. Alternatively, this may indicate that the pleural space has sealed up and the PleruX™ catheter may be safely removed by your doctor.

Drainage instructions

PleurX™ catheter system

Getting started: Have all drainage supplies ready and then thoroughly wash your hands.



- 1** Open all packaging. Unfold blue wrapping. Place bottle near wrapping and lay access tip on blue wrapping.

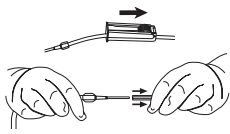


- 2** Pick up each glove by the wrist cuff and put both of them on.

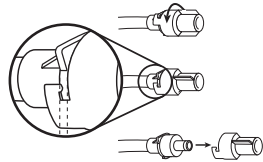


- 3** Tear open alcohol pads. Lay open alcohol pad pouches on blue wrapping a short distance from sterile items.

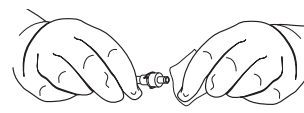
Connecting the drainage bottle: Be sure to keep the end of the catheter and access tip clean.



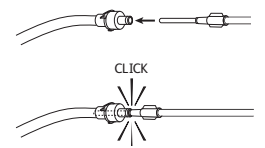
- 4** Close roller clamp completely by rolling the wheel on roller clamp toward bottle. Remove access tip cover by twisting and pulling gently. Set access tip on blue wrapping.



- 5** Take valve cap off catheter.

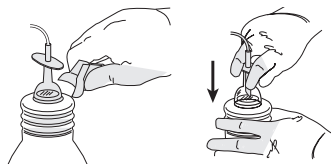


- 6** Clean around valve opening with first alcohol pad.

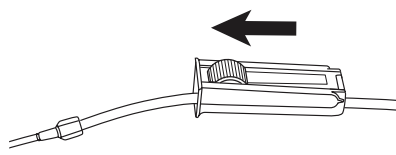


- 7** Insert access tip into catheter valve.

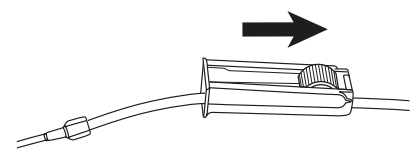
Draining fluid: Do not drain more than 1,000 mL from your chest or 2,000 mL from your abdomen at any one time.



- 8** Remove support clip from top of drainage bottle and push down T plunger.

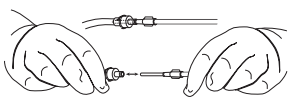


- 9** To begin draining, roll the wheel on the roller clamp away from vacuum bottle.



- 10** When finished draining, completely close the roller clamp by rolling the wheel on toward the bottle.

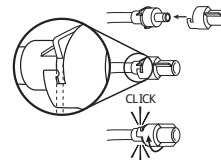
Final steps and disposal: If you have any questions or concerns, contact your doctor or nurse.



- 11** Pull access tip out of the valve; set drainage line down.



- 12** Clean around the valve opening with second alcohol pad.



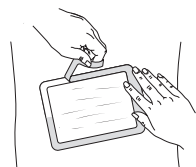
- 13** Place new cap on catheter valve and twist it until it clicks into its locked position.



- 14** Clean around catheter site with third alcohol pad.



- 15** Place foam catheter pad around catheter and wind catheter on top of pad. Cover catheter with gauze pads.



- 16** Apply self-adhesive dressing over gauze pads.



- 17** Push down T plunger and move the plunger in a circular motion to further puncture foil seal so fluid can be poured out.



- 18** Remove flexible cap and drainage line from bottle.

- 19** Empty bottle into toilet. Place bottle in a plastic bag, seal tightly and discard.

These instructions are to be used only as a supplemental reference. Read the *Instructions for Use* that come with the drainage kits and watch the drainage video for more detailed instructions.

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How and when should I contact my doctor?

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After business hours, on weekends or holidays: Call the paging operator at **(734) 936-6267** and ask for the Interventional Pulmonary physician on call.

Call us if you have:

- Pain, redness, swelling, and/or drainage around the catheter site
- Changes or difficulty in your breathing
- A temperature of 100.4 °F (38 °C) or higher
- Chills
- Less than 50 mL of fluid draining for 3 (three) draining instances in a row
- Changes in the color or consistency of the drainage
- Drainage that is cloudy or smells bad
- Pain when you drain the catheter or pain that continues after its drained
- Damaged, broken, or cut catheter
- A catheter that comes out
- Leaking from the valve or catheter
- Any concerns about your catheter

Disclaimer: This document contains information and/or instructional materials developed by Michigan Medicine for the typical patient with your condition. It may include links to online content that was not created by Michigan Medicine and for which Michigan Medicine does not assume responsibility. It does not replace medical advice from your health care provider because your experience may differ from that of the typical patient. Talk to your health care provider if you have any questions about this document, your condition or your treatment plan.

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This license does not apply to the Drainage Instructions chart on page 13