

Thoracentesis

What is thoracentesis?

Thoracentesis (THOR-a-sen-TE-sis) is a procedure to remove excess fluid between two membranes – the one that covers the lungs and the one that lines the chest (thoracic) cavity. The excess fluid is *pleural effusion* and the space where it collects is the *pleural space*.

Overview of the procedure

During the procedure, your doctor will insert a thin needle or plastic tube into the pleural space and draw out the excess fluid. Usually, the doctor removes just enough fluid to send for testing. If you have a large amount of excess fluid, the doctor may remove more. This makes it easier for the lungs to expand and take in more air, which will allow you to breathe easier.

What does thoracentesis show?

The fluid your doctor removed will be tested to identify the cause of the pleural effusion, such as infection, cancer, and heart failure. Once the cause of the pleural effusion is known, your doctor will plan a treatment. For example, if an infection is the cause, your doctor may prescribe antibiotic medication.

How do I prepare for the procedure?

Many medications, whether over-the-counter or prescription, can interfere with normal blood clotting and increase the risk of bleeding. Follow the guidelines in the chart on the next page about when to stop taking certain medicines, vitamins, and supplements.

If your doctor gives you different instructions, always follow your doctor's instructions.

7 days (1 week) before the procedure, stop taking:

- aspirin
- herbal supplements and garlic tablets
- vitamins

5 days before the procedure, stop taking:

- warfarin (Coumadin® or Jantoven®)
- clopidogrel (Plavix®) Note: For certain procedures, your doctor may tell you to stop this medication 7 days before surgery

3 days before the procedure, stop taking:

non-steroidal anti-inflammatory medications (NSAIDs)

- ibuprofen (Advil®/ Motrin®)
- naproxen (Aleve®/Anaprox®)
- piroxicam (Feldene®)
- sulindac (Clinoril®)
- oxaprozin (Daypro®)
- etodolac (Lodine®)
- diclofenac (Voltaren®)
- meloxicam (Mobic®)
- ketoprofen
- diflunisal

1 day (24 hours) before your procedure, stop taking:

enoxaparin (Lovenox®)

If you take any medications to treat or prevent blood clots, talk to your doctor about when, or if, you should stop taking your medication before surgery. These medications include:

- apixaban (Eliquis®)
- cilostazol (Pletal®)
- dabigatran (Pradaxa®)
- dalteparin (Fragmin®)
- eptifibatide (Integrilin®)
- fondaparinux (Arixtra®)
- lepirudin (Refludan®)
- prasugrel (Effient®)
- rivaroxaban (Xaralto®)
- ticagrelor (Brilinta®)
- ticlopidine (Ticlid®)
- tinzaparin (Innohep®)
- tirofiban (Aggrastat®)

On the day before your procedure:

- If you have a morning appointment, do not eat breakfast.
- If you have an afternoon appointment, you may eat breakfast.
- If you have diabetes and take insulin, talk to your primary doctor about how to take your insulin on the day of the surgery.
- Take all other medications as prescribed.

What to expect during thoracentesis

Before inserting the needle, the area will be numbed with a local anesthetic. The entire procedure, including preparation, usually takes 10 to 15 minutes, but the needle or tube is inserted for only a few minutes during that time. If there is a lot of fluid, the procedure may take up to 45 minutes.

What to expect after thoracentesis

- We will monitor your blood pressure and breathing to make sure there are no complications.
- We will take a chest x-ray after the procedure to check for any lung problems.
- Your doctor will let you know when you can return to your normal activities such as driving and working.
- Once at home, call your doctor right away if you have any breathing problems.

What are the risks of thoracentesis?

Most of these complications will resolve on their own and are easily treated. Using ultrasound to locate the pleural space reduces these risks.

- Pain
- Bleeding or bruising
- Infection (where the needle or tube was inserted)
- Pneumothorax (air in the pleural space): Sometimes air comes in through the needle, or the needle makes a hole in a lung. Usually, the hole seals itself. If enough air gets into the pleural space, however, the lung can collapse. If a lung collapses, your doctor may put a tube in your chest to remove the air and let the lung expand again.
- Liver or spleen injury (very rare)

When Should I Call my Doctor?

Call your doctor right away if you have:

- increased shortness of breath, difficulty breathing, or chest pain
- any sign of infection: **Fever of 100.4°F (38°C) or higher**, chills, cough, sore throat, pain or burning upon urination, redness/tenderness along a vein, at an IV site, or at any other wound or skin irritation
- redness, heat, pain, or increased swelling at the drainage site
- an increase in drainage or bleeding from the site

Notes

Questions or Concerns

Call the Thoracic Center at **716-845-3167** if you have any problems or questions. The Center is open Monday – Friday from **8 a.m.** to **5 p.m.**

- After hours, please call Roswell Park at **716-845-2300** and our Call Center staff will assist you. If it is determined you need to be seen, you may be asked to come to our Assessment and Treatment Center (ATC), which is open 24/7. You need to be referred to the ATC by a provider; it is not a walk-in clinic.
- **For emergency-related issues, please dial 911 or go to the nearest hospital emergency department.** Please let us know if you go to the emergency room or are admitted to the hospital.