

## Thoracentesis Procedure

### What is a thoracentesis?

The space around the lungs is called the pleural space, and in this space is called pleural fluid. This fluid normally exists only as a thin layer in the area between the lungs and chest wall.

A thoracentesis is a procedure used to remove a small sample of fluid from the space around the lungs, for diagnostic purposes (figure out the cause of the pleural fluid), or to remove a large amount of fluid to reduce pressure on the lungs and improve breathing (shortness of breath).

### What is a pleural effusion?

Some conditions can cause an increased amount of pleural fluid to collect and affect breathing. This abnormally accumulated fluid is called a pleural effusion.

Pleural effusions can be caused by many different conditions, including pneumonia, heart failure, cancer, or tuberculosis. In some cases, blood or other fluid may leak into the pleural space from another part of the body, causing the effusion.

A pleural effusion may be noticed during a physical examination or by a radiology test that looks at the chest, such as a chest X-ray, chest computed tomography (CT) scan, or chest ultrasound.

### What happens before a thoracentesis?

- You will have a chest X-ray and/or ultrasound to identify the exact location of the pleural effusion.
- The healthcare provider will explain the procedure, describe potential complications, and discuss why a thoracentesis is necessary.
- The healthcare provider will look at the chest X-ray and/or ultrasound, listen to your lungs with a stethoscope and tap on your chest to determine the best area to do the thoracentesis.
- Tell your healthcare provider if you have a history of bleeding problems or if you are taking a medicine that thins the blood. In some cases, a blood test will be done before the procedure to check for any blood clotting problems caused by disease or medicines.

### How is thoracentesis performed?

- The procedure takes a short time and can be done inside of the hospital or in a doctor's office.
- On the day of the procedure, you may be asked to **not** eat or drink for 6-8 hours before the procedure.

- Once you are in the procedure suite, you will be asked your name and date of birth. Afterwards, the clinician will explain the procedure, its benefits, and risks. If you understand and agree to the procedure, you will be asked to sign an informed consent form.
- You will be put in a position that allows the doctor to remove the fluid (pleural effusion). Usually, you are asked to sit upright during the procedure. It is important to remain still during the procedure.
- You should expect the doctor to confirm with you and the staff that the procedure is being done on the correct side of your chest.
- The skin will be cleaned with an antiseptic solution.
- Once the skin is clean, a small amount of numbing medicine (a local anesthetic, similar to Novocaine) is injected with a small needle through the skin and into the deeper tissues between two ribs. This medicine helps minimize discomfort during the procedure.
- A slightly larger needle attached to a syringe is then inserted where the anesthetic was injected. The needle goes between the ribs into the pleural space. Then a thin plastic tube (called a catheter) is exchanged for the needle. Once the catheter is in place, the needle is removed, and fluid is withdrawn through the catheter into the syringe. If you have been experiencing symptoms from the effusion (e.g., shortness of breath), a large amount of fluid may be drained, which allows the lung to expand more fully.
- After the procedure is complete, a bandage will be placed on the site of needle insertion.

#### **What happens after a thoracentesis?**

- The healthcare provider will watch for bleeding at the insertion site.
- Tell your healthcare provider if you feel short of breath. A chest x-ray may be done after the thoracentesis.
- The fluid removed will be sent to the lab. The healthcare provider will let you know the results and if you need any treatment.
- You will need a ride home after the thoracentesis if you are given any medicines that can make you tired. Talk to your healthcare provider about this before the procedure.

#### **Contact your healthcare team at 732-235-2465 if you experience any of the following after the procedure:**

- Pain in the area where the catheter was inserted
- Feeling faint or dizzy
- Bleeding or bruising around the insertion site
- Tenderness, redness, or drainage around the insertion site
- A fever of 100.4° F or higher, or as directed by your provider
- Worsening cough or shortness of breath
- Abdominal pain or tenderness

**If you are in need of immediate assistance, please call 732-235-2465 and select the option that best meets your needs.**