



Chest Drain Insertion

What is this procedure?

A chest drain is a plastic tube that is inserted into the chest through skin to drain fluid or air.

Why is there a need to do it?

Air or fluid has collected in the pleural space, which may stop your lung from working normally. The chest drain will allow this air or fluid to leave the body so that the lung can re-expand to its normal shape, helping you breathe more easily. If required, the fluid can be sent away for tests.

How is it done?

Patient will be asked to sit or lie in a comfortable position. The chest drain will be inserted into the affected side of your chest below the armpit, or sometimes in front of your chest or on your back. Before inserting the drain, we will usually do an ultrasound scan of the chest. Skin will be cleaned with antiseptic to reduce the risk of infection. Local anesthetics may be injected to numb the area. The drains come in a range of sizes (usually about 2 to 12 mm in diameter) suitable for a variety of purposes. A wound is made in the skin by a needle puncture and/or by an incision. The drain will then be guided into the chest, by a gloved finger or medical instruments, such as a wire or a pointed-end device. The drain will be secured in place with stitches, covered by a dressing and connected to a chest drain bottle. The chest drain will be monitored regularly by your healthcare team to ensure it is working normally.

When can the tube be removed?

The time will vary depending on patient's clinical condition.

Risk and Complications

Common:

- Pain
- Cough, hemoptysis
- Infection
- Subcutaneous emphysema: air may leak around the wound into area under the skin, leading to swelling due to air collection and may require re-positioning and/or additional chest drain
- Drain malposition, kinking, displacement, dislodgement and blockage
- Failure to adequate drainage
- Hypotension, dizziness, and sweating due to vasovagal attack
- Wound bleeding
- Scarring at the insertion site

Uncommon:

- Recurrence of underlying condition after removal of chest drain
- Allergic reaction to local anesthetics and /or premedication

Rare but life-threatening:

- Re-expansion pulmonary edema
- Air embolism
- Injury to the body and internal organs in the vicinity of the pleura, including blood vessels, nerves, muscle, lung, diaphragm, esophagus, liver, spleen, stomach and/or heart; this may lead to massive bleeding and/or other life-threatening conditions from visceral injury and may warrant surgical intervention
- Death related to the procedure is a very rare but possible event

Possibility that the procedure cannot be carried out

Rarely difficulties may be encountered resulting in failed chest drain insertion. Other treatment options may be needed. Let your doctor explain to you in this situation.

Other treatment options

If the patient chooses not to perform this procedure, it may affect the overall condition. The change of the condition is affected by a variety of clinical factors, including the individual patient's physical condition before the onset of illness, the type of disease, the response to treatment and the progress, etc. Your doctor will explain other suitable options to you.



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Disclaimer

The information provided in this booklet is for general reference only. The risks and complications listed above are not exhaustive. Please consult your attending doctor for details.