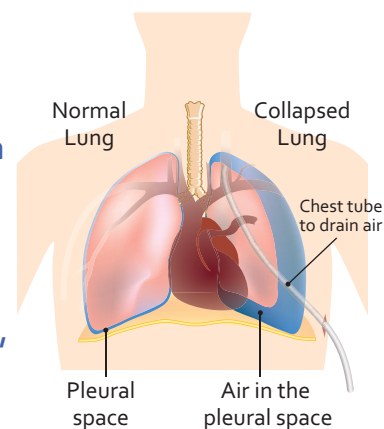


# What Is a Spontaneous Pneumothorax?

A spontaneous pneumothorax, commonly referred to as a “collapsed lung,” refers to a collection of air between the lung and the chest wall that should not be there. This air pushes against the lung and makes it hard for the lung to expand with each breath. A spontaneous pneumothorax can be small or large in size. A *spontaneous pneumothorax* happens without any injury to the lung or any known lung problem. Sometimes people can have a pneumothorax from a known lung problem, injury, or after surgery called a *secondary pneumothorax*. This fact sheet will focus on spontaneous pneumothorax.



## How do I know if I have a spontaneous pneumothorax?

- The signs and symptoms of a spontaneous pneumothorax depend on how big the air leak is and how much lung collapse occurs.
  - Large leak: Typically, a person will have sudden shortness of breath and a sharp or stabbing pain with breathing. You may have a dry, non-productive cough or notice a popping sensation before the pain starts. You may be breathing faster or harder. A healthcare provider may not be able to hear breath sounds when listening over the lung in the area of the pneumothorax.
  - Small leak: You may have very mild or no symptoms. Mild chest discomfort may be the only symptom. Pneumothorax may be found on a chest x-ray done for another reason.

## How is spontaneous pneumothorax diagnosed?

The diagnosis of spontaneous pneumothorax may be suspected based on history and physical exam. Usually the first test that shows the collapse is a chest radiograph (x-ray) which is easy to do and widely available. A chest x-ray will also show the size of the pneumothorax.

A computed tomography scan (CT scan) of the chest may be done but is not usually needed. Sometimes a

CT scan is done later when the lung has re-expanded to look for lung problems such as blebs in the lungs that can increase the risk of another pneumothorax.

## How is a spontaneous pneumothorax treated?

Often an air leak in a lung will seal on its own and the body can absorb the air between the lung and chest wall, allowing the lung to expand back to normal. Because of this, some small leaks do not need treatment. Treatment depends on your symptoms, how big the leak is, and whether the leak stops on its own.

- **Observation:** If you are not having breathing problems at rest and the pneumothorax is small in size, only close observation may be needed. This usually means a short (1-3 days) admission to the hospital. You may be given oxygen. If the air leak does not stop and you have more lung collapse, more treatment may be needed.
- **Needle aspiration:** A small needle connected to a syringe is inserted through the chest wall into the space between the lung and chest wall to help remove the collected air from around the lung.
- **Chest tube thoracostomy:** If the pneumothorax is large or a person has severe symptoms, a chest tube will need to be inserted between the ribs to drain the collected air and help re-expand the

lungs. For more information about chest tubes see the ATS Patient Information Series fact sheet “Chest tube thoracostomy” at [www.thoracic.org/patients](http://www.thoracic.org/patients).

- **Surgery:** If an air leak does not stop, a pneumothorax occurs in both lungs, or a person has had more than one pneumothorax on the same side, surgery may be needed. Surgery is often done through Video Assisted Thoracoscopic Surgery (or VATS). Small incisions are made to allow a tube with a camera to go into the chest and space around the lung. The surgeon can see the lung and take actions to remove blebs and seal the leak to prevent further collapse.
- **Other:** There are also procedures where the surface of the lung is roughed up or instilled with a substance, such as antibiotics or talc, that may also be done.

### What are other causes of pneumothorax (non-spontaneous)?

Non-spontaneous pneumothorax happens when the lung collapse is due to injury or a lung disease.

This can happen in patients with:

- Lung diseases like asthma or cystic fibrosis.
- Lung infections like pneumonia or tuberculosis.
- Known connective tissue diseases such as Marfan’s syndrome.
- Trauma/chest injury such as in a motor vehicle accident.

### Do I need to limit my activity after a spontaneous pneumothorax?

Ask your healthcare provider for advice about how long to limit some activities while your lung heals for a period of time after pneumothorax. These can include activities that would put extra pressure on the lungs such as playing wind or brass instruments. You also may be advised not to travel by airplane for a while. You may not do scuba diving or contact sports that might lead to blows to the chest.

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## Rx Action Steps

- ✓ If you have a spontaneous pneumothorax:
- ✓ Talk to your healthcare provider about the different treatment options and the risks of each.
- ✓ Talk to your healthcare provider about what activities you should avoid after spontaneous pneumothorax and for how long – this may include avoiding contact sports, airplane travel, and certain types of exercise.
- ✓ Seek medical care right away if you have symptoms that might suggest that the spontaneous pneumothorax has recurred such as difficulty breathing, chest pain, or trouble with exercise.

**Healthcare Provider’s Contact Number:**

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## For More Information

### U.S. National Library of Medicine:

- <https://medlineplus.gov/genetics/condition/primary-spontaneous-pneumothorax/#diagnosis>

### Up To Date:

- <https://www.uptodate.com/contents/pneumothorax-collapsed-lung-the-basics>

### Children’s Minnesota Patient and Family Information:

- <https://www.childrensmn.org/educationmaterials/childrensmn/article/17165/pneumothorax-spontaneous/>

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