Pulmonary embolism (PE) is the sudden blockage of a major blood vessel (artery) in the lung, usually by a blood clot. In most cases the clots are small and are not deadly, but can damage the lung. If the clot is large and stops the blood flow to the lung, it can be deadly. Typically, a blood clot in the leg breaks loose and travels to the lungs. Quick treatment is the key to reducing damage and saving your life.

**Call 911 and get to the hospital right away if you have any of these symptoms:**
- Sudden shortness of breath or very rapid breathing
- Sharp chest pain that is worse when you cough or take a deep breath
- Cough that brings up pink, foamy mucus

Other symptoms of PE include sweating, having a fast heart rate, and feeling anxious, lightheaded or faint. If you have these symptoms, you need to see a doctor right away.

**Risk Factors**
Things that make you more likely to form blood clots also increase your chance of PE. Some common risk factors include:
- Being inactive for long periods such as when you sit for a long time on a flight or car trip, or when you have to stay in bed after surgery
- Recent surgery of the legs or belly
- Broken hip or leg
- Recent or past DVT - deep vein thrombosis (blood clot in leg vein)
- Some diseases such as cancer, heart failure or lung disease
- Pregnancy and childbirth
- Taking birth control pills or hormone therapy
- Are a smoker, overweight, or above the age of 70

**Diagnosis**
It can be hard to diagnose PE because many other medical conditions cause similar symptoms. An accurate medical history and a careful physical exam are needed to point to the tests that may help with a diagnosis.

**Tests may include:**
- Chest x-ray – to rule out an enlarged heart or pneumonia
- Electrocardiogram (EKG) – to help rule out a heart attack
- Arterial blood gas (ABG) analysis – to determine blood oxygen level
- D-dimer (blood test) – to measure a substance that is released when a blood clot breaks up
- Computed tomography (CT) – to check for PE
- Pulmonary angiogram – to diagnose PE with a high degree of accuracy
- Magnetic resonance imaging (MRI) – to view clots in the deep veins and lungs
- Lung ventilation/perfusion scan or VQ scan – checks how well oxygen and blood are flowing in the lungs
Treatment

Treatment of pulmonary embolism focuses on preventing future PEs. Anticoagulation medications are used to prevent existing blood clots from growing larger and to help prevent new ones from forming. Heparin and Enoxaparin (Lovenox®) are often used to treat PE. Warfarin (Coumadin®) and Clopidogrel (Plavix®) help prevent clots from forming.

If symptoms are severe and life threatening, thrombolytic medicines that can dissolve a blood clot quickly may be used. This can increase the risk of severe bleeding. A very large clot may be removed surgically.

In some cases, a vena cava filter may be inserted into the large central vein of the body to help prevent blood clots from reaching the lungs.

Prevention

Besides taking anticoagulant medicines daily, you can help prevent blood clots from forming by:

- Getting up and moving as soon as possible after surgery.
- Wearing compression stockings as ordered.
- Reducing your risk factors such as quitting smoking or losing weight.
- Pumping your feet up and down by pulling your toes up toward your knees then pointing them down.
- Talking with your doctor about safety measures before traveling.

A PE can be life threatening. If you have any signs or symptoms of PE, contact your doctor right away or call 911.