

Pulmonary Embolism

A pulmonary embolism (PE) is a blood clot that blocks the blood vessels supplying the lungs. The clot (embolus) most often comes from the leg veins and travels through the heart to the lungs. When the blood clot lodges in the blood vessels of the lung, it may limit the heart's ability to deliver blood to the lungs, causing shortness of breath and chest pain, and, in serious cases, death. The US surgeon general estimates that 100 000 to 180 000 deaths occur from PE each year in the United States and identifies PE as the most preventable cause of death among hospitalized patients. The January 9, 2013, issue of *JAMA* contains an article about management of PE.

RISK FACTORS

- Genetic and acquired tendencies to develop blood clots
- Pregnancy; use of birth control pills or hormone therapy
- Obesity
- Smoking
- Cancer
- Medical illnesses including heart disease, lung disease, and kidney disease
- Older age
- Recent surgery, trauma, hospitalization, or prolonged bed rest

SIGNS AND SYMPTOMS

- Shortness of breath
- Chest discomfort
- Coughing up blood
- Palpitations
- Dizziness and fainting
- Leg swelling and discomfort

TREATMENT

Anticoagulants (commonly called **blood thinners**) are the main treatment for pulmonary embolism and work by preventing new blood clots from forming while the body breaks down the pulmonary embolism. Options for anticoagulation in patients with PE include intravenous heparin and injectable enoxaparin, dalteparin, and fondaparinux. Oral anticoagulants for PE include warfarin and rivaroxaban. Most patients with PE receive at least 6 months of anticoagulation treatment. Many patients are advised to continue anticoagulation treatment for longer than 6 months, sometimes lifelong, if their risk of recurrent PE is high.

For some patients with large or massive pulmonary embolism, more aggressive therapy is required. These treatments include clot-dissolving medications, invasive procedures to remove the embolus with catheters or surgery, and implantation of a filter device to catch free blood clots before they reach the heart.

Treating risk factors for pulmonary embolism is a critical step in preventing future blood clots. Lifestyle changes such as regular exercise, a heart-healthy diet, and smoking cessation are important steps in reducing risk.

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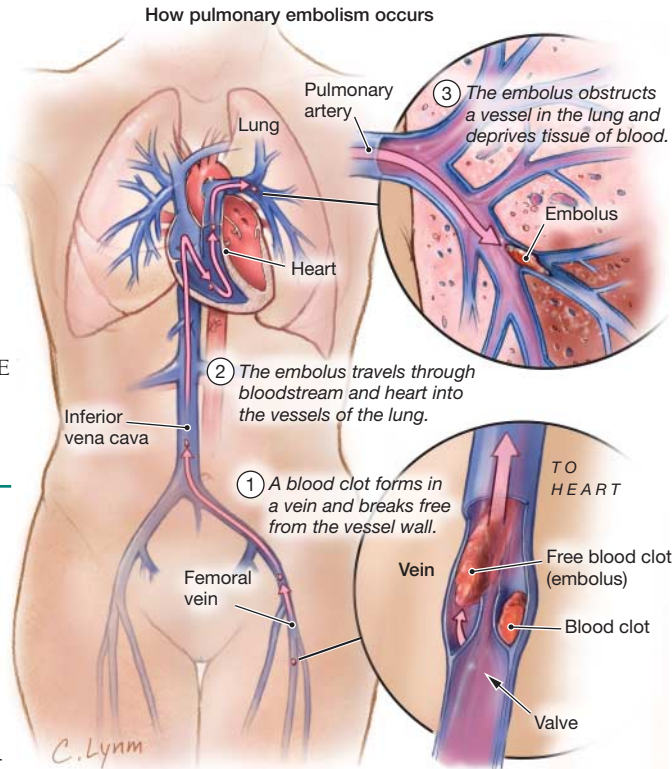
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