Pulmonary Hypertension

Pulmonary hypertension is high pressure in the blood vessels that carry blood into the lungs. This strains the lungs and heart and can lead to serious problems.

Systemic hypertension means the pressure is too high in blood vessels throughout the body. A person with pulmonary hypertension may also have high blood pressure throughout the body.

What causes pulmonary hypertension?

The cause of pulmonary hypertension is sometimes unknown. But it's most often caused by another health problem. In many cases, controlling this problem can help prevent or control pulmonary hypertension. Some of the most common causes of pulmonary hypertension are:

In children:
- Severe lung problems in a newborn
- Lung conditions, such as cystic fibrosis or interstitial lung disease
- Heart disease
- Congenital heart defects
- HIV infection
- Other conditions, such as scleroderma, lupus, or sickle cell disease

In adults:
- Lung conditions, such as chronic obstructive pulmonary disease (COPD), advanced bronchitis, cystic fibrosis, or pulmonary fibrosis
- Liver disease
- Blood clots in the lungs
- Left-sided heart failure
- HIV infection
- Sleep apnea
Other conditions, such as scleroderma, lupus, or sickle cell disease

What are the symptoms of pulmonary hypertension?
Symptoms may come on suddenly. Or, they may come on slowly over time. Symptoms can include:
- Shortness of breath
- Blue lips or fingernails (signs that the body is having trouble getting oxygen)
- Tiring quickly, especially when active
- Fast heartbeat
- Pain in the upper right side of the abdomen
- Swelling in the legs or ankles
- Chest pain or pressure
- Fainting or dizzy spells

How is pulmonary hypertension diagnosed?
Your healthcare provider will examine you and listen to your heart and lungs. Your blood pressure will also be measured. Tests may be done to help find the cause. These may include:
- Blood tests. These measure certain body functions. They also check for problems such as infection.
- Chest X-ray. This takes a picture of the inside of the chest. It can show certain heart and lung problems.
- Electrocardiogram (ECG). This test records the heart’s electrical activity.
- Echocardiogram (echo). This test uses sound waves to create a moving picture of the heart.
- Pulmonary function tests. These tests measure breathing and lung capacity.
- Perfusion lung scan. This scan may be used to find changes in the arteries leading to the lungs and blood flow within the lungs and to identify blood clots.
- CT scan of the chest. This test takes detailed pictures of the lungs.
- 6-minute walk test. This test measures your exercise tolerance and to check if your oxygen levels drop when you exert yourself.
- Right heart catheterization (cath). This procedure measures pressures in the heart and lungs. A thin tube (catheter) is put into a blood vessel in the groin or neck and guided into the right side of the heart and to the pulmonary artery. This is the main artery that carries blood to your lungs. Certain blood pressure tests are then done. This is the only test that measures the pressure inside the pulmonary arteries.

How is pulmonary hypertension treated?
Treatment depends on your age, health, and the severity of your symptoms. Any underlying health problems you have will be treated. Treatment may also include:
• Oxygen
• Medicine to lower the pressure in the lung blood vessels
• Medicine to help the body lose excess water
• Medicine to prevent blood clots
• Medicine that help the heart beat stronger, pump more blood and control abnormal heart rhythms

What are the long-term concerns?
Though pulmonary hypertension has no cure, certain treatments may relieve symptoms and slow progression of the disease. In rare and severe cases, a lung transplant may be needed. Your healthcare provider can tell you more about this if needed.

When you should call your healthcare provider
Call your healthcare provider right away if you have any of the following:
• Persistent blueness of lips or fingernails
• Shortness of breath
• Fever of 100.4°F (38.0°C) or higher or as advised by your healthcare provider
• Fainting spells
• New symptoms or worsening of current symptoms

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