Pulmonary Hypertension

Pulmonary hypertension is elevated pressure in the blood vessels of the lung.

Pulmonary hypertension is defined as an average pressure of greater than 20 mm Hg in the pulmonary artery, which is the large blood vessel leading from the heart to the lungs. Pulmonary hypertension can cause poor functioning of the heart, which may result in shortness of breath with exertion, fatigue, chest pain, swelling of the legs or abdomen, and dizziness or fainting.

Pulmonary hypertension can affect both children and adults. It is more common in women, people aged 75 years or older, and Black individuals.

How Is Pulmonary Hypertension Diagnosed?
The first recommended test is a transthoracic echocardiogram, which is an ultrasound of the heart that can estimate pulmonary artery pressure and assess how well the heart is functioning.

Types of Pulmonary Hypertension
Pulmonary hypertension is divided into 5 categories:

- **Pulmonary arterial hypertension** involves destruction or narrowing of the pulmonary artery due to inherited or unknown causes, some drugs or toxins, and certain medical conditions, including connective tissue diseases, HIV, liver cirrhosis, congenital heart disease, and a parasitic infection called schistosomiasis.

- **Pulmonary hypertension due to heart disease** involves increased pressure in the blood vessels of the lung from heart failure or problems with the heart valves.

- **Pulmonary hypertension due to lung disease** is caused by low oxygen levels from lung illnesses (such as chronic obstructive pulmonary disease or progressive lung scarring due to interstitial lung disease) or from other medical conditions (such as sleep apnea).

- **Pulmonary hypertension due to blockage of blood vessels** typically involves large blood clots in the lungs but may also be due to tumors within or externally compressing the pulmonary artery.

- **Pulmonary hypertension due to other causes** includes other medical conditions, such as some blood disorders (such as sickle cell disease), certain systemic diseases (such as sarcoidosis), chronic kidney disease, and complex congenital heart disease.

In the US, heart disease is the most common cause of pulmonary hypertension.

How Is Pulmonary Hypertension Treated?
Basic treatments for pulmonary hypertension may include oxygen, diuretics to decrease swelling in feet and legs, blood thinners to prevent blood clots in the lungs, and exercise under supervision. Specialized treatment depends on the cause of pulmonary hypertension.

- **Pulmonary arterial hypertension** can be treated with specialized medications to dilate the pulmonary artery. Lung transplant may be considered in the most severely affected patients.

- **Pulmonary hypertension due to heart disease** is managed with heart failure medications or with valve replacement for patients with heart valve problems.

- **Pulmonary hypertension due to lung disease** is treated with medications for the underlying lung disease, use of oxygen, and management of sleep apnea, if present.

- **Pulmonary hypertension due to blockage of the blood vessels** can sometimes be treated with surgical removal, if there are large blood clots in the pulmonary artery.

- **Pulmonary hypertension due to other causes** is managed by treating the underlying cause.

FOR MORE INFORMATION
American Thoracic Society
https://www.thoracic.org/patients/patient-resources/resources/pulmonary-hypertension.pdf

Centers for Disease Control and Prevention
https://www.cdc.gov/heartdisease/pulmonary_hypertension.htm

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