EMPHYSEMA

What is it: Emphysema is a type of chronic lung disease that slowly and progressively damages the alveoli in the lungs. It is one of several diseases known collectively as chronic obstructive pulmonary disease (COPD).

Who is at risk: Smokers. Emphysema is most likely to develop in cigarette smokers, but cigar and pipe smokers also are susceptible. The risk for all types of smokers increases with the number of years and amount of tobacco smoked. Other risk factors include:

- Age. The damage to the lungs occurs gradually but most people with tobacco-related emphysema will notice symptoms between the ages of 40 and 60.
- Exposure to secondhand smoke. Being around secondhand smoke increases your risk of emphysema.
- Occupational exposure to fumes or dust. Breathing fumes from certain chemicals like dust from grain, cotton, wood or mining products.
- Exposure to indoor and outdoor pollution. Breathing indoor pollutants, like fumes from heating fuel, or outdoor pollutants, like care exhaust.

Cause: The most common cause of Emphysema is cigarette smoking

Symptoms: The symptoms of Emphysema can present slowly and may go unnoticed for years before they become severe enough to seek medical attention. Shortness of breath is the main symptom and will gradually become worse until it eventually interferes with activities of daily living. Patients with advanced emphysema will experience shortness of breath even at rest.

Diagnosed: Imaging tests

A chest X-ray is usually ordered to rule out other causes of the patient's shortness of breath and can also support the diagnosis of advanced emphysema.

Lab tests: Blood work such as arterial blood gas can determine how the patients transfer oxygen in and carbon dioxide out of their blood.

Blood taken from an artery in your wrist can be tested to determine how well your lungs transfer oxygen into, and remove carbon dioxide from, your bloodstream.

Lung function tests: these tests measure how much air the patient's lungs can hold and how well the air flows in and out. They can also tell the physician how well the patient's lungs deliver oxygen to your bloodstream.

Complications: Pneumothorax. While uncommon, this can be life-threatening in people who have severe emphysema, because the function of their lungs is already so compromised.

Heart problems. A cor pulmonale, a condition in which a section of the heart expands and weakens, can develop because of the increased pressure in the arteries that connect the heart and lungs.

Giant Bullae: Bullae are air pockets or empty spaces in the lungs. Giant bullae can be as large as half the lung. These bullae reduce the amount of space in the lung that is available for it to expand. They can also increase the risk for developing a pneumothorax.

Treatment:

Depending upon the severity of your symptoms, your doctor might suggest:

- Bronchodilators. These drugs relax constricted airways and can ease the coughing and shortness of breath.
- Inhaled steroids. Corticosteroid drugs may help relieve shortness of breath. Patients must be educated and precautioned about the long-term use of steroids. Long term, these medications may weaken your bones and increase your risk of high blood pressure, cataracts and diabetes.

- Pulmonary rehabilitation. Teaches the patient breathing exercises and techniques that may help reduce your breathlessness and improve their ability to exercise.
- Nutrition therapy. In the early stages of emphysema, many people need to lose weight, while people with late-stage emphysema often need to gain weight.
- Supplemental oxygen. Patients with severe emphysema will have difficulty moving their oxygen throughout their body and may require supplemental oxygen.

For more severe emphysema, surgery may be recommended.

Lung volume reduction surgery. surgeons remove small wedges of damaged lung tissue. By removing the diseased tissue, the healthy lung tissue can work more efficiently.

Lung transplant. Lung transplantation is usually a last option after all other options have failed.

Did you know? Per the American Lung Association, in 2011 about 4.7 million American's had emphysema. More than 90% of these cases were in patients over the age of 45.

Sources

Medlineplus.gov

Mayoclinic.com

www.healthline.com