

Heart Disease and Lung Disease Often Occur Together

- ✓ Individuals with chronic obstructive pulmonary disease (COPD) are more than twice as likely to have heart disease than the general population. COPD includes emphysema and chronic bronchitis.
- ✓ Both heart disease and lung disease can cause shortness of breath, fatigue, and chest tightness. Sometimes heart disease does not get diagnosed in individuals with lung disease because of the overlap in these symptoms.
- ✓ Individuals with lung disease have higher rates of the following types of heart disease than those who do not have lung disease:
 - ❑ Atrial arrhythmias, such as atrial fibrillation (also called afib) and multifocal atrial tachycardia (also called MAT)
 - ❑ Ischemic heart disease (also called coronary artery disease)
 - ❑ Myocardial infarction (also called MI or heart attack)
 - ❑ Heart failure (also called congestive heart failure or CHF)
 - ❑ Peripheral artery disease
 - ❑ Ischemic stroke
 - ❑ Cor pulmonale (a specific type of right-sided heart failure)

Shared Risk Factors for Heart Disease and Lung Disease

- ✓ Many of the factors that increase the risk of lung disease also increase the risk of heart disease.
- ✓ Health behaviors that increase the risk of lung disease and heart disease include smoking and lack of physical activity.
- ✓ Health conditions that increase the risk of lung disease and heart disease include diabetes, obesity, and hypertension (which is also called high blood pressure).
- ✓ There may be shared genetic risk factors for lung disease and heart disease.
- ✓ Aging increases the likelihood of developing lung disease and heart disease.

Lung Disease Can Cause Heart Problems

- ✓ There are a few different ways that lung disease can lead to the development of heart disease.
- ✓ Individuals with COPD have chronic inflammation. Inflammation increases during exacerbations, and is higher among individuals who have frequent COPD exacerbations. Inflammation is associated with stiffness in the arteries, which is a risk factor for heart disease.
- ✓ Alphas with lung disease often develop hyperinflation, a condition in which the lungs expand beyond their normal size. Hyperinflation decreases the amount of blood returning to the heart and can cause low blood pressure during exercise. Endobronchial valves may improve hyperinflation.
- ✓ The heart rate is higher with exercise when lung disease is present. The high heart rate can put extra strain on the heart.
- ✓ Some individuals with COPD do not have enough oxygen circulating in their blood. Inadequate blood oxygen levels can lead to heart problems in two different ways:
 - ❑ When there is not enough oxygen in the blood, the heart has to do more work.
 - ❑ Having low oxygen levels can lead to constriction of the pulmonary blood vessels. This can make it difficult for the heart to pump blood through the lungs, leading to right heart failure (cor pulmonale).

Heart Disease Risk Can be Reduced by Taking Good Care of Lung Disease

- ✓ Individuals with well-controlled lung disease are less likely to develop heart disease than those who have poorly-controlled lung disease.
- ✓ Reduce your risk of exacerbations by getting vaccinated against influenza and pneumococcal pneumonia, taking medications as prescribed, and exercising regularly.
- ✓ Check your blood oxygen saturation and use oxygen if necessary to ensure adequate oxygen levels.
- ✓ Use a heart rate monitor to adjust exercise intensity. Report chest pain with exercise to your healthcare provider.
- ✓ Use your rescue inhaler 15-30 minutes before exercise.