

Asthma is an allergic lung disease, which is very common, and on the rise; nearly 5-10% or 15-30 million Americans have this disease. Symptoms include chronic cough, shortness of breath, chest tightness and wheezing, and in rare cases, asthma can be fatal. We think of asthma as belonging to a class of diseases known as COPD-Chronic Obstructive Lung Diseases which include emphysema and chronic bronchitis-because the symptoms are caused by blockage or obstruction in the airways when one tries to exhale. In most cases, the airways are inflamed and filled with mucus which blocks airflow. Allergies and infection are the two major triggers for inflammation and can be controlled (ie, steroids, allergy shots) and even cured (ie, antibiotics), respectively. Unlike bacteria, viral infections are not treated with antibiotics, and resolved over time.

Asthma, emphysema, and chronic bronchitis therefore all have airway obstruction as a major feature. The classic teaching was that asthma, unlike emphysema and chronic bronchitis, is reversible and that steroids and bronchodilators reverse the inflammation, open the airways and prevent symptoms. Newer research shows that this teaching is not entirely correct. Studies now show that patients with persistent mild, moderate or severe asthma may undergo airway “remolding” and develop fixed, irreversible obstruction, abnormal lung function studies and lower lung volumes. One study in adults showed a possible mechanism to be the loss of lung elastic recoil, which means the lung airways have lost the flexible “rubber band” quality needed for normal breath taking. Interestingly, chest computerized tomography (CT) scans showed no or minimal emphysema in all patients studied. This has been called “pseudo physiologic emphysema”; that is, asthma which resembles emphysema due to the loss of elastic recoil.

Thus, patients with persistent asthma are at risk for losing lung elastic recoil, but not for developing true emphysema, as may occur with years of smoking. Patients should therefore have regular medical checkups with their allergists to prevent and treat their conditions.