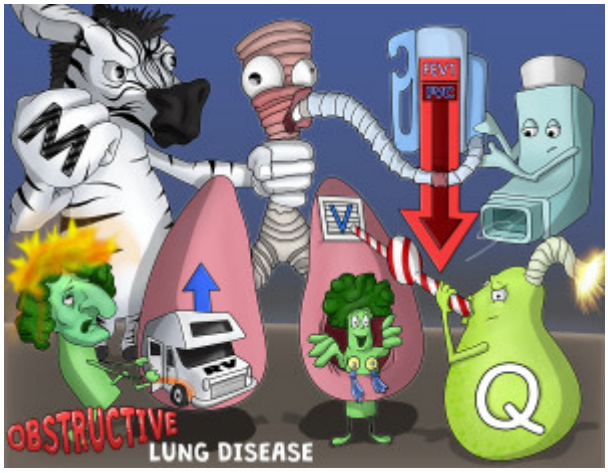
Obstructive Lung Disease

Obstructive lung disease is characterized by airway obstruction and associated with inflammation of the airways. Air trapping as a result of airway obstruction causes an increased in the residual volume of the lungs, which means the volume of air left in the lungs after fully exhaling is increased. Forced vital capacity, the volume of air that can be forcibly blown out after one full inspiration, is decreased. FEV1, the forced expiratory volume in 1 second or the volume of air that can be forcibly blown out in 1 second, is also decreased. More importantly, the ratio of FEV1/FVC is decreased because even though FVC is decreased, the FEV1 decreases even greater resulting in an overall decrease in the FEV1/FVC ratio. This can be clearly distinguished from restictive lung disease which has a ratio greater than 80%. Common obstructive lung diseases include chronic bronchitis, emphysema, asthma and bronchiectasis.



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Blocked Airflow
Lungs' Airway Blocked off
Obstructive lung disease is characterized by blocked airflow, resulting in air trapping.

Increased residual volume
RV in lungs
This means the volume of air left in the lungs after full exhalation increases. These patients trap air in their lungs over time.

V/Q Mismatch
Little Vent over a Big Pear-Fuse
Obstructive lung disease often results in V/Q mismatch. A decreased V/Q ratio is seen because of a decrease in the amount of air reaching the alveoli.

Decreased forced vital capacity (FVC)
Down-arrow FVC-spirometer
Forced vital capacity is the volume of air that can be forcibly blown out after one full inspiration.

Decreased FEV1/FVC ratio
Down-arrow Ratio on Spirometer
FEV1 is the forced expiratory volume in 1 second or the volume of air that can be forcibly blown out in 1 second. Decreased FEV1/FVC indicates that the patient cannot get rid of the air in the lungs as quickly due to the obstruction. Although FVC decreases, there is a larger decrease in FEV1, resulting in a drop in the overall FEV1/FVC ratio.

Asthma
Asthma-inhaler
Asthma is an obstructive lung disease caused by bronchial hyperresponsiveness, leading to bronchoconstriction and inflammation.

Bronchiectasis
Broccoli-with-tassels
Bronchiectasis is a type of obstructive lung disease that is caused by chronic infection of bronchi, resulting in dilated airways.

Chronic bronchitis
Crone Broccoli-on-fire
Chronic bronchitis is a type of obstructive lung disease in which there is hypertrophy of mucus-secreting glands, leading to chronic productive cough.

Emphysema
M-fist-zebra
Emphysema is a type of obstructive lung disease caused by the destruction of the alveolar walls and loss of elastic fibers.This leads to increased lung compliance and decreased recoil.

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