

Welcome to this lesson today on the Lower Respiratory Tract. Today, we will be identifying structures associated with the lower respiratory tract. So our respiratory system, first of all, I want to define what that is so you can understand this tutorial a little bit better.

So our respiratory system is an organ system that's composed of the lungs and airways, which allow us to exchange gases between ourselves and our environment. So we need to take in oxygen and expel carbon dioxide, and our respiratory system allows us to do this with the structures that are composed of it. So we divide the respiratory system into the upper and lower tracts. So today, we're going to be looking specifically at the structures associated with the lower respiratory tract.

So to get started on that, we're going to start by labeling the trachea. So these structures up here are associated with the upper respiratory tract. And basically, the function of these is just to take in air and filter it down towards the trachea. So the trachea is also sometimes known as the wind pipe. That might be a more common way that people talk about the trachea.

But basically, it connects the upper respiratory tract or it connects the larynx part of the upper respiratory tract to the bronchi and the lungs. And this trachea is reinforced with flexible cartilage bands, so it makes it kind of more flexible and it can expand a little bit. If you actually feel the front of your throat, you can feel those cartilage bands that are on the trachea. They're actually something you can feel from the outside. So that's our trachea.

The next thing we're going to talk about then are the bronchi. So our trachea then will split down into these two tubes. One tube is going to go to each lung. So we call these the bronchi.

So from there, air is moving from the trachea to the bronchi, and then into the lungs. So the lungs are our major organ of the respiratory system involved in gas exchange. So the bronchi, once it gets into the lungs, is actually going to branch into smaller tubes, which we call bronchioles.

So these bronchioles are smaller tubes, which will then connect to alveoli. So if we take a look at this picture up here, this is a picture of alveoli. So this is actually the site of gas exchange.

So pretend that this is one of the bronchioles, which will then branch into alveoli. So alveoli is the specific site within the lungs of gas exchange. This is where carbon dioxide and oxygen are exchanged with capillaries within the lungs, at the alveoli.

Another structure that we're going to take a look at here is the diaphragm. So the diaphragm is a muscle that

separates your chest cavity from your abdominal cavity. It's found right underneath the lungs. And basically, what it does is it helps to regulate pressure in the chest cavity, which assists in the respiratory cycle. So it just plays a role in regulating pressure within the chest cavity.

So these are the structures associated directly with the lower respiratory tract. But other structures, including intercostal rib muscles, for example, also play a role in the functioning of the lower respiratory tract also by regulating that pressure in the chest. But for today, we just need to know these structures associated directly with the lower respiratory tract and the function of each. So this lesson has been an overview on the lower respiratory tract.