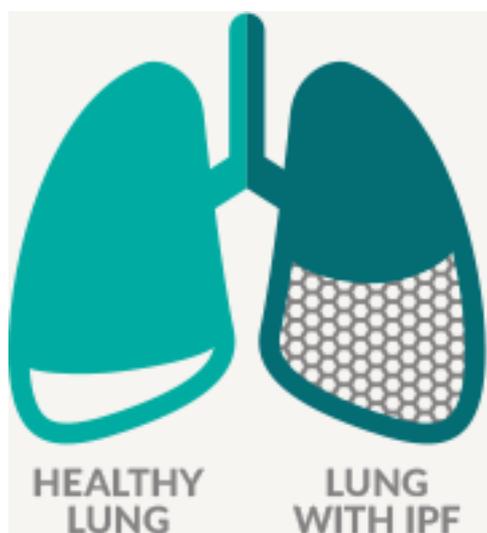


LUNG FUNCTION AND IPF

Lung Function and IPF

To understand idiopathic pulmonary fibrosis (IPF) better, it's important to understand how your lungs work. As you breathe in, the air goes from your mouth down your trachea. This is the tube that connects your nose and mouth to your lungs. Air flows down your trachea through your bronchial tubes into both your left and right lungs. Your bronchial tubes have many branches that look like an upside-down tree.

At the very ends of these branches, like berries at the end of a bush, are tiny air sacs called *alveoli*. Around the alveoli are capillaries—tiny blood vessels that eventually lead back to your heart. The alveoli allow oxygen from the air you breathe in to pass into your blood, where it's stored in your red blood cells for use elsewhere in your body. The alveoli also allow carbon dioxide from your blood to be released back into the air.

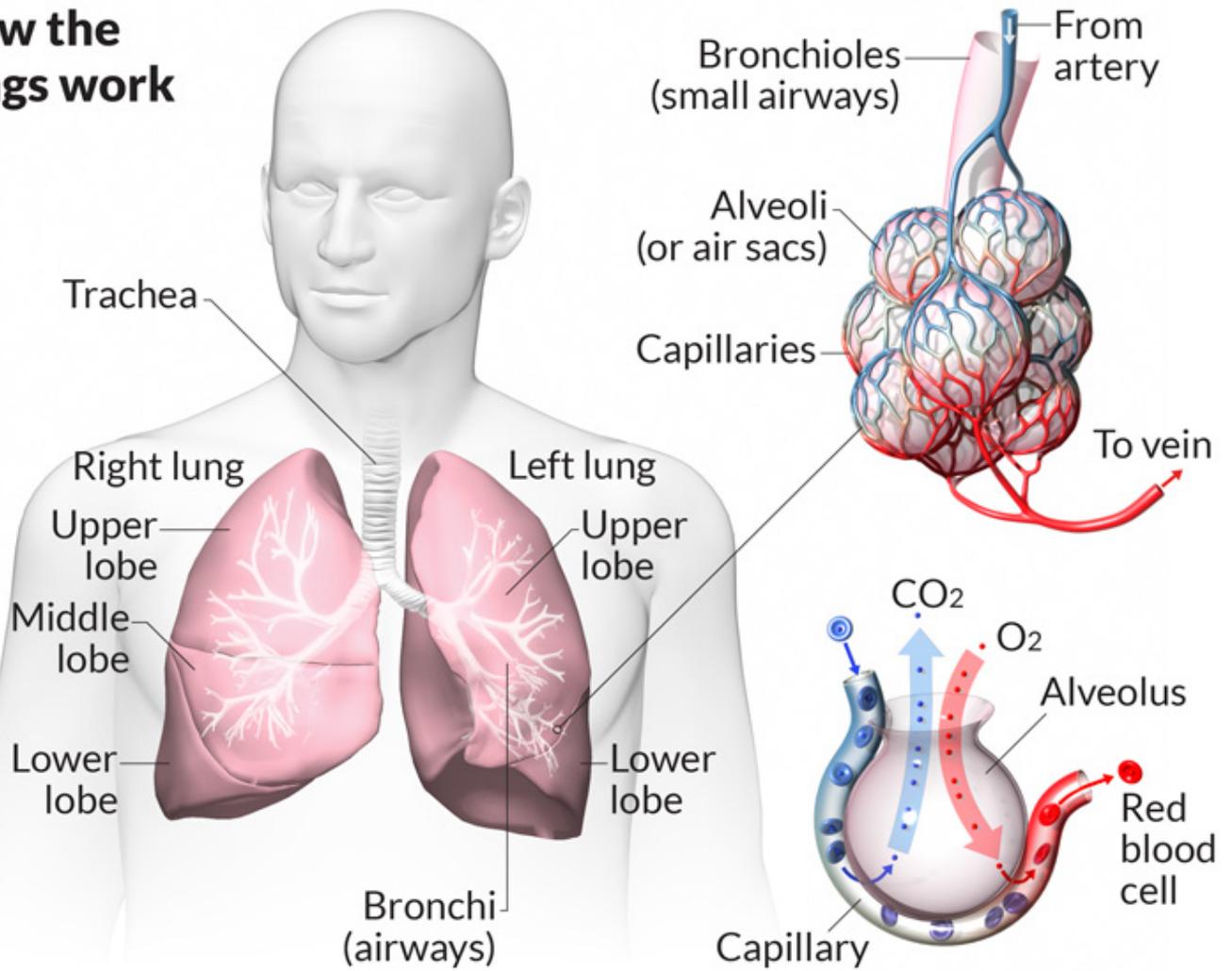


ON AVERAGE, PEOPLE WITH IPF LEFT UNTREATED LOSE 3 TO 4 TIMES MORE LUNG FUNCTION EACH YEAR THAN THOSE WITHOUT IPF

How Your Lungs Work

In a normal lung, oxygen passes easily through the bronchial tubes to the alveoli, where it's transferred to the bloodstream. (See illustration below.) In a person with IPF, the lungs can't function correctly due to scarring ("fibrosis"). This scarring happens in the spaces between the air sacs, and it reduces the amount of oxygen the lungs can transfer into the bloodstream. This leads to shortness of breath and fatigue. As IPF progresses and lung function is reduced, shortness of breath worsens. Oxygen therapy is often needed to help patients with reduced lung function breathe more easily. (Learn more about what IPF is and [how it affects your lungs.](#))

How the lungs work



Air travels into the lungs via the windpipe (trachea). It goes down a series of branching airways called bronchi. These branch into smaller bronchioles and then into millions of tiny air sacs (alveoli).

Oxygen (O_2) in the air passes through the thin walls of the alveoli into the tiny blood vessels nearby. Oxygen attaches to red blood cells and is carried in blood vessels to the rest of the body.

Carbon dioxide (CO_2) is passed out of the alveoli from the red blood cells and is breathed out.
