

What is COPD?

Chronic obstructive pulmonary disease (COPD) is an illness that interferes with how the lungs work and makes breathing difficult.

COPD generally involves a combination of:

- Chronic bronchitis – having too much mucus in your airways, which leads to a chronic cough and more chance of respiratory infections.
- Emphysema – damage to your lungs, which causes air to get trapped and makes it harder for oxygen to get into the blood.

In some cases, people with COPD may also have asthma (a chronic lung condition that makes breathing difficult)

How normal airways work

Our airways are shaped like an upside-down tree. When we breathe in, air:

- Moves into the trachea
(the “trunk” of the upside-down tree)
- Flows into smaller passageways
Called bronchi and bronchioles
(the “branches” of the tree)
- Makes its way into air sacs called alveoli
(the “leaves” on the tree)

Oxygen from the air passes through the alveoli and into the bloodstream. At the same time, waste gas (carbon dioxide) passes from the blood stream to the alveoli and is exhaled.

What happens when COPD develops

As COPD develops, the trachea, bronchi, and bronchioles:

- Thicken, closing off or narrowing passageways
- Fill with mucus
- Lose their flexibility, causing them to trap air inside. (This happens to the alveoli, too.)

In the later stage of COPD, there may be too little oxygen in the blood. The amount of carbon dioxide in the blood may increase

COPD also makes the heart pump harder – it has to push blood through narrower blood vessels in the lungs.