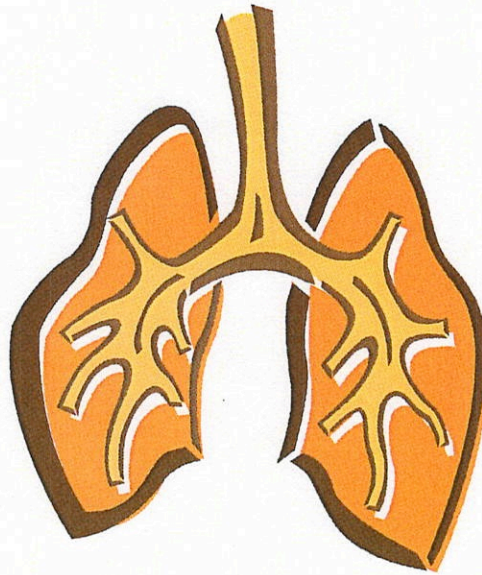
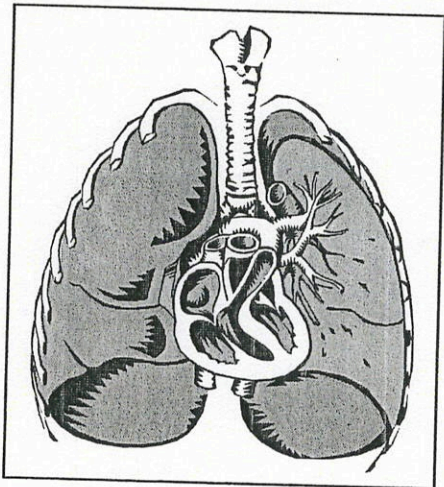


# Chapter 1

## Living with Chronic Lung Disease



## How Your Lungs Work



When you take a breath, air enters into the nose or mouth where it is circulated, filtered, humidified, and warmed to body temperature. The air is then passed through the throat and trachea (windpipe), entered into the right and left main stem bronchi (the largest of the airways), and finally, into the tiny, very narrow airways called bronchioles. Each bronchial tube ends in clusters of grape-like air sacs called alveoli. These air sacs are interconnected and surrounded by tiny blood vessels that allow oxygen to enter the blood and carbon dioxide to exit.

Surrounding each bronchial tube, are thin bands of muscles that act to protect the lungs from irritating substances. These muscles are called bronchial smooth muscles.

## The Muscles of Inspiration

The diaphragm is a large, half-mooned shaped muscle that separates the chest cavity from the abdominal cavity. This muscle does 75% of the work of breathing. When a breath begins, the diaphragm moves down, similar to a piston, creating more space in the lungs for air to enter. When the lungs are full of air, the diaphragm relaxes and moves upward allowing air to be exhaled. Other muscles of inspiration, are the muscles in between the ribs and muscles in the neck and back.

