

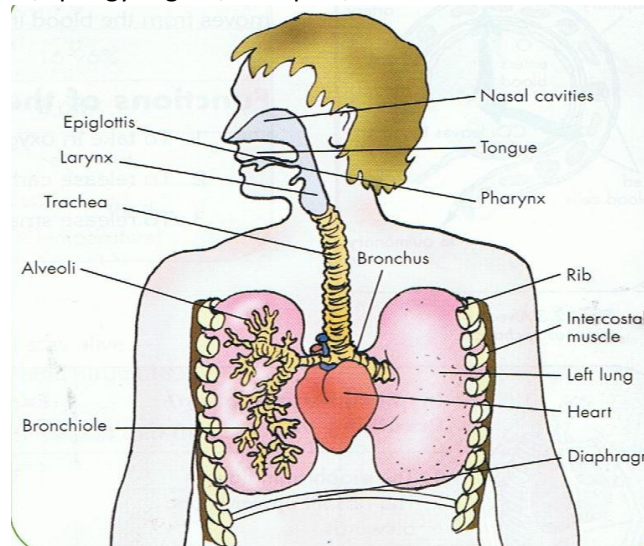
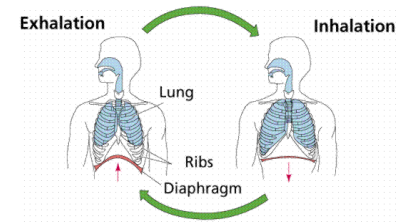
The Respiratory System

Inhalation: breathing in – Oxygen is inhaled. Lungs expand, fill with air, ribs lift outwards and diaphragm flattens

Exhalation: breathing out – CO₂ is exhaled. Lungs return to normal, air is forced out, ribs move inwards and diaphragm relaxes

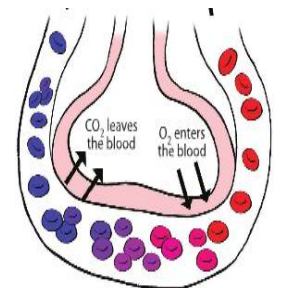
Position of lungs: in the chest cavity, under the ribs, lungs rest on the diaphragm (band of muscle)

Structure of lungs: cone-shaped, spongy organs, dark pink, contain bronchioles and alveoli (surrounded by capillaries - gas exchange)



Exchange of gases in the lungs:

- Gas exchange occurs at the alveoli
- CO₂ in the capillaries (surrounding the alveoli) passes into the alveoli to be exhaled
- O₂ that has been breathed in, passes from the alveoli into the capillaries surrounding the alveoli, to be transported to the cells in the body
- O₂ is used in the body for energy



Composition of air:

	Inhaled air	Exhaled air
Nitrogen	79%	79%
Oxygen	20.96%	16.96%
Carbon Dioxide	0.04%	4.04%

Function of the lungs: Breathe in oxygen, breathe out carbon dioxide, breathe out water vapour (excretion)

Respiratory diseases: Bronchitis, lung cancer, colds, laryngitis, influenza (the flu), tonsillitis

Smoking: increases the risk of many respiratory diseases

Government controls (for smoking):

- Cigarettes are highly taxed
- No advertising of cigarettes on TV
- Packets must carry a health warning



- Illegal to sell to under 18s
- No smoking allowed in public workplaces