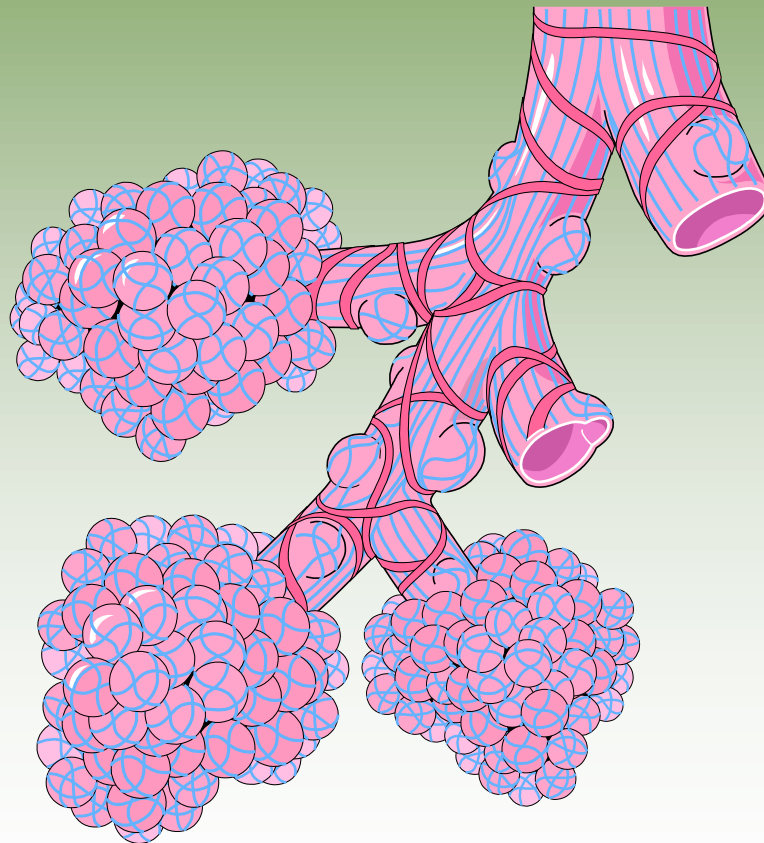


THE RESPIRATORY SYSTEM



MEDICAL DIVISION

UPPER AIRWAYS

- **NOSE**
- **MOUTH**
- **PHARYNX**

THE NOSE

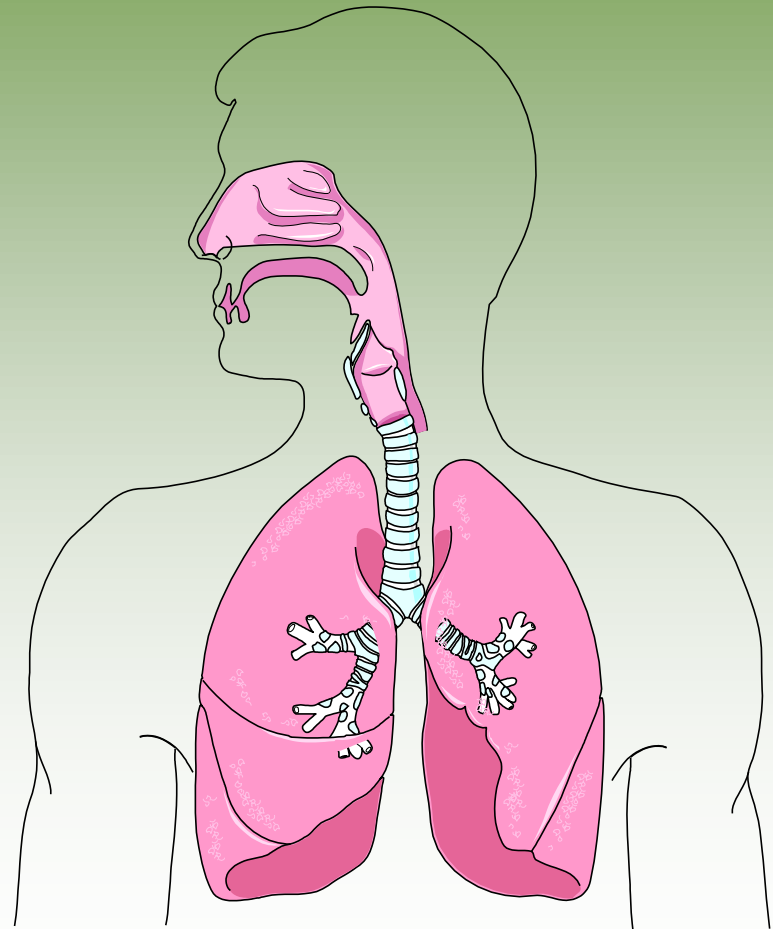
- **THE NASAL CAVITY**

- warms, or cools the air
- moistens the air
- filters the air

- another important factor is smell

LOWER AIRWAYS

- **LARYNX**
- **TRACHEA**
- **BRONCHI**
- **ALVEOLI**

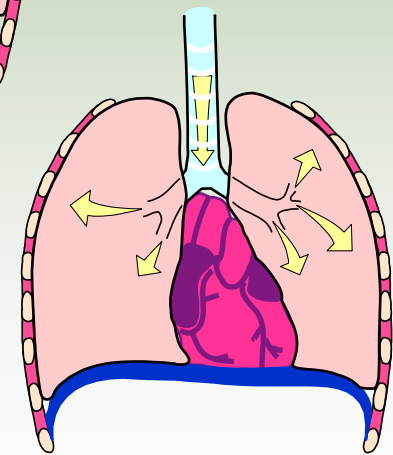
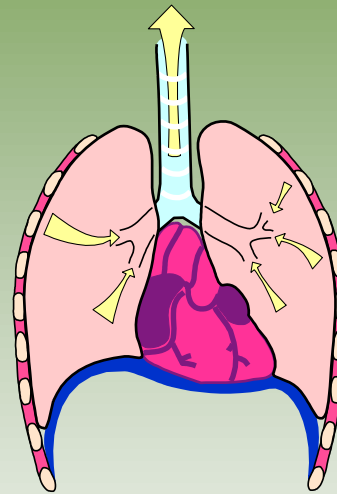


THE LARYNX

- **SITUATED BETWEEN THE PHARYNX AND TRACHEA**
- **THE THYROID CARTILAGE**
Skoldbrusken
- **CRICOID CARTILAGE** Ringbrusken
- **2 VOCAL CORDS**
- **EPIGLOTTIS**
 - closes the airway when we swallow

TRACHEA

- **TRACHEA OR THE WINDPIPE IS A TUBE THAT CONNECTS THE THE LARYNX TO THE LUNGS.**
- **IT DIVIDES INTO THE TWO MAIN BRONCHI**

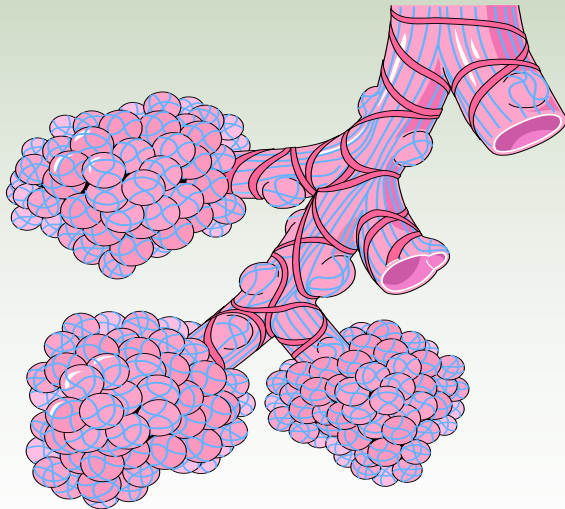


THE BRONCHI

- **WE HAVE THE TWO MAIN BRONCHI THAT GOES LEFT AND RIGHT, AND DIVIDES FURTHER INTO SMALLER AND SMALLER BRONCHI, BUT NOW CALLED BRONCHIOLES**
- **THIS LOOKS RATHER LIKE THE ROOTSYSTEM OF A TREE**

THE ALVEOLI

- **THIS IS WHERE THE GASEOUS EXCHANGE TAKE PLACE**



- **there are many small alveoli arranged in grapelike clusters with tiny bloodvessels called capillaries that surrounds the alveoli. Here the gases can be exchanged and carbondioxide is taken up by the alveoli, and oxygen is taken up by the blood**

THORAX

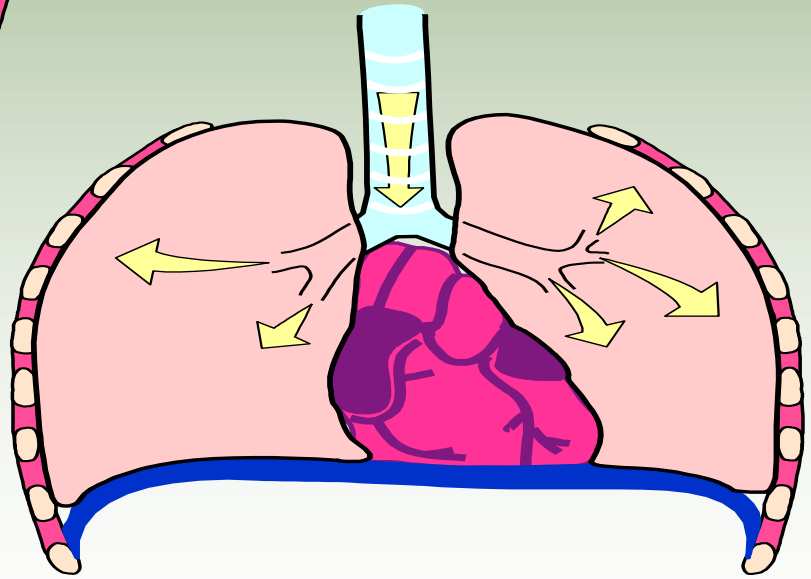
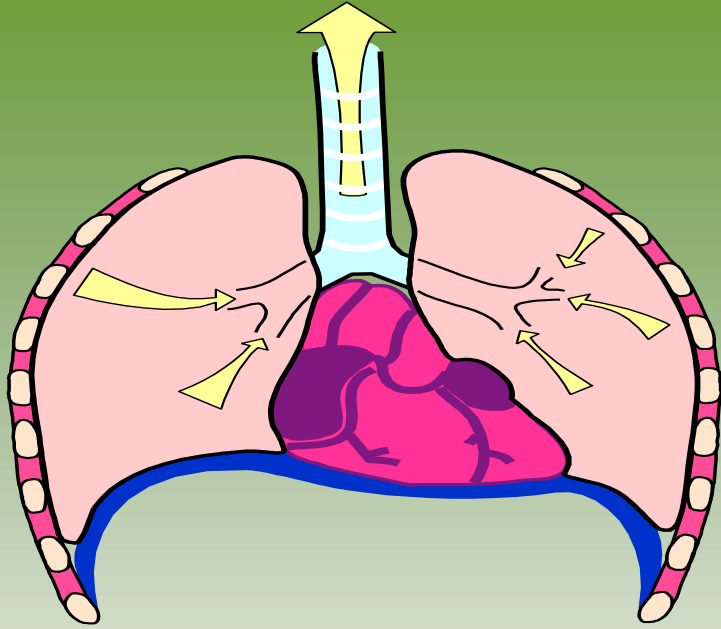
- **THORACIC CAVITY**
 - inside covered by pleura parietalis
- **LUNGS**
 - outside covered with pleura visceralis
- the space between these covers is called the pleural cavity and is filled with a thin layer of serous fluid to provide a friction free movement, there is also a negative pressure here so that the lungs are suspended inside the thoracic cavity

THE MECHANISM **OF RESPIRATION**

- **INSPIRATION**

- An active process where the diaphragm and the intercostal muscles contract. This increases the thoracic cavity, and because the pressure inside the thorax is lower than the outside, air is sucked in (through the nose)

- **THEN THERE'S A PAUSE FOR GASEOUS EXCHANGE**



THE MECHANISM **OF RESPIRATION**

- **EXPIRATION**

- This is a passive process where the diaphragm and the intercostal muscles relax, this causes the thoracic cavity to shrink and a greater air pressure is made, and air is forced out

- **REPEAT CYCLE**

NORMAL RESPIRATORY RATE

- **THE NORMAL RATE FOR AN ADULT IS 12-18 BREATHS PER MINUTES**
- **WITHOUT AIR (OR RATHER OXYGEN) WE WILL SUSTAIN SEVERE BRAINDAMAGE WITHIN 3-5 MINUTES, AND DEATH FOLLOWS SHORTLY**