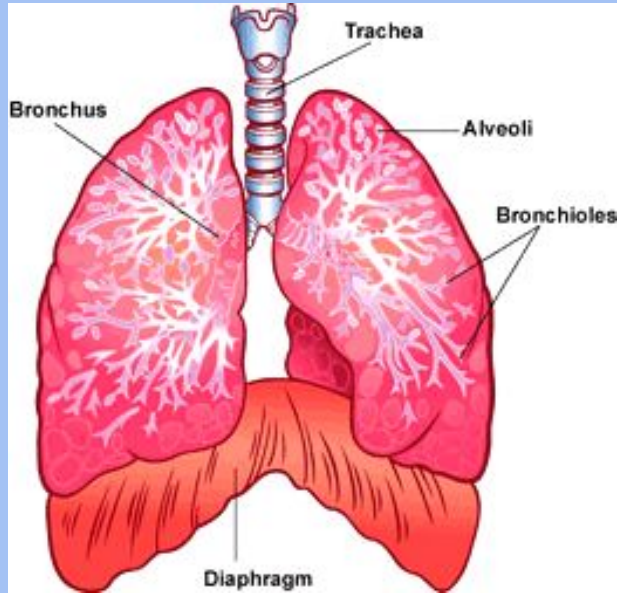


THE RESPIRATORY SYSTEM

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THE RESPIRATORY SYSTEM'S PURPOSE



- Air from the environment travels through the trachea, into the lungs
- They take O_2 and puts it in the blood stream
- They then take CO_2 out of the blood stream

ORGANS THAT MAKE UP THE RESPIRATORY SYSTEM

- There are 3 major parts of the respiratory system: the airway, the lungs, and the muscles of respiration.
- Consists of all of the organs involved in breathing.
- These include...
 - Nose
 - Pharynx
 - Larynx
 - Trachea
 - Bronchi
 - Lungs
- These all work like a system of pipes through which the air is funnelled down into our lungs.

FUNCTIONS OF THE ORGANS WITHIN THE RESPIRATORY SYSTEM

AIRWAY: CARRIES AIR BETWEEN THE LUNGS AND THE BODY'S EXTERIOR.

LUNGS: ACT AS THE FUNCTIONAL UNIT OF THE RESPIRATORY SYSTEM BY PASSING OXYGEN INTO THE BODY AND CARBON DIOXIDE OUT OF THE BODY.

MUSCLES OF RESPIRATION: THE DIAPHRAGM AND THE INTERCOSTAL MUSCLE WORK TOGETHER TO ACT AS A PUMP, PUSHING AIR INTO AND OUT OF THE LUNGS DURING BREATHING.

NOSE & NASAL CAVITY: WARMS, MOISTURIZES, AND FILTERS AIR ENTERING THE BODY BEFORE IT REACHES THE LUNGS. AIR EXITING THROUGH THE NOSE RETURNS MOISTURE AND HEAT TO THE NASAL CAVITY.

FUNCTIONS OF THE ORGANS WITHIN THE RESPIRATORY SYSTEM CONT.

MOUTH: CAN BE USED TO REPLACE THE NASAL CAVITY'S FUNCTION WHEN NEEDED.

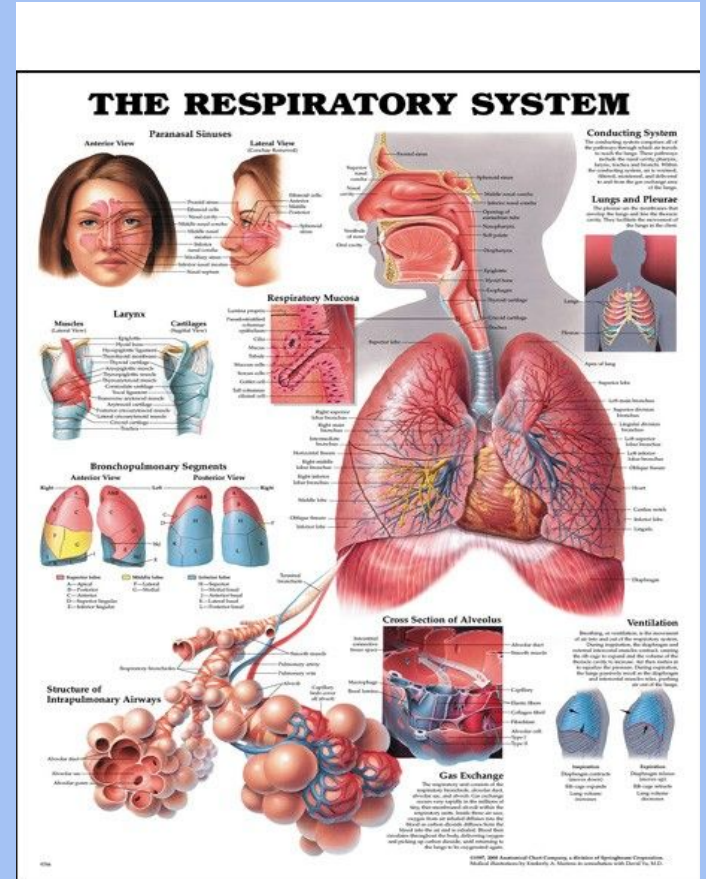
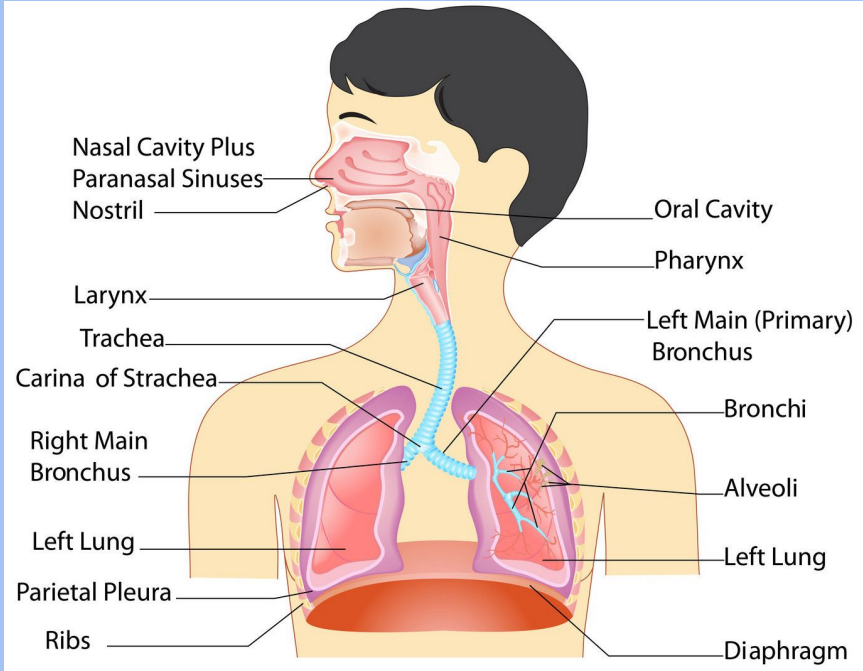
PHARYNX: USED TO SWALLOW FOOD. THE EPIGLOTTIS ENSURES THAT AIR PASSES INTO THE TRACHEA BY COVERING THE OPENING TO THE ESOPHAGUS.

LARYNX: KNOWN AS THE VOICE BOX THAT CONNECTS TO THE LARYNGOPHARYNX AND TRACHEA CHORDS CAN BE CHANGED TO CHANGE THE PITCH THAT THEY PRODUCE.

TRACHEA: CONNECTS THE LARYNX TO THE BRONCHI AND ALLOWS AIR TO PASS THROUGH THE NECK AND INTO THE THORAX. ALSO PROVIDES A CLEAR AIRWAY FOR AIR TO ENTER AND EXIT THE LUNGS.

BRONCHI & BRONCHIOLES: CARRIES AIR FROM THE TRACHEA INTO THE LUNGS.

THE RESPIRATORY SYSTEM



THE RELATIONSHIP BETWEEN THE RESPIRATORY SYSTEM AND OTHER BODY SYSTEMS:

THE SKELETAL SYSTEM: WITHOUT THE RESPIRATORY SYSTEM, THE SKELETAL SYSTEM WOULD BE NOTHING BUT SOFT TISSUE. THE RESPIRATORY SYSTEM IS PRIMARILY RESPONSIBLE FOR ALLOWING YOU TO SPEAK BY INTERACTING WITH THE LARYNGEAL SKELETON.

THE CIRCULATORY SYSTEM: THE CIRCULATORY SYSTEM WORKS WITH THE RESPIRATORY SYSTEM TO MAKE SURE THAT OXYGEN RICH BLOOD CAN FLOW THROUGH THE BODY.

THE DIGESTIVE SYSTEM: THE DIGESTIVE SYSTEM BREAKS DOWN FOOD AND MOVES IT THROUGH THE TRACTS OF THE BODY. THE RESPIRATORY SYSTEM RELIES ON THIS PROCESS BECAUSE IT TAKES THE FUEL PRODUCED TO FUNCTION.

THE NERVOUS SYSTEM: THE LUNGS HAVE RECEPTORS THAT RESPOND TO DEFLATION, INFLATION, AND CHEMICAL STIMULATION. THIS CAN ACTIVATE THE NERVOUS SYSTEM, AND CAN RESULT IN A COUGH OR A DIFFERENT BREATHING PATTERN.

THE IMMUNE SYSTEM: WHEN ANY HARMFUL PARTICLES ENTER THE RESPIRATORY SYSTEM, THE IMMUNE SYSTEM RELEASES LYMPHOCYTES AND MACROPHAGES TO PROTECT THE BODY.

EXOCRINE SYSTEM: THE RESPIRATORY SYSTEM FUNCTIONS WITH THE KIDNEYS TO KEEP THE RIGHT AMOUNT OF OXYGEN IN THE BLOODSTREAM.

DISEASES/MEDICAL PROBLEMS

- **ASTHMA**-A CONDITION IN WHICH A PERSON'S AIRWAYS BECOME INFLAMED, NARROW AND SWELL, AND PRODUCE EXTRA MUCUS, WHICH MAKES IT DIFFICULT TO BREATHE
- **PNEUMONIA**- INFECTION THAT INFLAMES AIR SACS IN ONE OR BOTH LUNGS, WHICH MAY FILL WITH FLUID
- **CYSTIC FIBROSIS**-A GENETIC CONDITION CAUSING POOR CLEARANCE OF MUCUS FROM THE BRONCHI. THE ACCUMULATED MUCUS RESULTS IN REPEATED LUNG INFECTIONS
- **LUNG CANCER**-A CANCER THAT BEGINS IN THE LUNGS AND MOST OFTEN OCCURS IN PEOPLE WHO SMOKE

