Respiration is a made up of Inspiration and expiration this process is ventilation of the lungs, Lungs are performing a free flowing of air.

**THE PATH OF AIR:**
1. **nose breathing**, obstruction in the nasal cavity. Air entering is filtered and warms and humidifies. At air can be very dry.
2. **Pharynx**—Nasal pharynx, Oral pharynx, Laryngeal pharynx (voice box helps you talk, vocal cords).
3. **Trachea/windpipe**—
4. **Rt, Lt Bronchus/ Bronchi**—looks like an upside down tree.
5. **Rt, Lt Lung**
6. **Bronchi** —> **Bronchioles** —> Bronchioles sac or Alveolar sac or alveoli (this is where gas exchange takes place, deoxygenated blood comes here).

Aspiration Pneumonia— Food going into air lungs (aspiration is sucking into the lungs).

Breathing rate: 12-20 times per min.

Excess carbon dioxide your brain will cause you to hyperventilate to get more oxygen.

Protective membrane: double layered membrane. small amount of fluid. Pluoro-fluid. the infection can travel for the lung to the plural membrane

**All in the plural space:**
Gun shot victim: Puemothorax — air in the membrane
Too much fluid Hydrothorax blood in the Plural space Hemothorax

Lungs get compressed and breathing is compressed. Dyspnea (breathing) Orthopnea — straight up right to have smooth breathing.

Brady (slow) Pnea — Slow breathing Tachy (fast) Pnea — Fast breathing
NERVOUS SYSTEM

Controlling all the functions

Central (CNS)
peripheral (PNS)

Central Nervous system, brain, spinal cord, and nerves

Brain: 3 parts protected by the bones, brain is protected by cranial cavity. Walnut. entire body is close to nature. underneath the skill the membrane is 3 layered:
- outer—dura matter
- mid—arachnoid matter
- internal—Pia matter

Small amount of fluid between the layers. cerebral spinal fluid. (CSF)
Meningitis infected, meningitis inflammation of the Meningitis epidermal hematoma
subdural hematoma;
Mass bleed it will be a Hemorrhage.

Cerebrum— major part of the skull, two half, Rt, Lt hemisphere. Right handed Left brain is stronger. mostly Left sided. Gyrus
Sukus (sulci)
Cerebral cortex— Cognitive functions: all higher functions that set us aside from other animals, logical factions, memorizing critical thinking, problem solving. Judgment.

These are lost in allzimers—1st symptom, forgetting things. the higher functions opposite of mallows. most diseases start physical functions. You thinking and memory is gone. Plaques forms on the dendrites. degenerative.

Cerebral cortex—neuron specialized cell.
dendrites—info accepted
Axon—Transfers info, covered by myelin sheath. Loss of myelin sheath will result in Multiple sclerosis. branches, neurotransmitter chemical is realized at nerve ending. Also released, Dopamine helps neurotransmitter to release at the muscle. This chemical is absent in Parkinson diseases.

Front—Frontal lobe ( critical thinking)
Back —Occipital lobes ( vison)
Each side—temporal lobes (speech and hearing)
Chapter 14

**Changes with aging:**
loss of teeth, broken tooth, gum infections, taste buds declined wont eat (loss of appetite), they can burn themselves, decreased saliva chewing is difficult, not enough water.
Epiglottis will weaken

Acid will decrease, peptic ulcers. food does not leave stomach quickly

Fibre, water, physical activity.

**Accessory organs:**
all important even thought it is not in the GI tract

**Salivary glands & teeth**
**Liver (left side of abdomen)**
—making bile to digest fats and absorbed fats.
**Hepatitis**—inflammation of the liver
**Gallbladder**
—bile stored, and released in Duodenum.
**Cholecystitus**—inflammation of the gallbladder
**Johndus**—yellow colour of the skin.
Stones, bile has cholesterol in it.
Cholelithiasis can also cause Johndus
**Pancreas**
—makes insulin (hormone) for sugars, also makes digestive enzymes. carbs, proteins, fats