**Skeletal System**

**What is the purpose?**

* Assists your body with \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**What are the parts and their purpose?**

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  + The \_\_\_\_\_\_\_\_\_\_ of your skeleton keep us from being a jello-like blob
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  + Rib cage protects the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  + Skull protects the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  + Spine protects the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  + Bones connect to one another at our \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  + Ex: elbow, wrist, neck, ankle…
  + Bones depend on working with the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in order to move; one \_\_\_\_\_\_\_\_\_\_\_\_ move without the other!
  + Muscles are connected to bones by tissues called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**What can go wrong?**

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  + bones loose calcium and become brittle; common among older women
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  + attacks \_\_\_\_\_\_\_\_\_\_\_\_\_ and the surrounding tissue causing \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ with movement.

**How does it work with other body systems?**

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_: muscles are connected to bones which allow them to move
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_: inside of your bone marrow is where red blood cells are made

**Muscular System**

**What is the purpose?**

* Works with the skeletal system to allow \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Each muscle is made up of individual muscle \_\_\_\_\_\_\_\_\_\_\_\_\_\_; each fiber is one long, stretchy \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Move by a series of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (tightening) and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Muscles work in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Muscles connect to bones by tissues called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**What are the parts and their purpose?**

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_: you have control
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_: they move automatically
* Three types
  + *\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_:* voluntary muscles connected to your bones
  + *\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_:* involuntary muscle, found in your heart
  + *\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_:* involuntary muscle, found in your digestive system

**What can go wrong?**

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_: causes weakness and loss of muscle mass
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_: syndrome in which a person has long term, body wide pain and tenderness in the joints, muscles, tendons, and other soft tissues
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_: stretching or tearing of a ligament (tissues that hold bones together); the most common muscle disorder

**How does it work with other body systems?**

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_: muscle connects to bones to help it move
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_: nerves tell your muscles how and when to move
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_: blood vessels go throughout your muscles to help give them nutrients/oxygen and take away waste; makes up your heart
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_: muscles line your digestive tract

**Circulatory System**

**What is the purpose?**

* To carry \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ rich blood around the body and deliver it to the \_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* To carry \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ around the body and deliver it to the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* To pick up \_\_\_\_\_\_\_\_\_\_\_\_\_\_ from muscles and organs and deliver it to the \_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ for excretion

**What are the parts and their purpose?**

* Heart
  + A \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ that pumps \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ throughout your body
  + Made of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ muscle
  + Located in the center of your chest \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  + Protected by your \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Blood vessels
  + \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ that \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ around your body
  + The three types are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Arteries
  + \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ from the heart
  + Blood is full of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Capillaries
  + \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  + Found in the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  + Where \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  + \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of these tubes are so \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ that \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_can pass right through
* Veins
  + \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ the heart
  + Blood is full of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**What can go wrong?**

* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_:** blood vessels that go around the heart get blocked; heart muscle tissue dies; heart attack results
* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_:** high fat diet results in arteries becoming hard; higher blood pressure results; heart and kidney damage can follow
* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_:** inner lining of heart swells/becomes inflamed; some antibiotics can treat

**How does it work with other body systems?**

* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_:** blood passes through the lungs in order to pick up fresh oxygen or drop off carbon dioxide
* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_:** arteries carry oxygen and nutrients to the muscles; veins carry carbon dioxide and other waste away from the muscles
* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_:** red blood cells are made in bone marrow, which can be found inside bones
* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_:** blood vessels run through the kidneys so they can be filtered of waste material

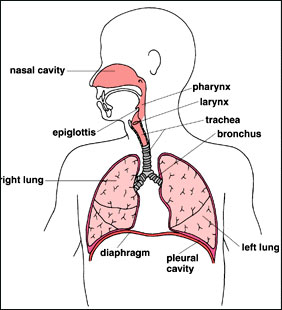
**Respiratory System**

**What is the purpose?**

* To bring \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ into the body (inhale)
* To get rid of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (exhale)
* Part of the “\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_”
* This is a collection of body systems which all help to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ from the body

**What are the parts and their purpose?**

* Your respiratory system looks like an \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_:** where your \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ can be found
* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_:** also known as the “\_\_\_\_\_\_\_\_\_\_\_\_”, runs down your throat
* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_:** two lobes which are made up of many smaller parts; lungs are not hollow!
* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_:** the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ at the bottom of your lungs which cause you to breathe; moves down and contracts to expand lungs (inhale)



* **Lungs**
  + **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_:** two tubes which lead into the left and right side of your lungs
  + **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_:** the smaller and smaller tubes which branch off of the bronchi
  + **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_:** very \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, the end of the lungs, touching very tiny capillaries, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ from the alveoli into the capillaries, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ from the capillaries into the alveoli

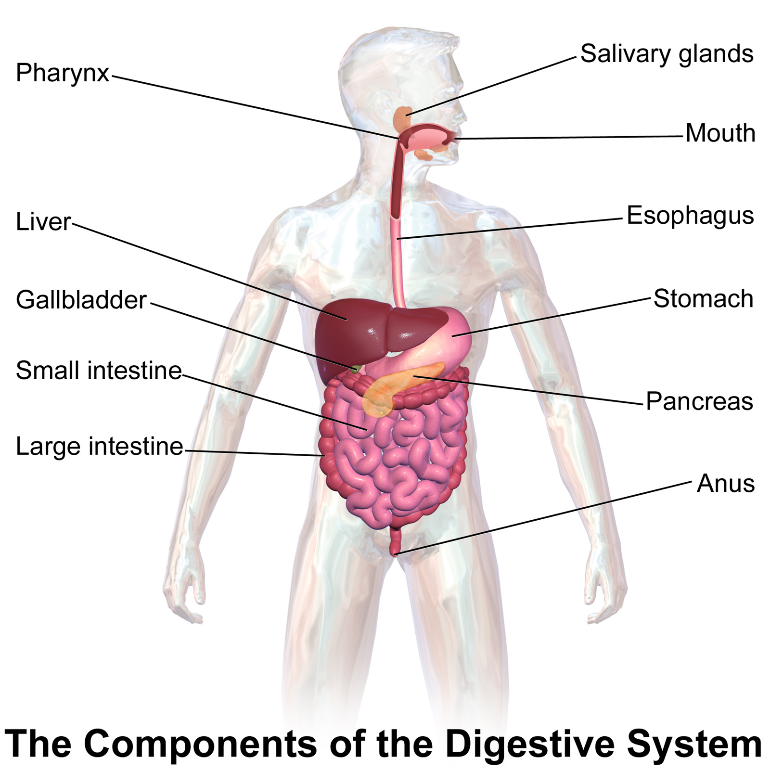
**What can go wrong?**

* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_:** a genetic condition which affects cells that produce mucus, sweat, and digestive juices; causes cells in the lungs to produce too much mucus; blocks breathing passages and traps harmful bacteria in the lungs
* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_:** bronchioles in the lungs constrict (tighten) and inflame (swell up) making breathing difficult
* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_:** damages the alveoli in lungs making it difficult to breathe; prevents old air filled with waste from exiting the body efficiently

**How does it work with other body systems?**

* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_:** a muscle called the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ contracts and relaxes allowing lungs to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_; provides the fresh oxygen needed for muscles to function; provides an out for waste carbon dioxide
* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_:** the circulatory system \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ which is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ by the respiratory system

**Digestive System**

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**What is the purpose?**

* To \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ into its \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* To \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ into the blood stream
* To \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ from your food

**Two types of digestion**

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_: food is mashed and physically broken down
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_: chemicals are added to food to chemically break them down

**What are the parts and their purpose?**

* **Mouth**
  + \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and break down food
  + \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ begins to break down starches into sugars
* **Esophagus**
  + Tube that \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ down from your mouth to your stomach
  + Lined with \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* **Stomach**
  + \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and mixes up food
  + \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ breaks down food further
  + Lined with \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* **Small Intestine**
  + Lined with \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ called villi
  + \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ through the walls of the villi and into the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of the circulatory system
* **Large Intestine**
  + \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* **Colon**
  + Last section of intestines
  + \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Food travels through the intestines in the following order: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, stomach, small intestine, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* There are organs that assist the digestive system which the food does not physically pass through
  + \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_: produces insulin, assists the small intestine absorb nutrients
  + \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_: assists in the digestion of fat
  + \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_: no known use in the body

**What can go wrong?**

* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_:** caused by a virus, bacteria, or indigestion; the large intestine does not properly absorb enough water causing runny stool; dehydration can result from loss of water
* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_:** the body cannot break down the sugar lactase; causes diarrhea,
* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_:** the body cannot digest the gluten protein; causes pain and cramping in the small intestine

**How does it work with other body systems?**

* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_:** once nutrients are broken down into small pieces they are carried throughout the body in the circulatory system
* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_:** nutrients broken down are supplied to the muscles to give them energy

**Urinary System**

**What is the purpose?**

* Filter \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ out of the blood
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ from those waste materials
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**What are the parts and their purpose?**

* **Kidneys:** blood vessels travel through the kidneys; kidneys \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and keep the good nutrients in the blood; \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* **Ureters:** two thin tubes which \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* **Bladder:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ until it is ready for excretion; lined with \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_:** tube which the urine travels through to get from the bladder to the outside of the body

**What can go wrong?**

* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_:** calcium separates from the urine and crystallizes; can cause a round or jagged piece to become stuck in the kidney, ureters or urethra
* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_:** temporary or permanent damage to the kidneys that result in loss of normal kidney function; this leaves waste in the blood and can cause damaged to other organ systems in the body

**How does it work with other body systems?**

* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_:** circulatory system sends blood to the kidneys so they can filter waste out of the blood stream
* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_:** all organ systems would fail if fresh, clean blood was not supplied to them

**Nervous System**

**What is the purpose?**

* Interpret the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Sight, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, smell, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, touch
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to the outside environment
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_: a change in the environment that an organism reacts to (Ex: a loud noise)
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_: the reaction to the stimulus (Ex: you jump)

**What are the parts and their purpose?**

* Central nervous system:
  + Brain: contains 100 billion nerve cells, called neurons; \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (ex: walking, thinking) and involuntary behaviors (ex: heartbeat, blood pressure, posture)
  + Spinal Cord: the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ from the brain to the nerves throughout the body
* Peripheral nervous system:
  + Nerves: nerves that leave the spinal cord and reach to \_\_\_\_\_\_\_\_\_\_\_\_ of the body
* Autonomic nervous system
  + Sounds like \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  + Controls the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, smooth muscles in the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, and glands of the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  + Two main functions is to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and conserve/store energy
  + Different functions are controlled by different structures
  + Cerebellum: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  + Brain Stem: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Voluntary nervous system
  + \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**What can go wrong?**

* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_:** impacts mental functions, such as memory
* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_:** abnormal electrical discharges from brain cells cause seizures
* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_:** the protective lining of the nerves is attacked by the immune system
* **Amyotrophic lateral sclerosis (ALS):** nervous system damage leads to weakened muscles; also called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**How does it work with other body systems?**

* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_:** voluntary nervous system controls muscle movement by sending electrical impulses through neurons
* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_:** autonomic nervous system controls heart rate in the brain stem
* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_:** autonomic nervous system controls breathing in the brain stem
* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_:** autonomic nervous system controls movement of smooth muscle in the digestive tract

**Endocrine System**

**What is the purpose?**

* A collection of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ which produce \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Regulates \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, metabolism, tissue function, sexual function, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, sleep, and mood

**What are the parts?**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_

**What can go wrong?**

* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_:** the body does not break down glucose efficiently due to lack of insulin production
* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_:** when the thyroid under functions; causes drops in body temperature and metabolism; body functions can slow or stop

**Immune System**

**What is the purpose?**

* to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ or other potentially harmful foreign bodies
  + \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ = anything that is not supposed to be in your body

**What are the parts and their purpose?**

* **Lymph nodes:** produce and store \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* **Spleen:** contains white blood cells, regulates the amount of blood in the body, breaks down old blood cells
* **White blood cells:** lymphocytes and leukocytes; \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ invading viruses and bacteria within the body

**What can go wrong?**

* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_:** when the body overreacts to a foreign body, called an “allergen”
* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_:** when the immune system works too much; attacks the organism’s own body tissues; Rheumatoid arthritis, lupus, multiple sclerosis, psoriasis
  + You would see an \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ if you had any of these conditions.

**B-Cells:**

* A \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ blood cell that protects you from future invasions
* Patrols the \_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ systems looking for trouble
* Highlights dangerous \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ with markers called antibodies

**T-Cells:**

* Another \_\_\_\_\_\_\_\_\_\_\_\_\_ blood cell that works in the immune system.
* Trained to kill \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Disease of the T-cells: HIV (AIDS) attacks them

**How does it work with other body systems?**

* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_:** produces white blood cells
* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_:** helps to defend all body systems from foreign bodies