

Match the body system to its function

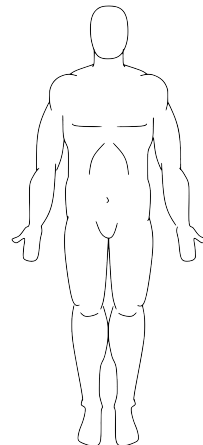
- | | |
|--------------------------|--|
| ___ Nervous System | a. Controls the body through hormones |
| ___ Digestive System | b. Consists of muscles attached to the skeletal system |
| ___ Endocrine System | c. Takes in oxygen and releases carbon dioxide |
| ___ Respiratory System | d. Supports the body and protects internal organs
Composed of bones and joints |
| ___ Circulatory System | e. Responds to internal and external stimuli |
| ___ Muscular System | f. Covers the body and produces vitamin D |
| ___ Skeletal System | g. Breaks down complex materials into smaller/absorbable units |
| ___ Integumentary System | h. Transports materials and blood around the body,
including to and from the cells. |

Why is reproduction NOT a survival need for an individual?

What is the difference between a receptor and an effector?

What is the difference between a positive feedback system and a negative feedback system?

Briefly describe anatomical position



Language of Anatomy

Inferior

Superior

Lateral

Medial

Proximal

Distal

The heart is _____ to the lungs

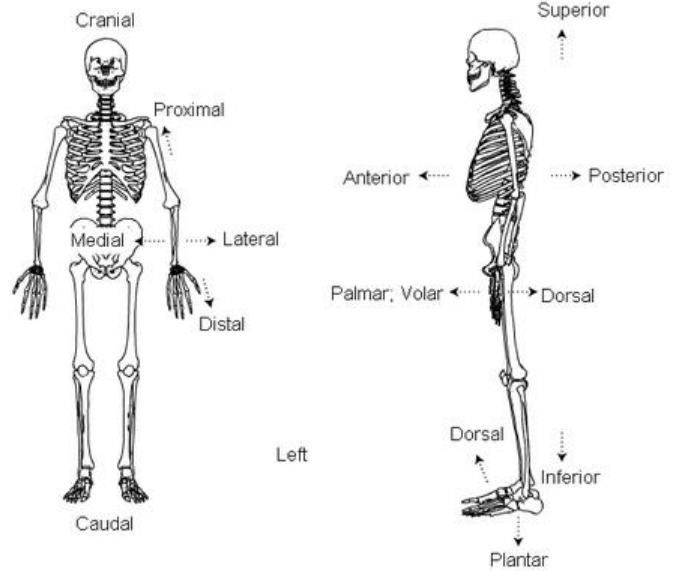
The head is _____ to the feet

The hand is _____ to the elbow

The knee is _____ to the foot

The lungs are _____ to the heart

The pelvis is _____ to the ribs



CELLS and TISSUES

(*Calcium or Iron*) is the element that makes bones hard, while (*Calcium or Iron*) is needed for oxygen transport.

What are some functions of mitochondria?

What happens at the ribosomes?

What is the function of each of the following tissues:

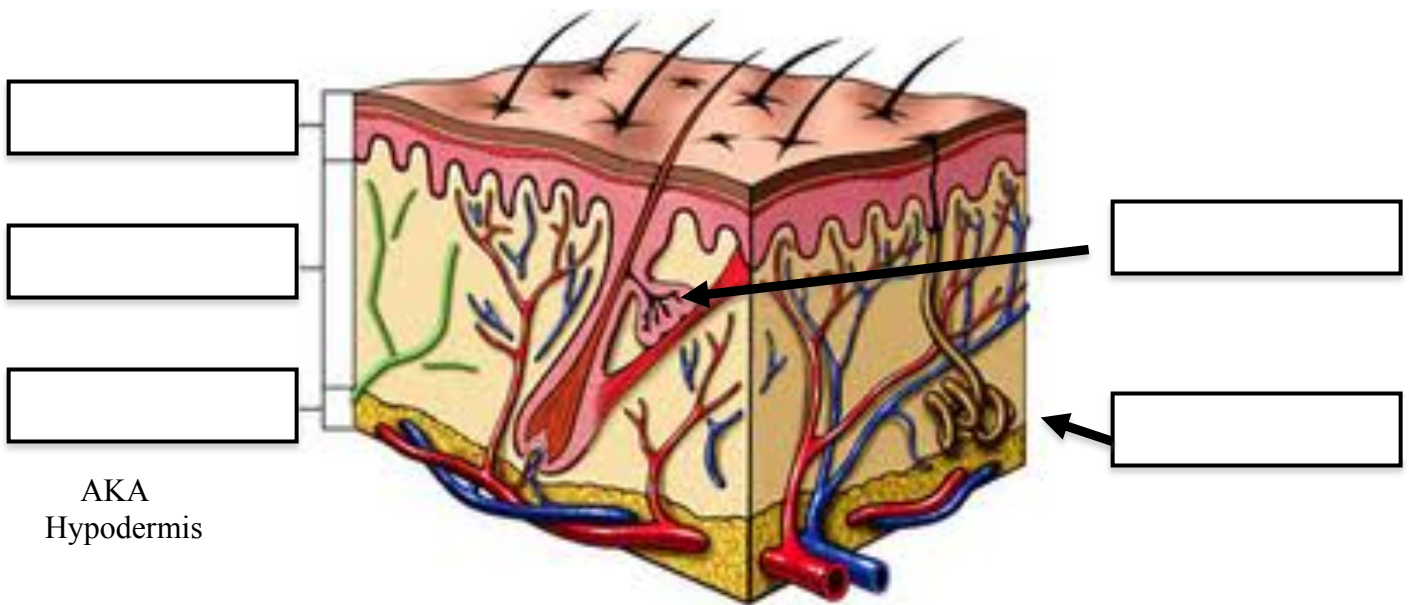
Blood-

Ligament-

Tendons-

SKIN and BODY MEMBRANES

Label the following in this diagram of the skin with the following words:
Sweat Gland, Adipose Tissue, Sebaceous/Oil Gland, Dermis and Epidermis.



Functions of the skin include:

Which vitamin is synthesized by this system?

The skin has many appendages. These include _____,
_____ and _____. Of these appendages, the
_____ glands are found throughout the body except for the palms of the hands
and soles of the feet. _____ glands become more active after puberty. Specific
sweat glands called _____ glands cover your entire body and help regulate body
temperature. _____ is composed of dead keratinized cells.

Sometimes the hairs on the back of your neck “stand up” What causes that?

The skin is composed of two sections, the top layer _____ and the lower layer _____. The top layer is composed of _____ layers with a tough protein called _____ found throughout.

If you spend time in the sun you may see your skin “tan”. What causes the temporary color change in your skin?

What can the top layer of the skin do that the lower level cannot do?

Why does the skin turn red if the body becomes too warm?

What is the difference between a first, second and third degree burn?

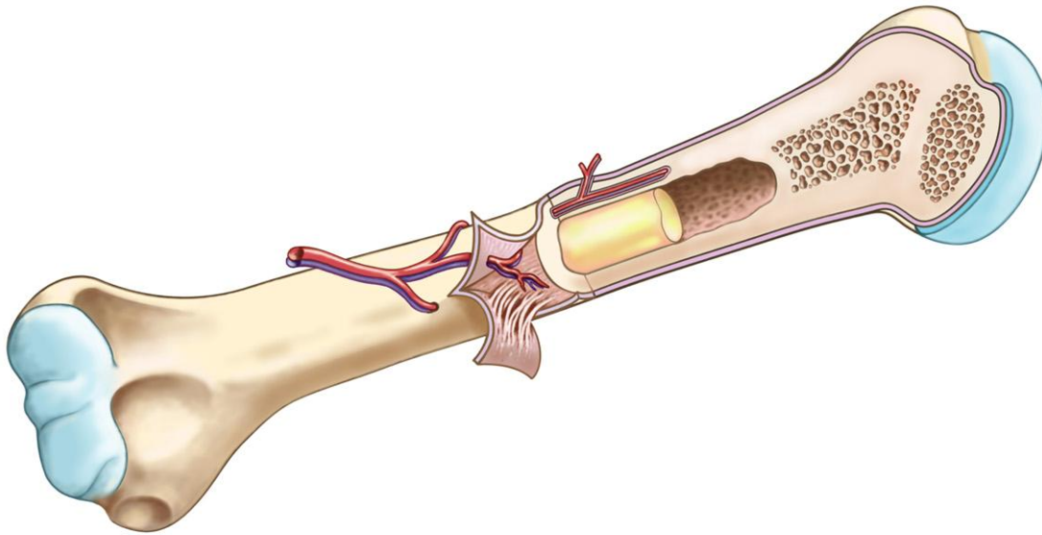
Once skin is burned, how long can it remain sterile?

SKELETAL SYSTEM

What are the functions of the skeletal system?

Label the following words on the diagram of the bone.

**bone marrow, epiphysis, diaphysis, epiphyseal line, spongy bone, periosteum, Sharpey's fibers
articular cartilage and compact bone**



How is the periosteum held to the bone?

Bone formation is otherwise known as?

Osteoblasts

Osteoclasts

What type of cartilage is found at the end of bones and what is its function?

Which two minerals are stored in the bones? _____ and _____

What are some of the functions of red bone marrow?

How do the blood vessels make their way through dense bone?

How many bones are found in the axial skeletal system?

List some of the bones of the axial skeleton.

How many bones make up the appendicular skeletal system?

List some bones of the appendicular skeleton.

List the bones of the arm.

List the bones of the leg.

What is the difference between the pelvic girdle and the pectoral (shoulder) girdle?

List the bones that make up each girdle.

What is the name given to the bones of the fingers and toes?

Correctly match the type of bone to the name of the bone.

Vertebrae _____ a. Long Bones

Skull/Cranium b. Irregular

Wrist/Ankle c. Cubic Bones

Arms/Legs d. Flat Bones

What can be determined in an X-ray if the epiphyseal plate is present?

What can be determined in an X-ray if the epiphyseal line is present?

What is the function of yellow bone marrow?

What is protects the spinal cord?

Name each section and how many bones are in each.

What is another name for the tail bone?

Name the top two vertebrates

What protects the brain?

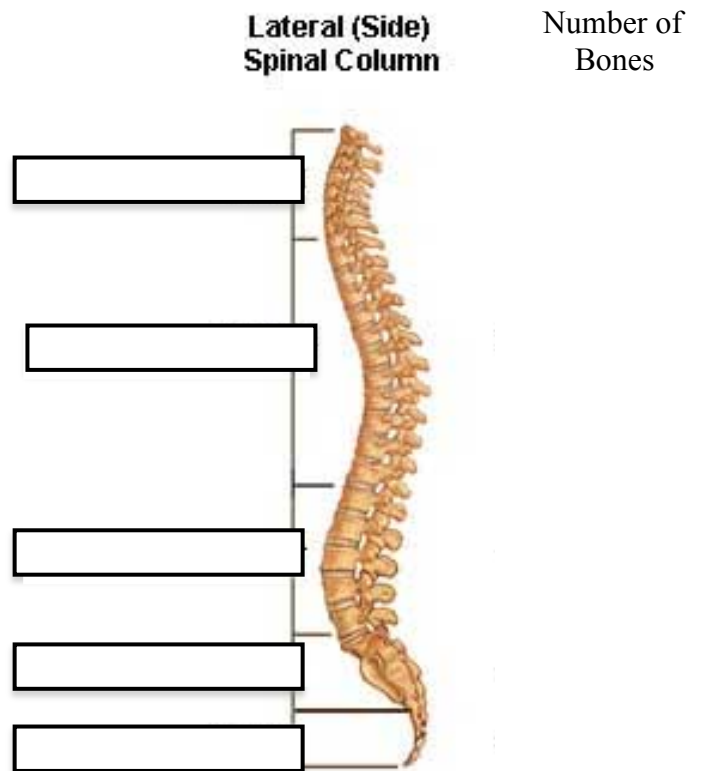
How are the bones of the cranium held together (what type of joints are they)?

True ribs are the ribs that connect directly between the vertebrae and the sternum. How many pairs of true ribs are there?

What does it mean to be a false rib? How many pairs of false ribs are there?

What is a floating rib?

What is the difference between a greenstick fracture and a compound fracture?



CARDIOVASCULAR SYSTEM

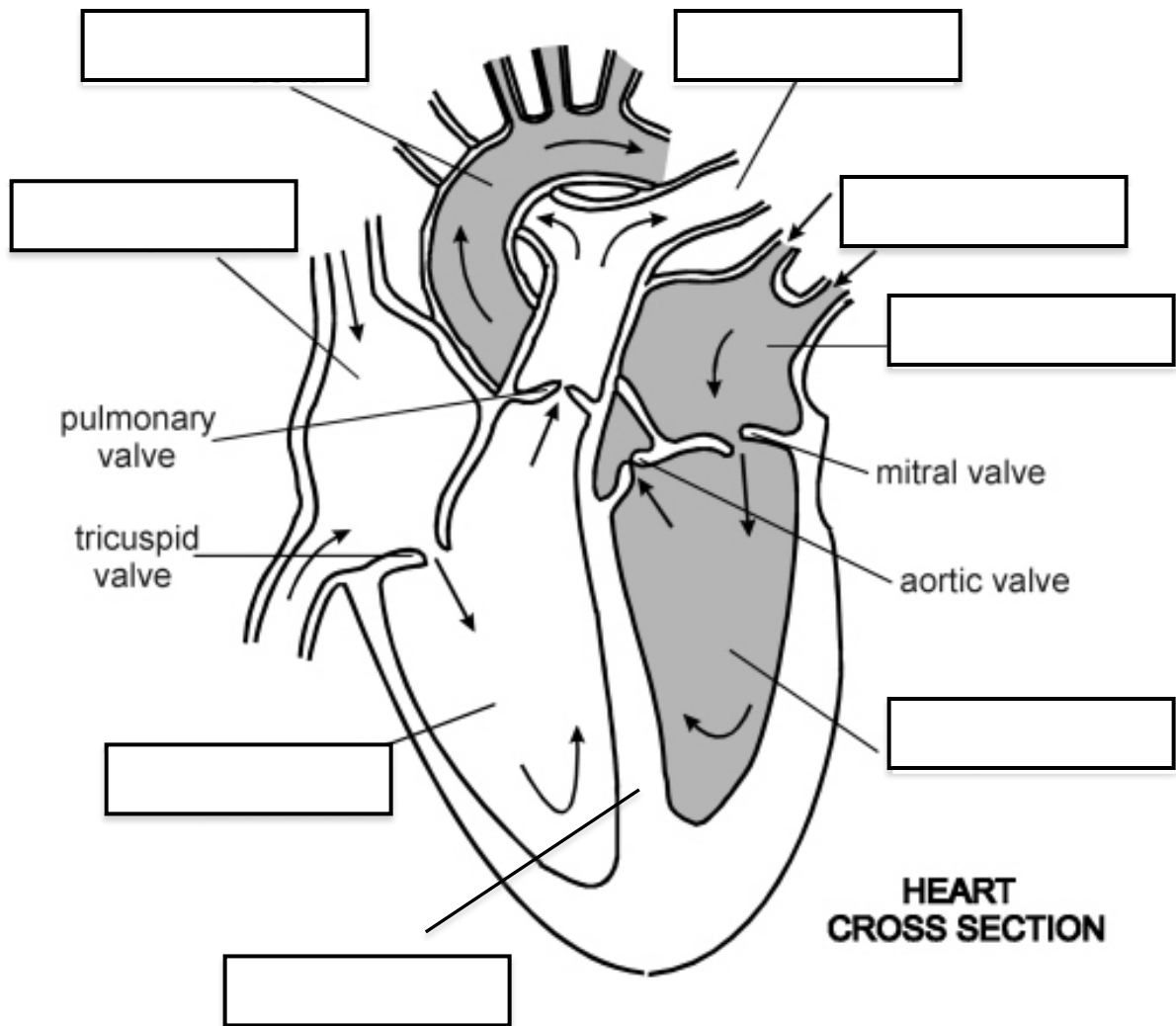
Arteries

Veins

Capillaries

Label the following terms on the diagram below:

Right Ventricle Left Ventricle Aorta Pulmonary Veins
Pulmonary Arteries Left Atrium Septum Right Atrium



Cardiac muscle is ONLY found on in the _____.

The heart itself has an inner, middle and outer layer. The inner layer is called the _____ is super smooth and allows for blood to flow without clotting. The middle layer called the _____ is composed of cardiac muscle. The outer layer is called the _____ and is tough and connective. The heart beats in a fluid filled sac called the _____. The fluid surrounding the heart allows it to beat in a nearly _____ environment.

What is the difference between systemic and pulmonary circulation?

What is the difference between a systemic artery and a coronary artery?

Where do coronary arteries originate?

Which structure separates the left and right ventricle?

Why is the left ventricle thicker than the right ventricle?

What structure prevents back flow in the heart?

Describe the pulmonary vein.

Describe the pulmonary artery.

Briefly describe the flow of blood around the body using words like heart, veins, arteries, arterioles, venules and capillary beds.

Use the list below and state where blood goes next. It comes from THE BODY →

Superior/Inferior Vena Cava → _____ →

Right Ventricle → _____ →

Lungs → _____ → Left Atrium →

Left Ventricle → _____ → THE BODY

How can you increase heart rate?

How can you decrease heart rate?

What is stroke volume?

How can you determine cardiac output?

Describe blood pressure in terms of systolic and diastolic pressure.

How can blood pressure be written?

NERVOUS SYSTEM

Label the following on the diagram:

Dendrite

Axon

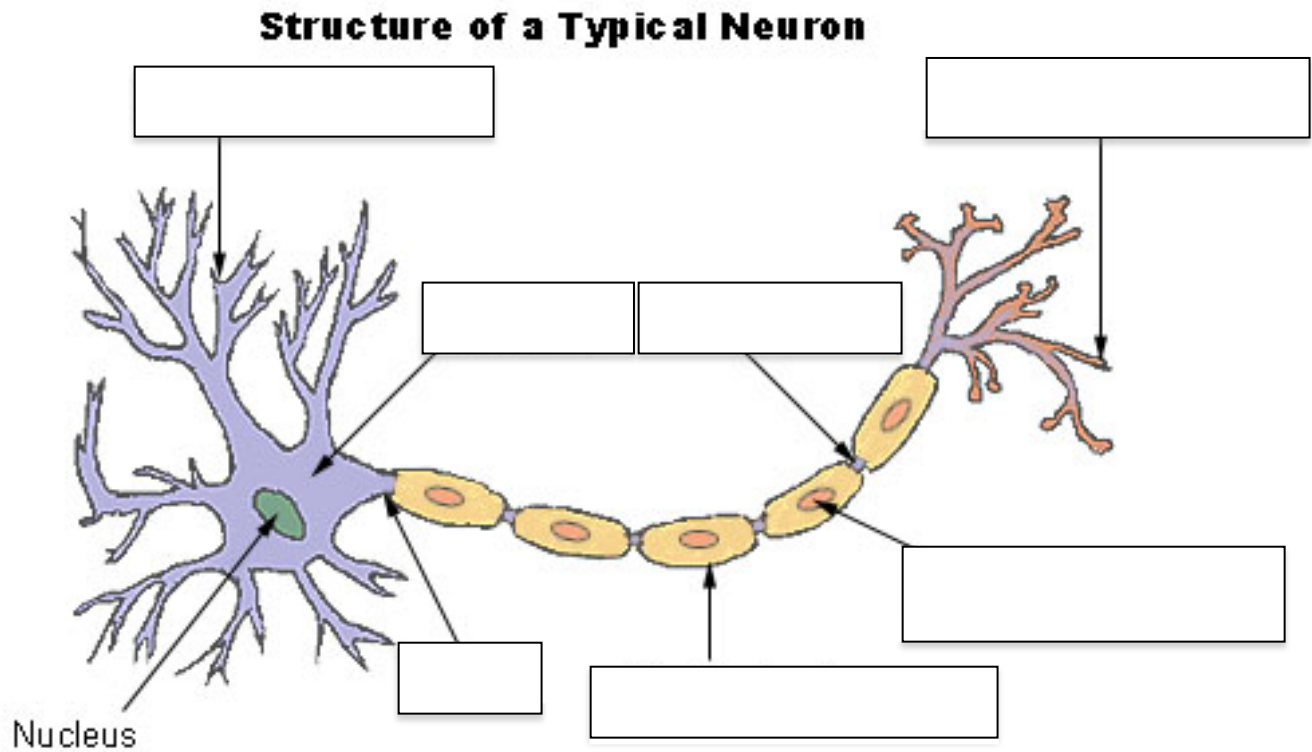
Schwann Cell

Cell Body

Nodes of Ranvier

Axon Terminal

Myelin Sheath



What is the function of the Schwann Cells? What is another name for the covering of Schwann Cells? Be sure to include the word action potential in your answer.

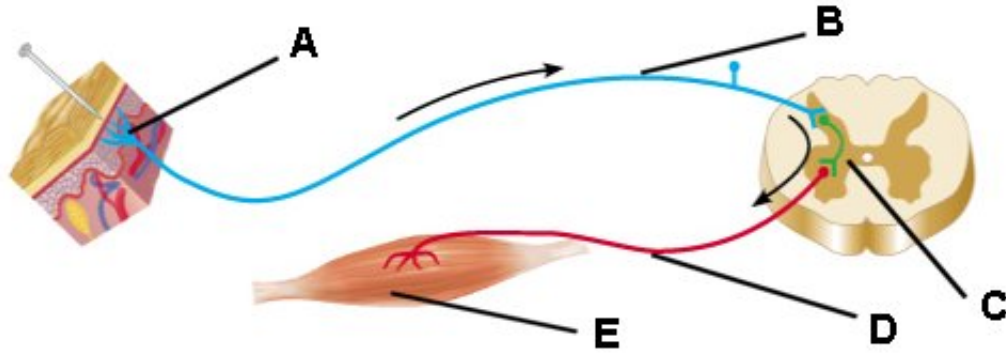
How does the signal in one nerve cell get to another nerve cell?

Describe myelin and what its function is.

Describe cerebrospinal fluid and where it is produced.

Describe Broca's area.

What is the difference between the central nervous system and the peripheral nervous system?



Afferent Pathway _____ Effector _____ Efferent Pathway _____

Interneuron _____ Receptor _____

List the steps in a reflex arc.

MUSCULAR SYSTEM

What are the functions of the muscular system?

Describe a smooth muscle cell.

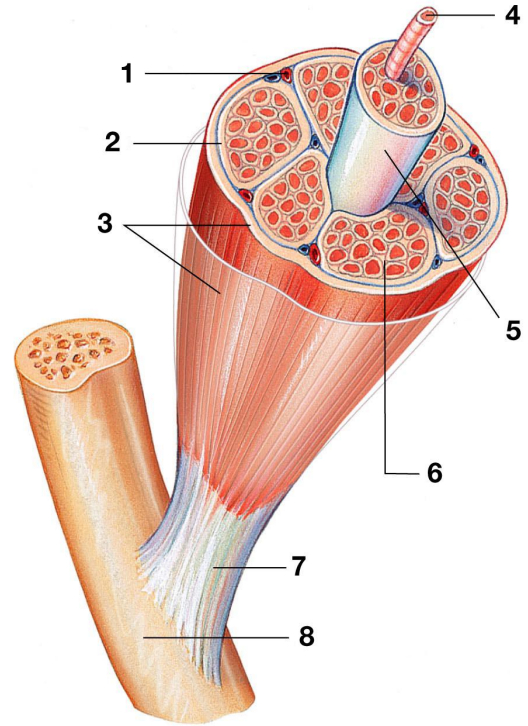
Describe a cardiac muscle cell.

Describe a skeletal muscle cell.

What happens to your blood vessels when you exercise?

Use the diagram to the right

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____



What are individual muscle cells surrounded by?

What is a group of muscle cells bound by the perimysium called?

What is acetyl choline and how does it propagate the muscle contraction and where can it be found?

What generates the mechanical force for a muscle contraction? HINT-These two filaments will form a cross-bridge.

Describe an isotonic contraction vs. an isometric contraction. Give an example of each.

Describe a motor unit and sketch one.

Muscle contractions can occur for hours if the mitochondria are supplied with enough glucose and oxygen to produce ATP. This process is called _____. If your muscle are still working and no oxygen is present, they will move into _____ and produce _____. This will cause pain and soreness tomorrow.