

TERMINOLOGY

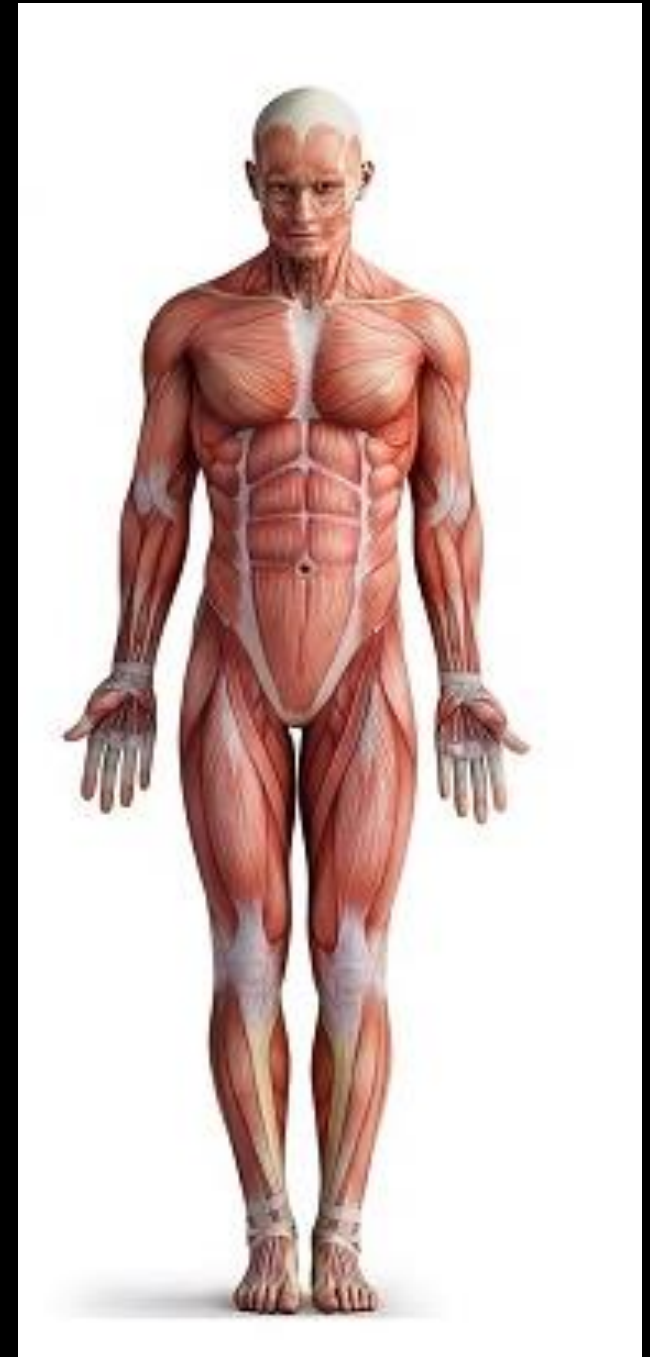
ANATOMY DEFINED

- **Anatomy**
 - the study of structure and the relationships among structures.
- Subdivisions
 - surface anatomy, gross anatomy, radiological anatomy, embryology, cytology, histology and pathological anatomy

anatomical position

- **body erect; head, eyes, toes directed forward; upper limbs at the side of the body, with palms directed forward**

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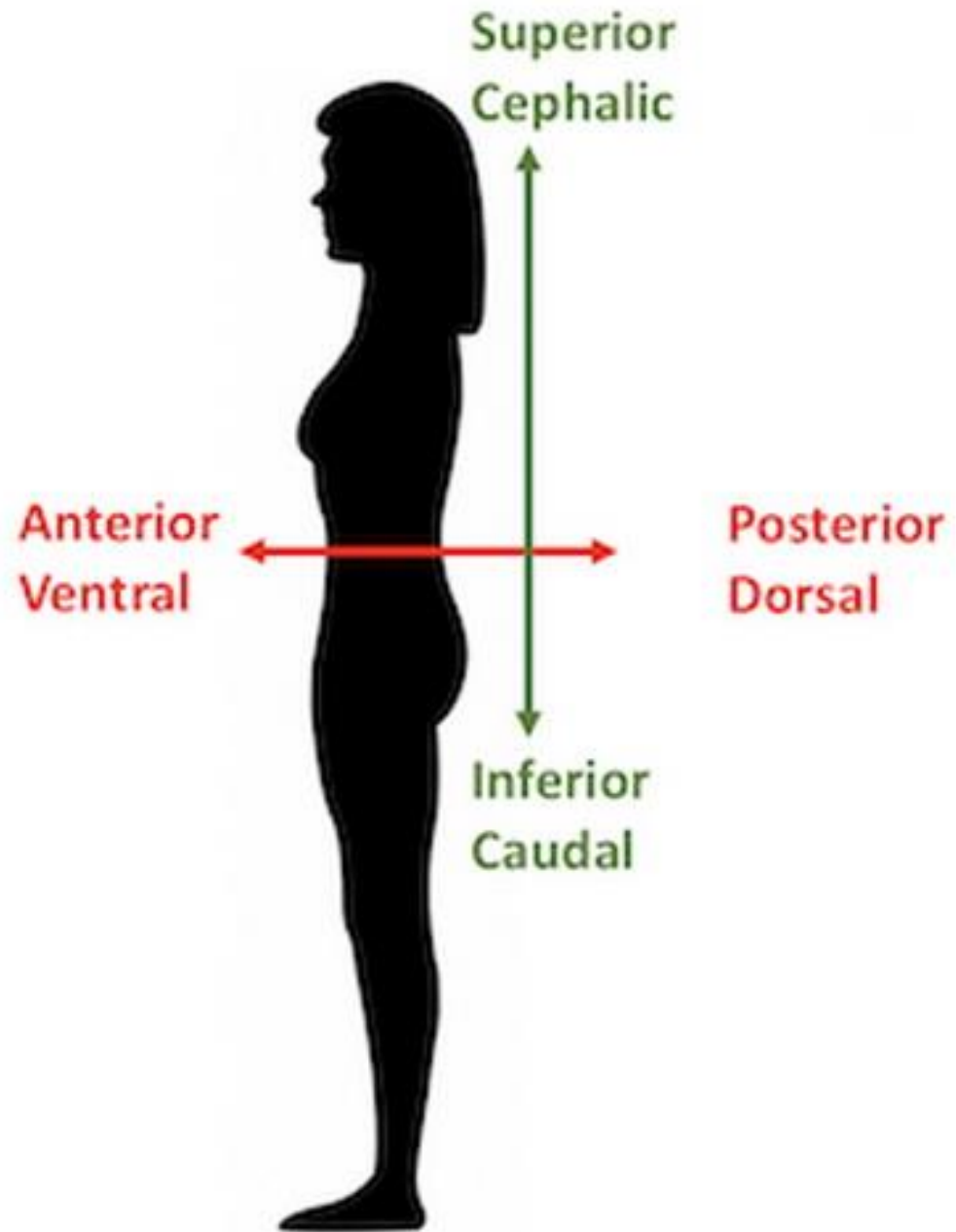
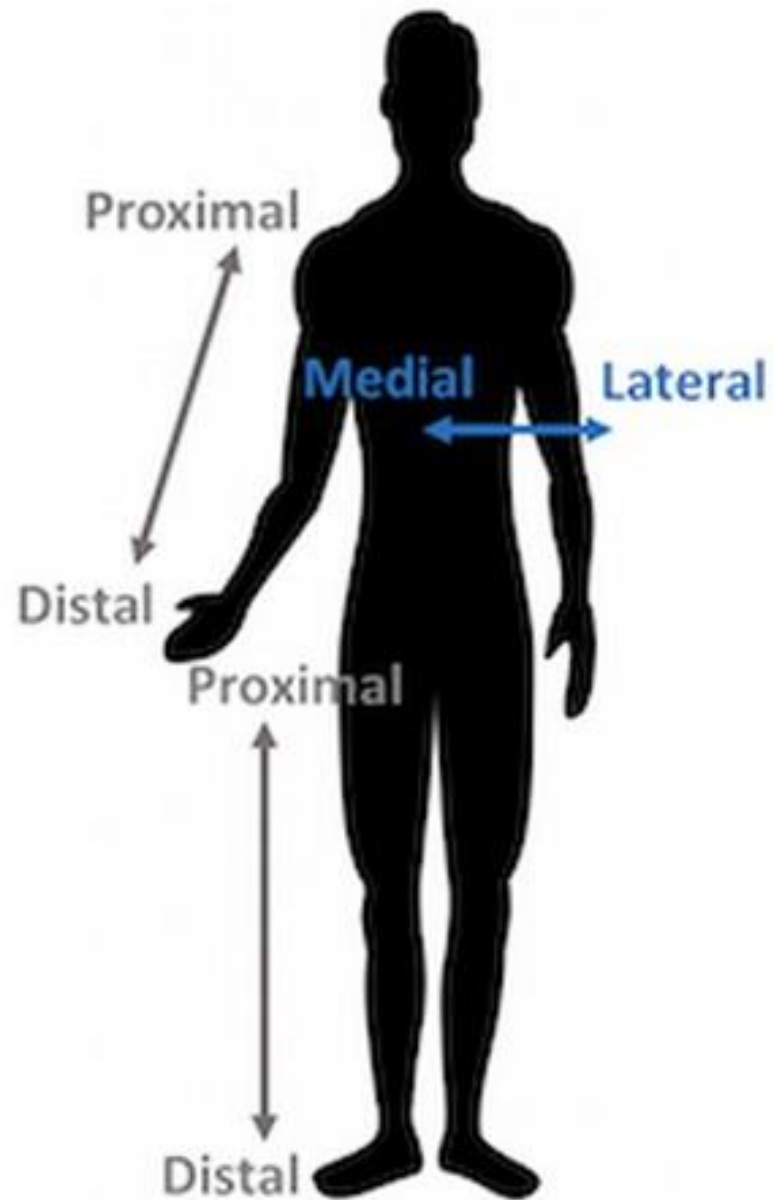


DIRECTIONAL TERMS

- Directional terms are used to precisely locate one part of the body relative to another and to reduce length of explanations.

- 1. medial - nearer or towards the median plane**
- 2. lateral - further from the median plane**
- 3. anterior or ventral - nearer to the front of the body**
- 4. posterior or dorsal - nearer to the back of the body**
- 5. superior or cephalic - nearer to the top of the head**
- 6. inferior or caudal - nearer to the bottom of the feet**
- 7. superficial - towards the surface of an organ or the body**
- 8. deep - towards the center of an organ or the body**
- 9. proximal - nearer the point of origin or attachment**
- 10. distal - further from the point of origin or attachment**

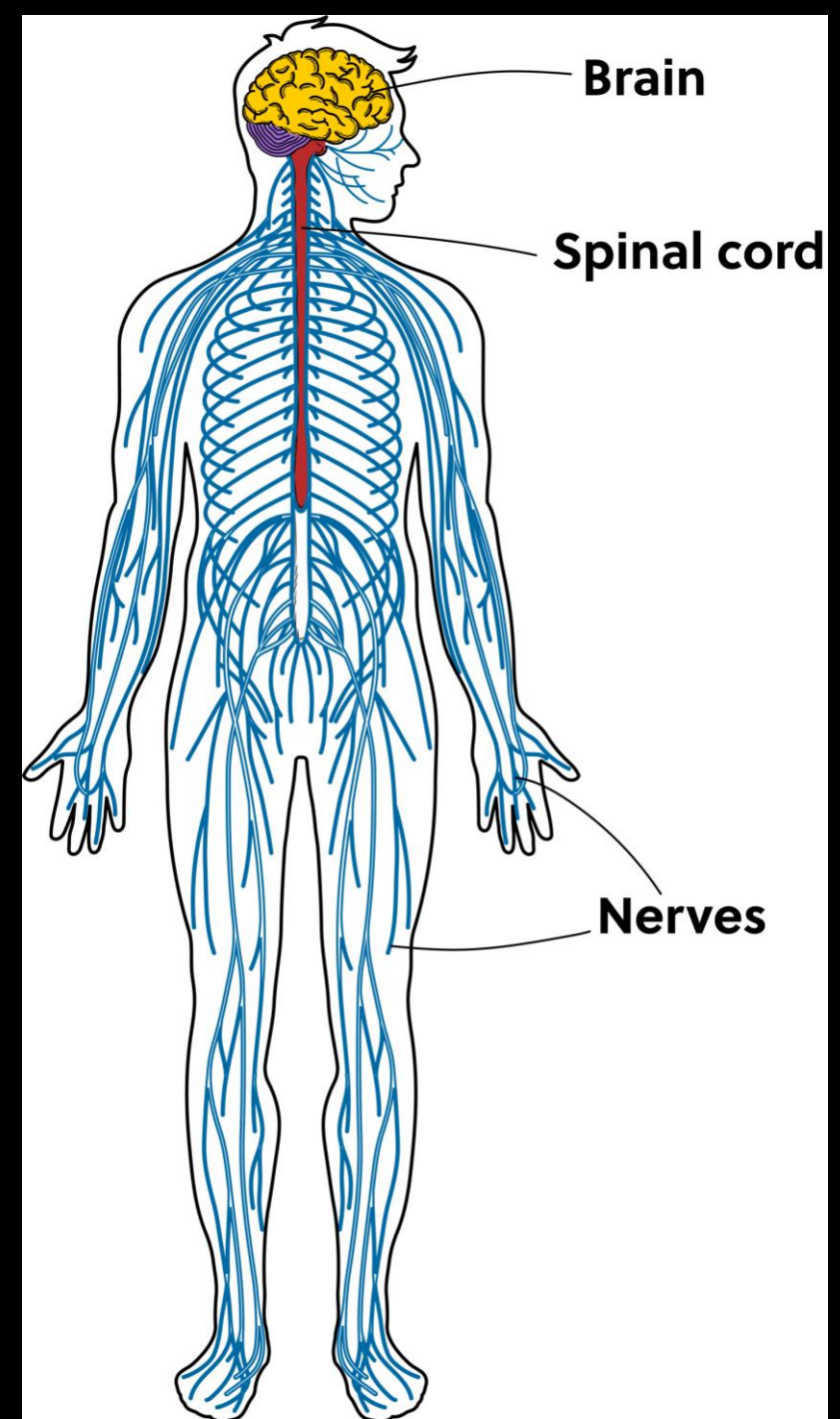
DIRECTIONS



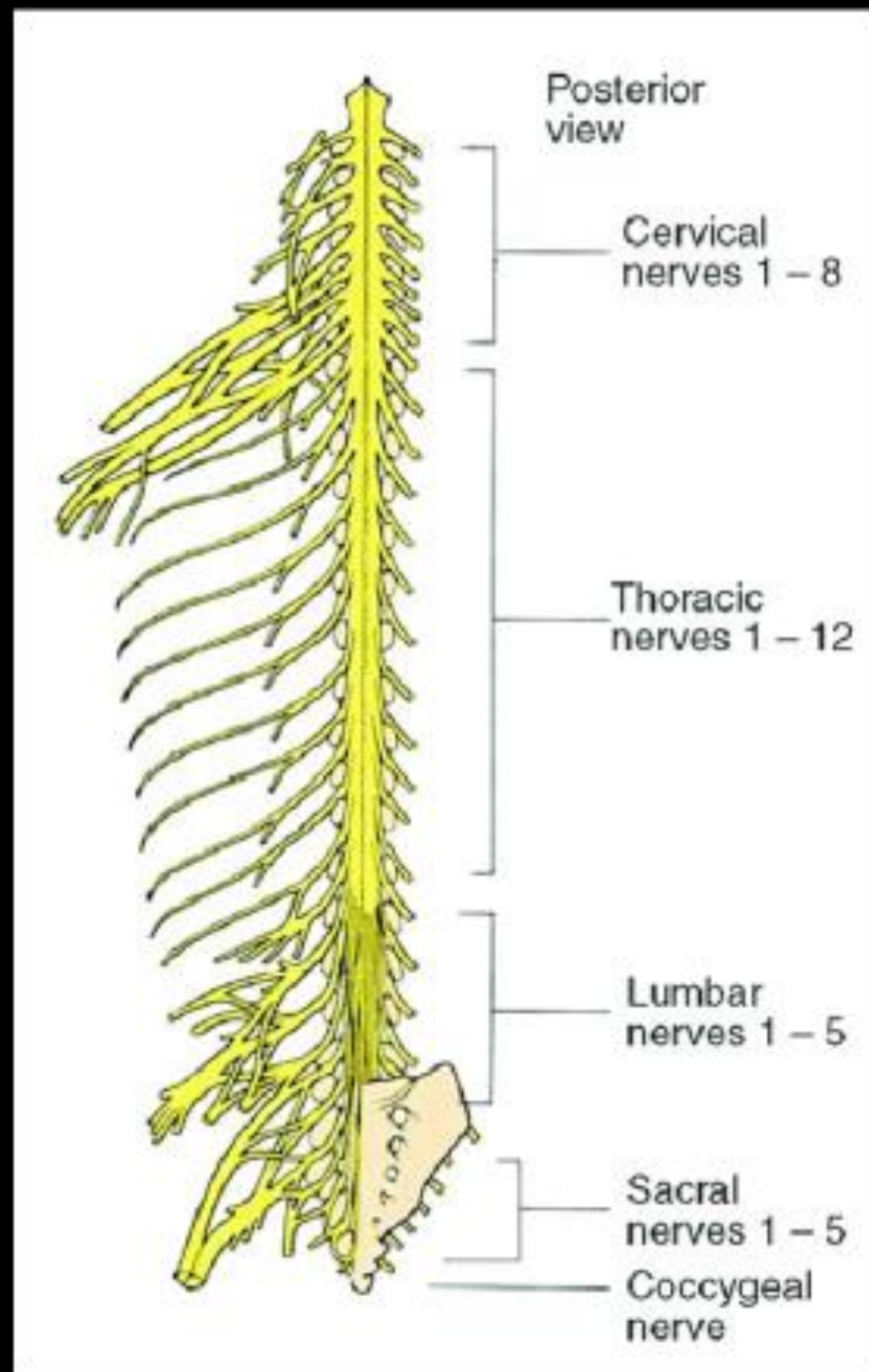
Nervous system

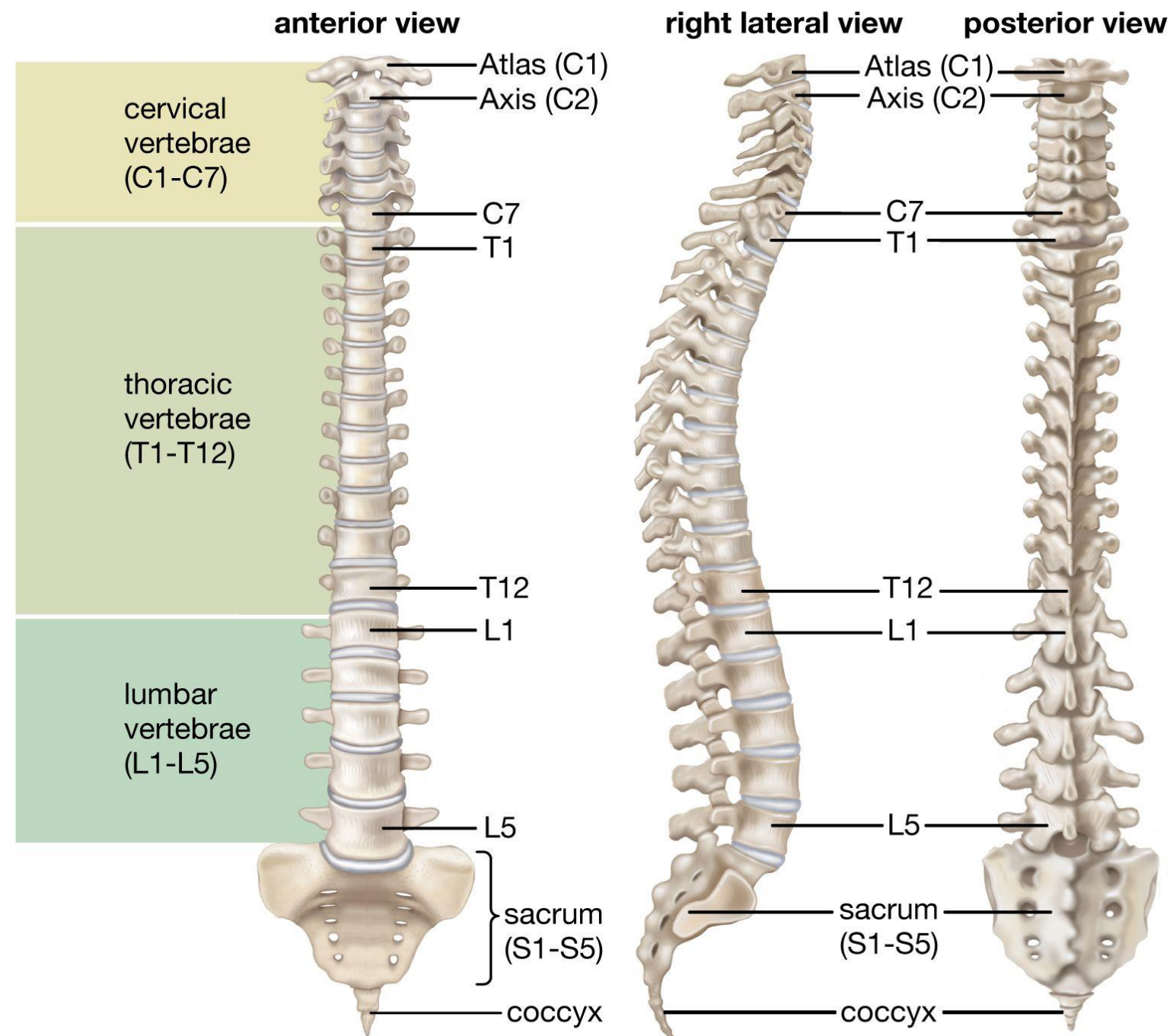
- **Peripheral nervous system**
- **Central nervous system**

Peripheral part composed of 12 pairs cranial and 31 pairs spinal nerves. The peripheral nervous system is divided into the somatic nervous system and the autonomic nervous system.

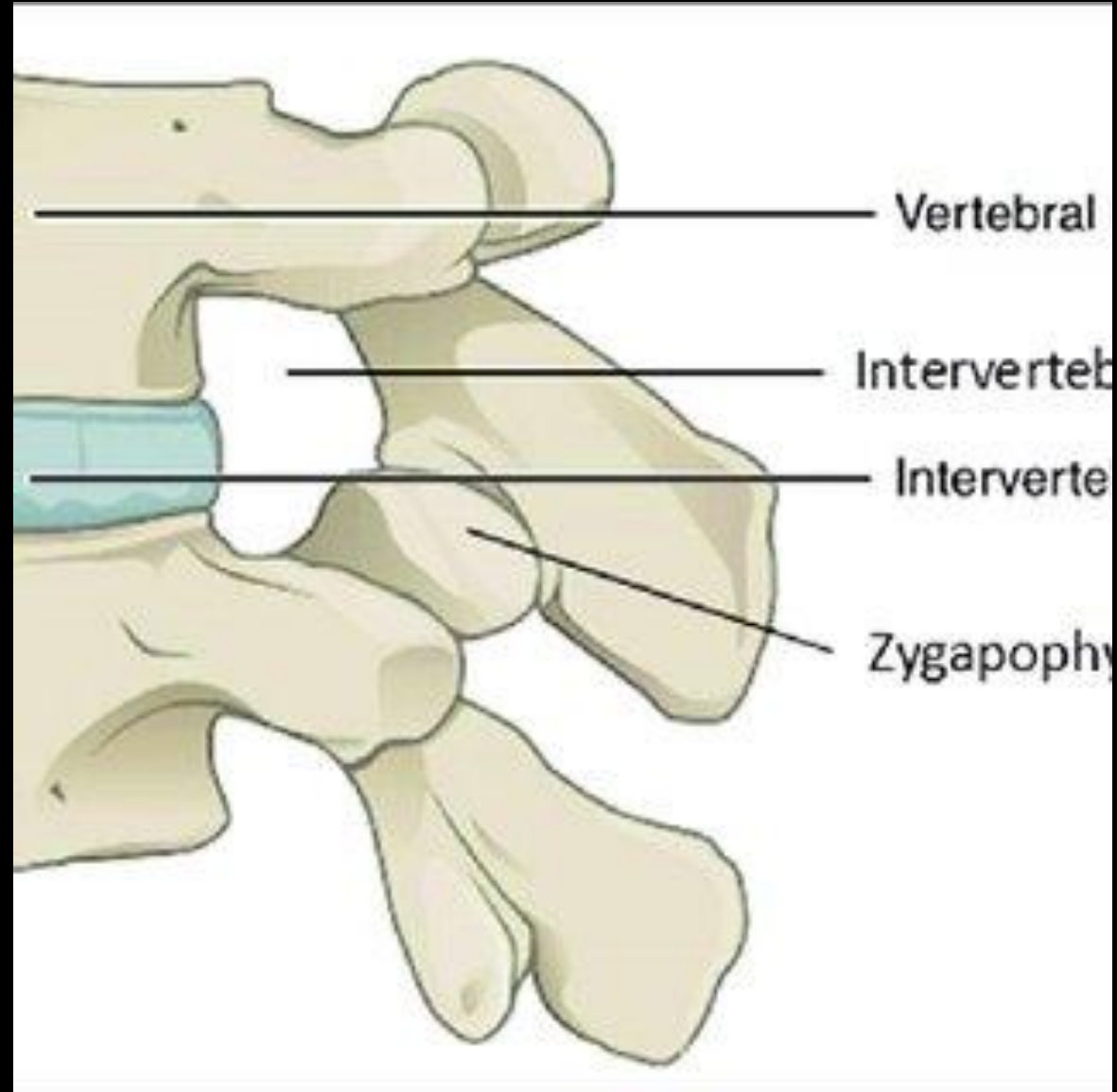


Spinal nerves

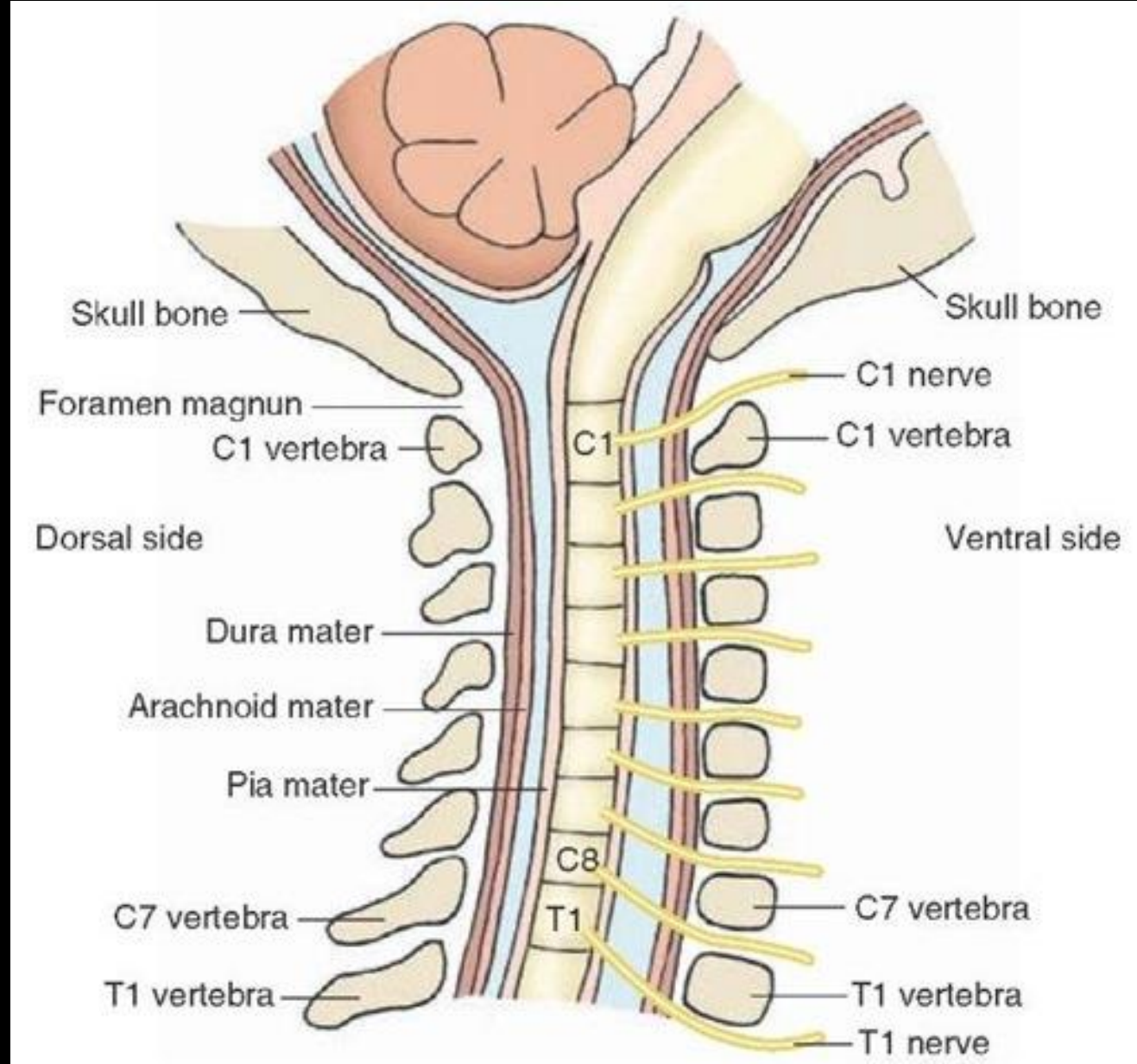




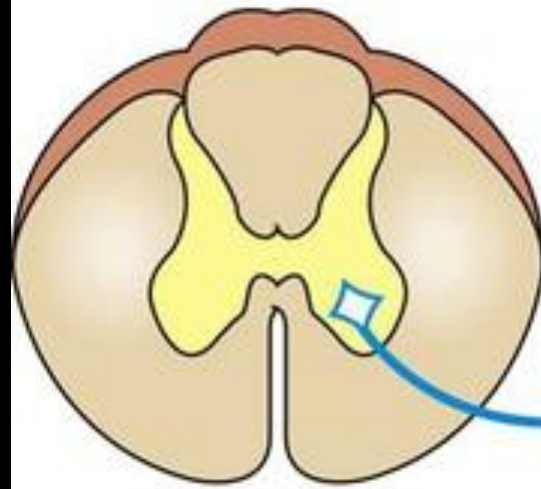
Intervertebral foramen



exit of spinal nerves from the vertebral column



Central nervous system



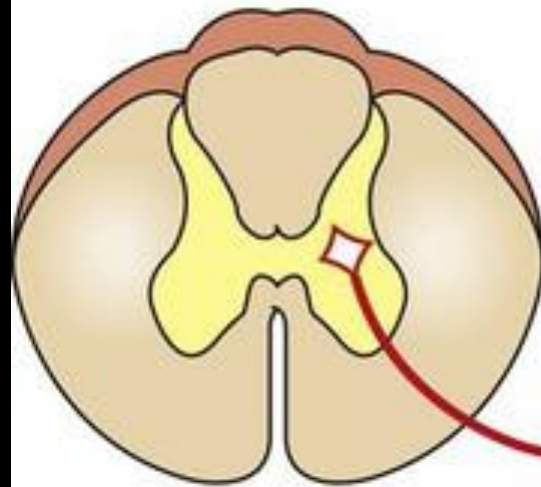
1 motor neuron

Somatic nervous system



Skeletal muscle

Central nervous system



2-neuron system

Preganglionic



Ganglion

Postganglionic



Smooth muscle

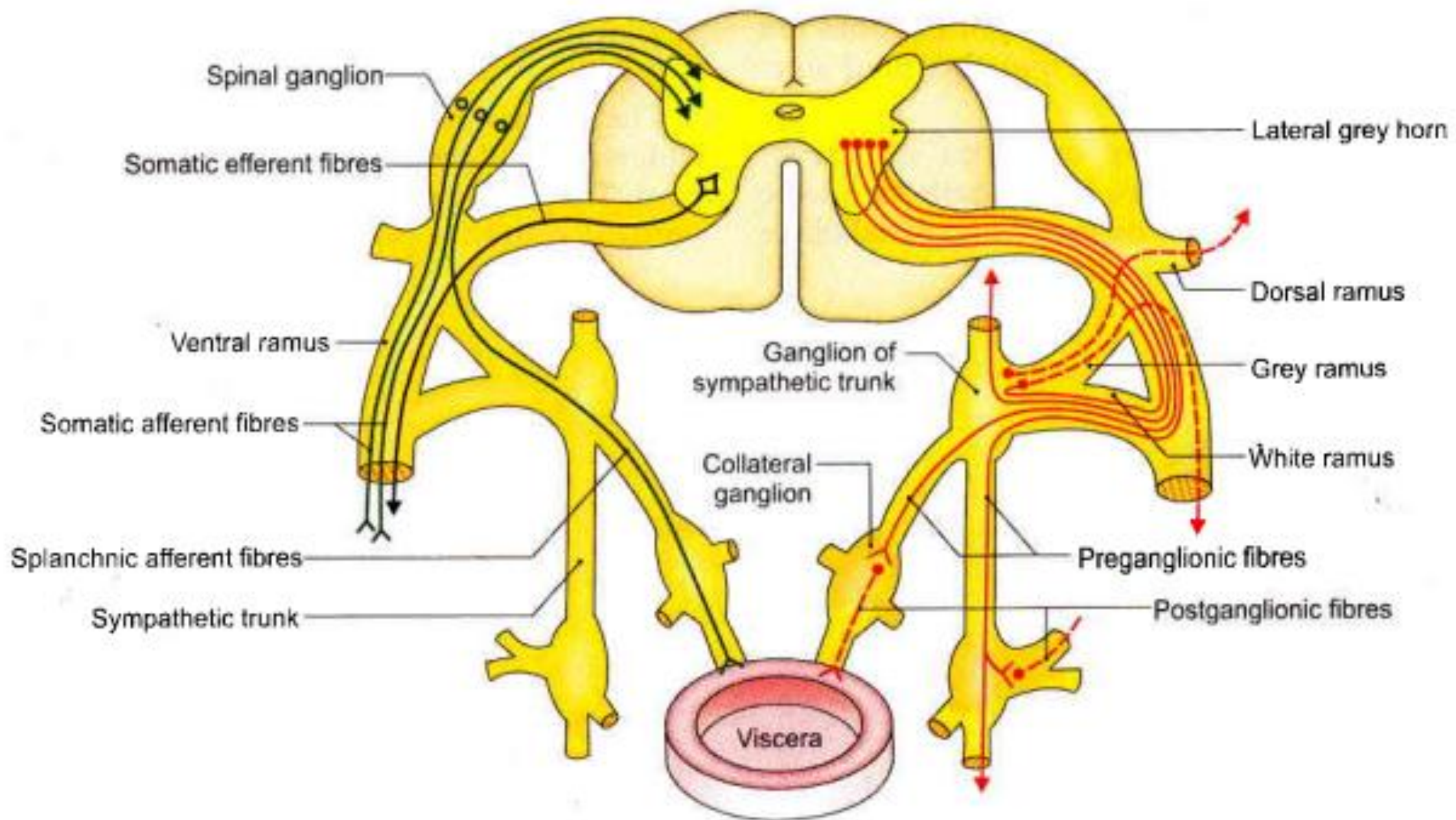


Cardiac muscle

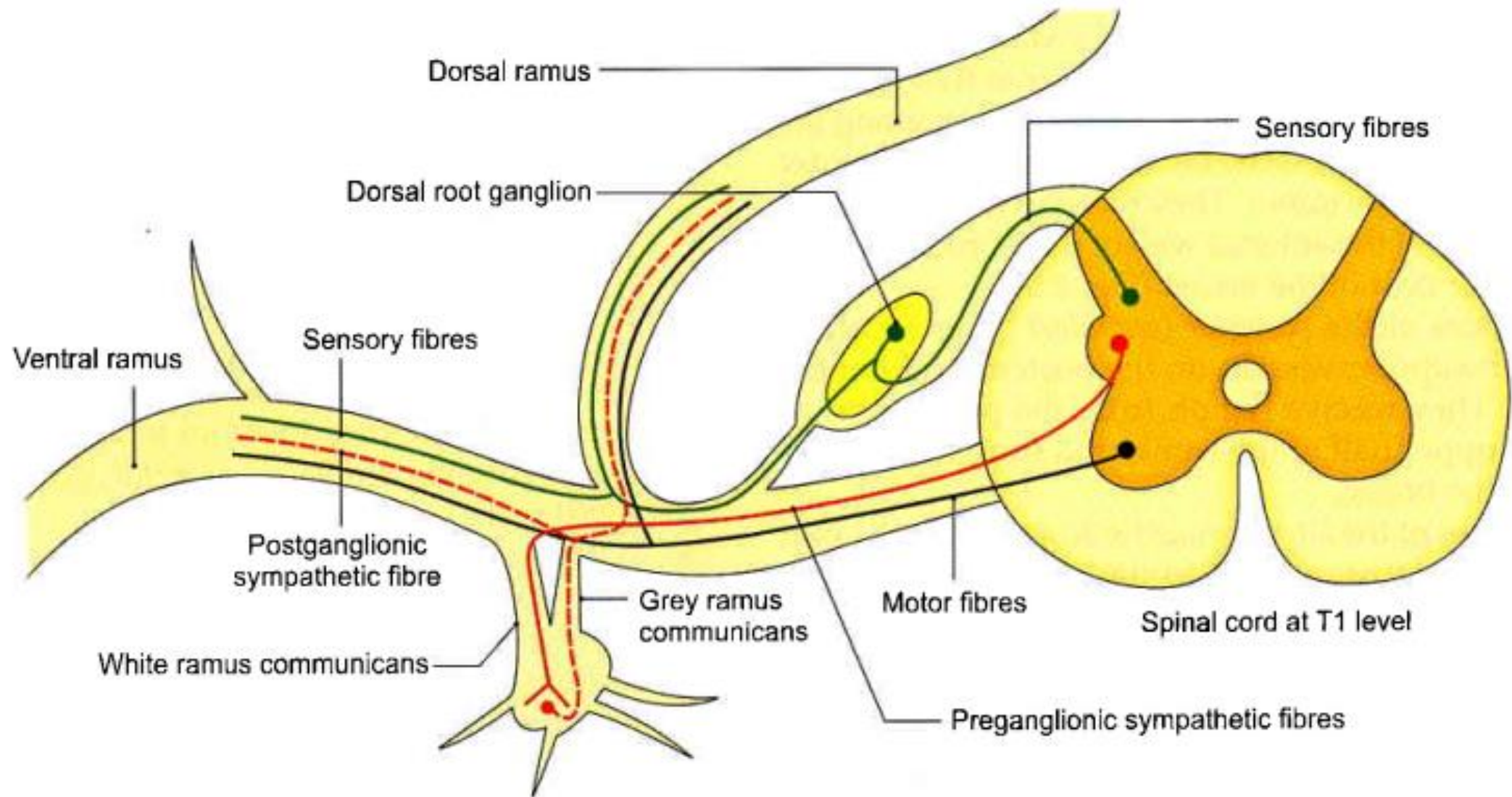


Glands

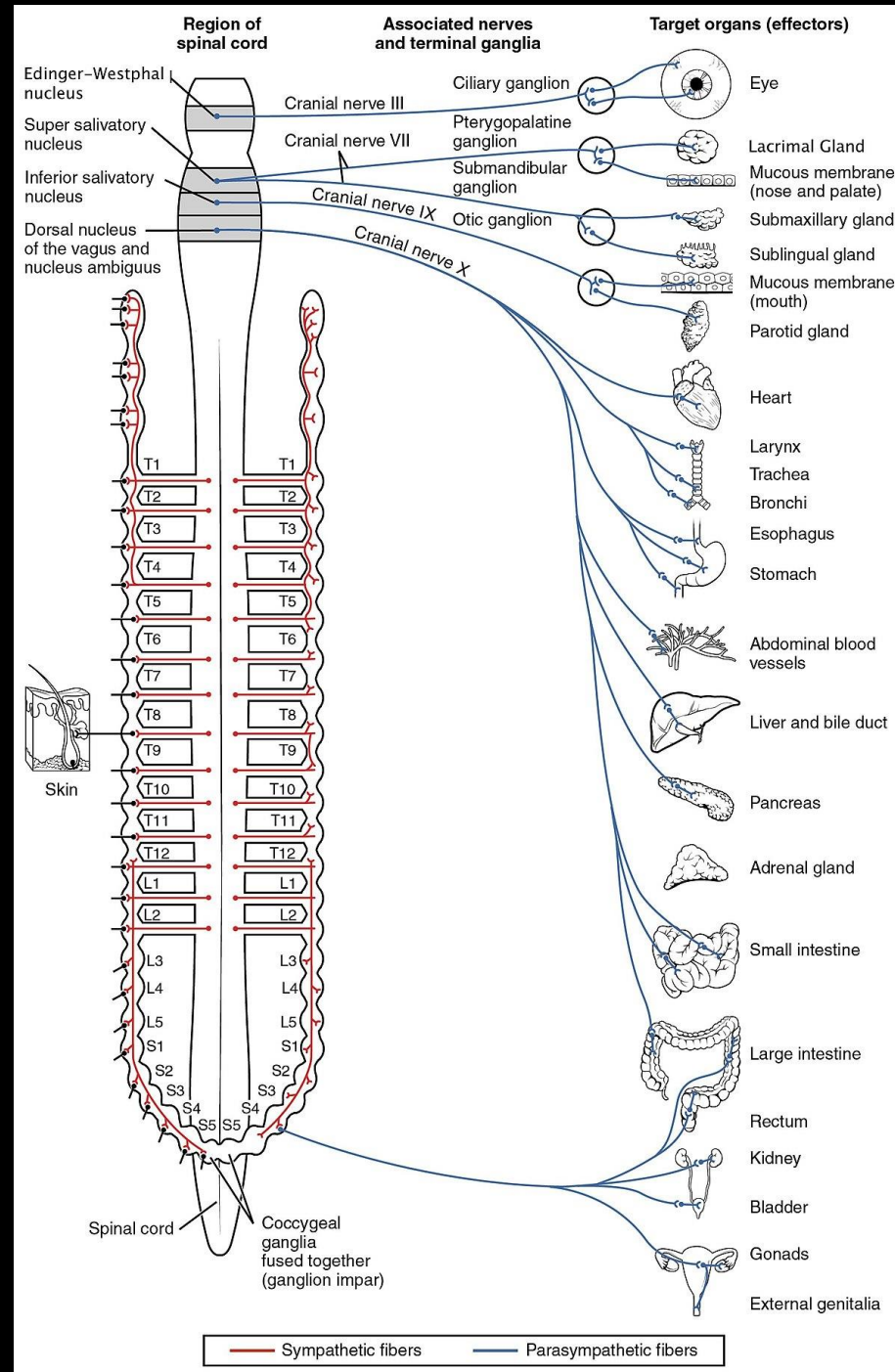
Autonomic nervous system



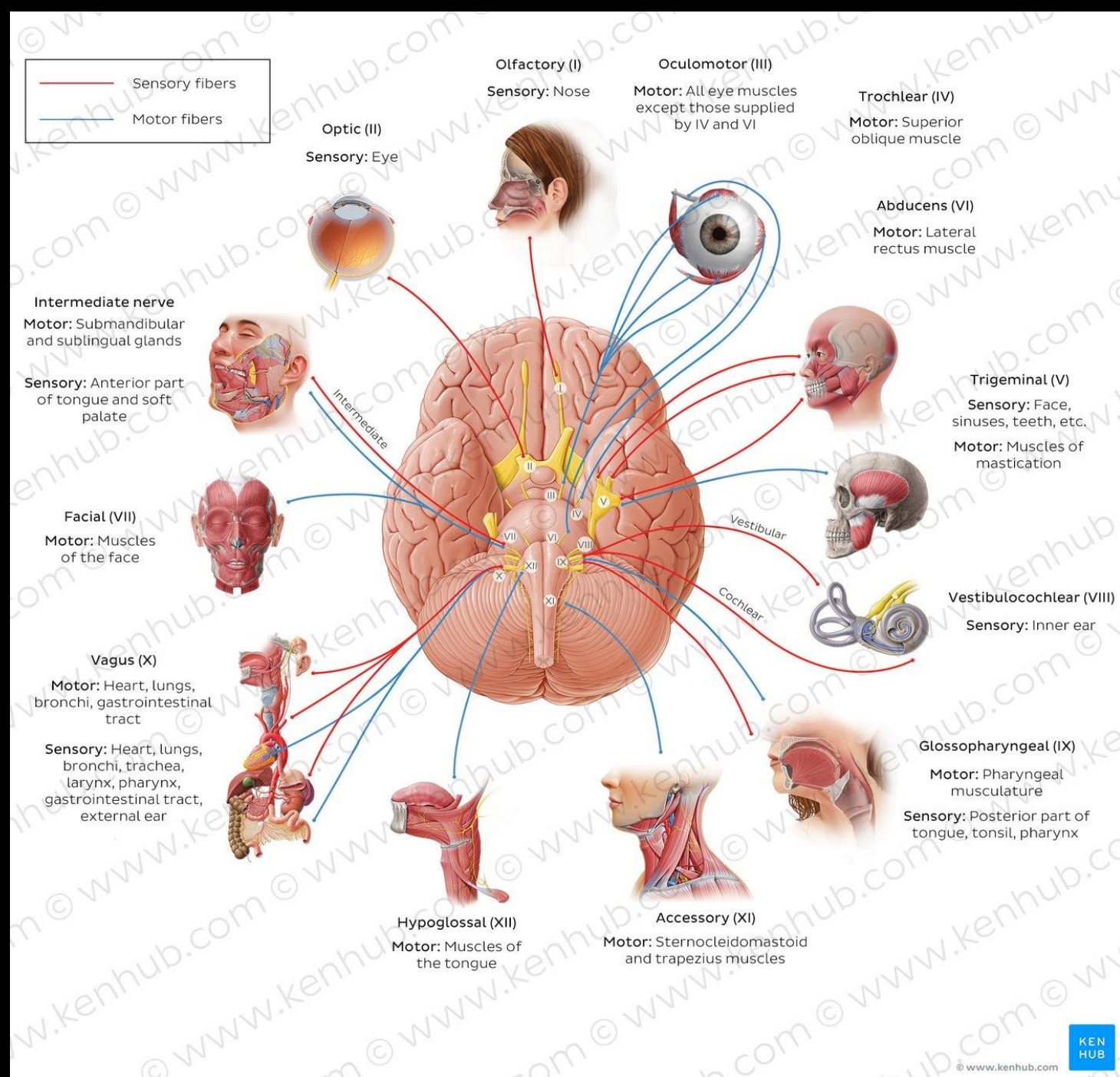
Functional components of spinal nerves

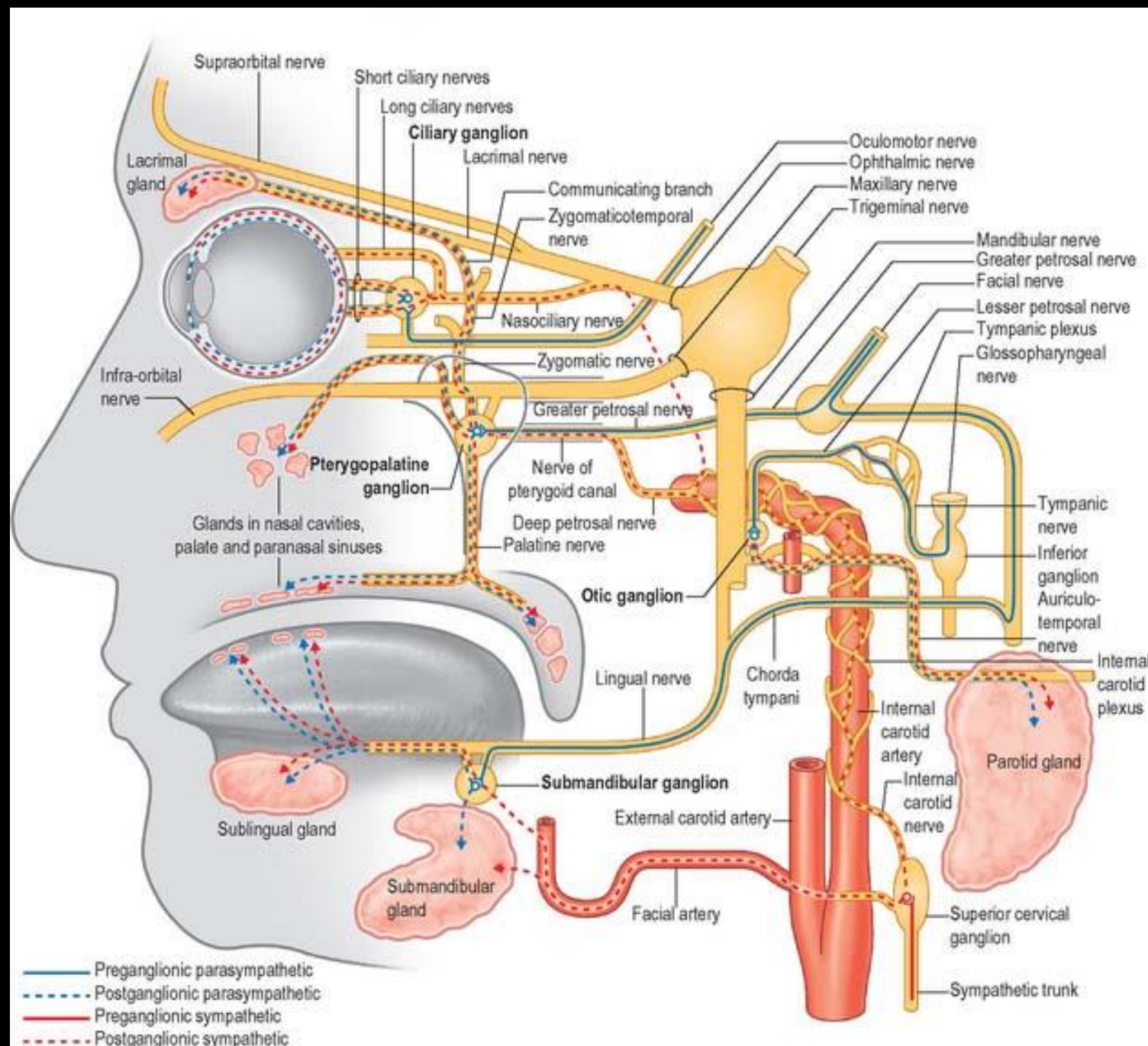


The visceral nervous system



Cranial nerves





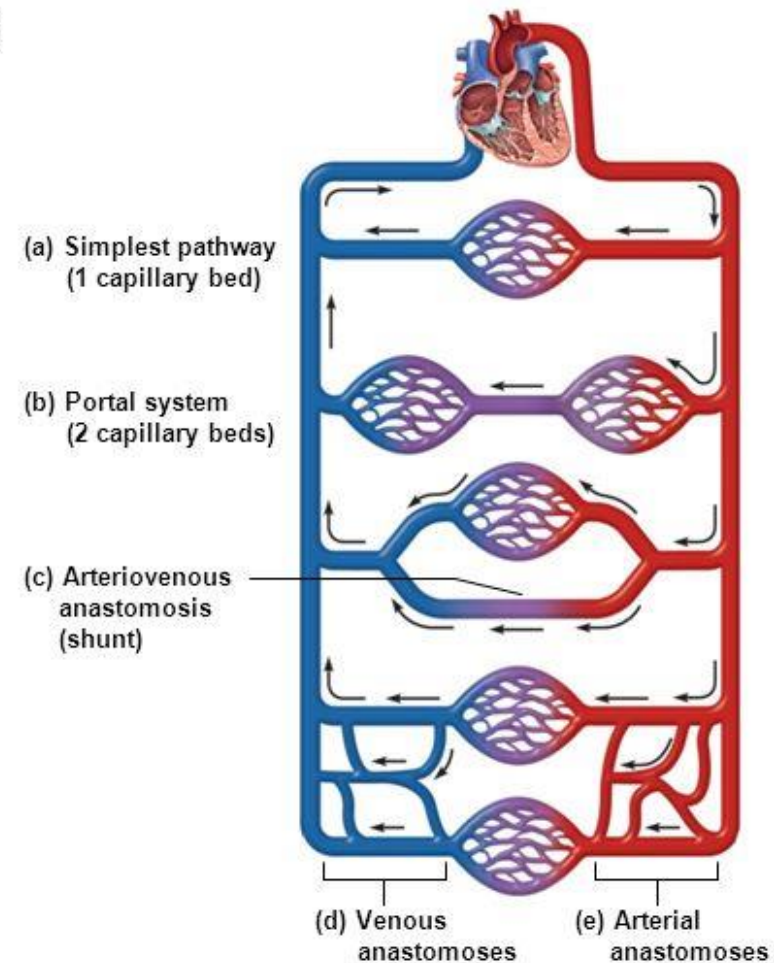
Anastomosis

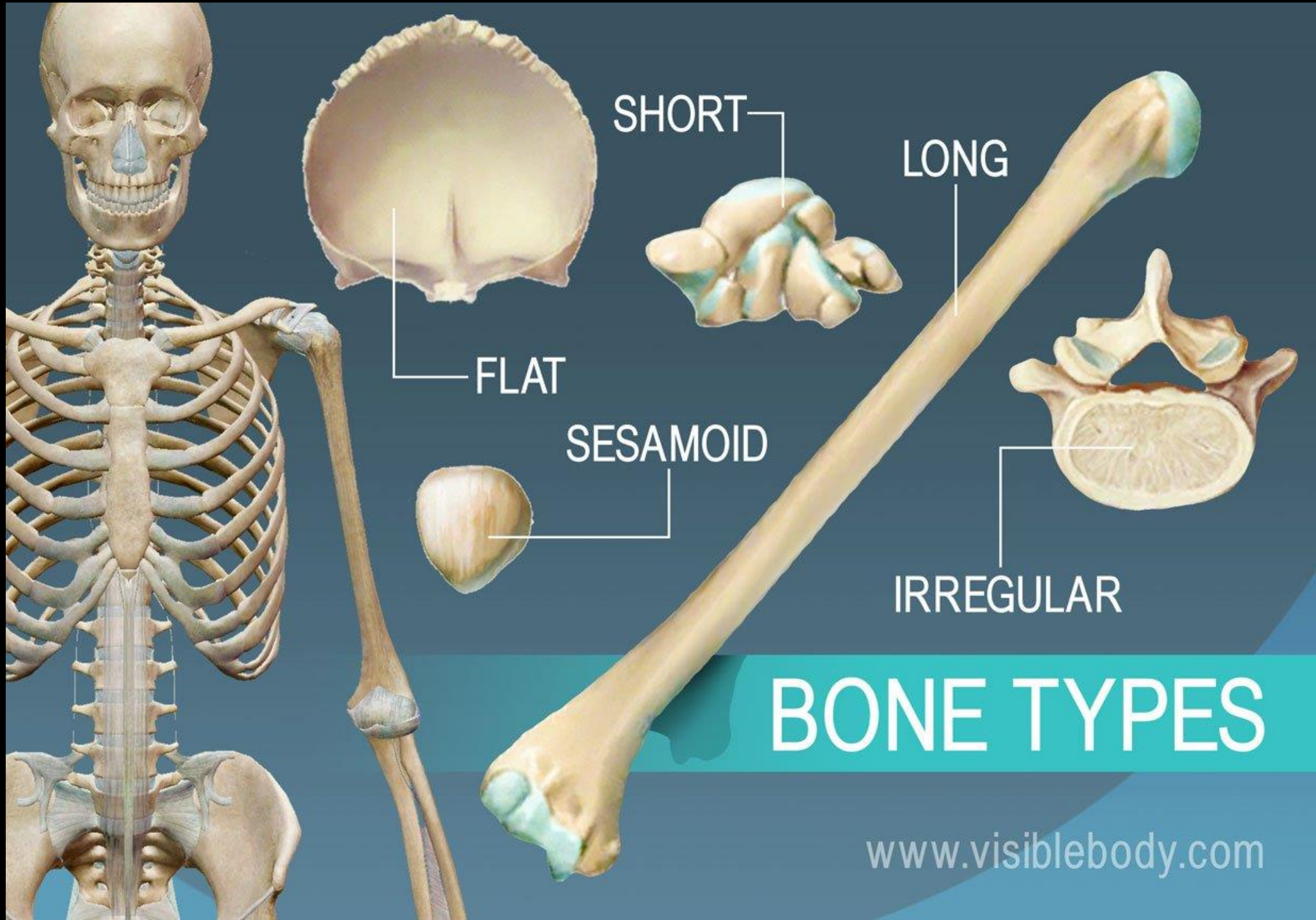
- The circulatory anastomosis is further divided into arterial and venous anastomosis. Arterial anastomosis includes actual arterial anastomosis and potential arterial anastomosis.

Anastomoses

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- anastomosis – the point where two blood vessels merge
- arteriovenous anastomosis (shunt)
 - artery flows directly into vein bypassing capillaries
- venous anastomosis
 - most common
 - one vein empties directly into another
- arterial anastomosis
 - two arteries merge
 - provides collateral (alternative) routes of blood supply to a tissue
 - coronary circulation

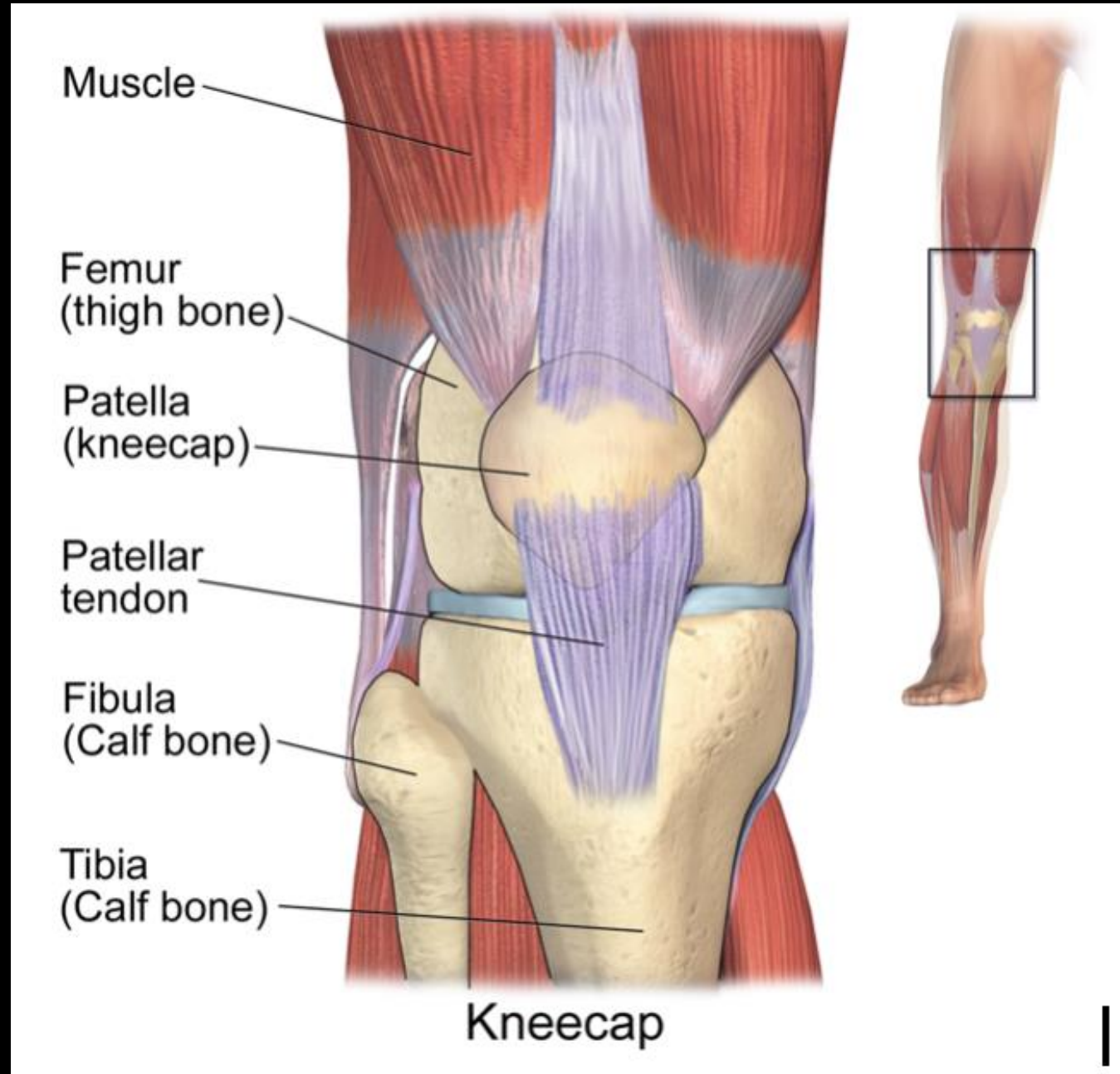




BONE TYPES

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sesamoid - bones which develop within a tendon; patella, pisiform

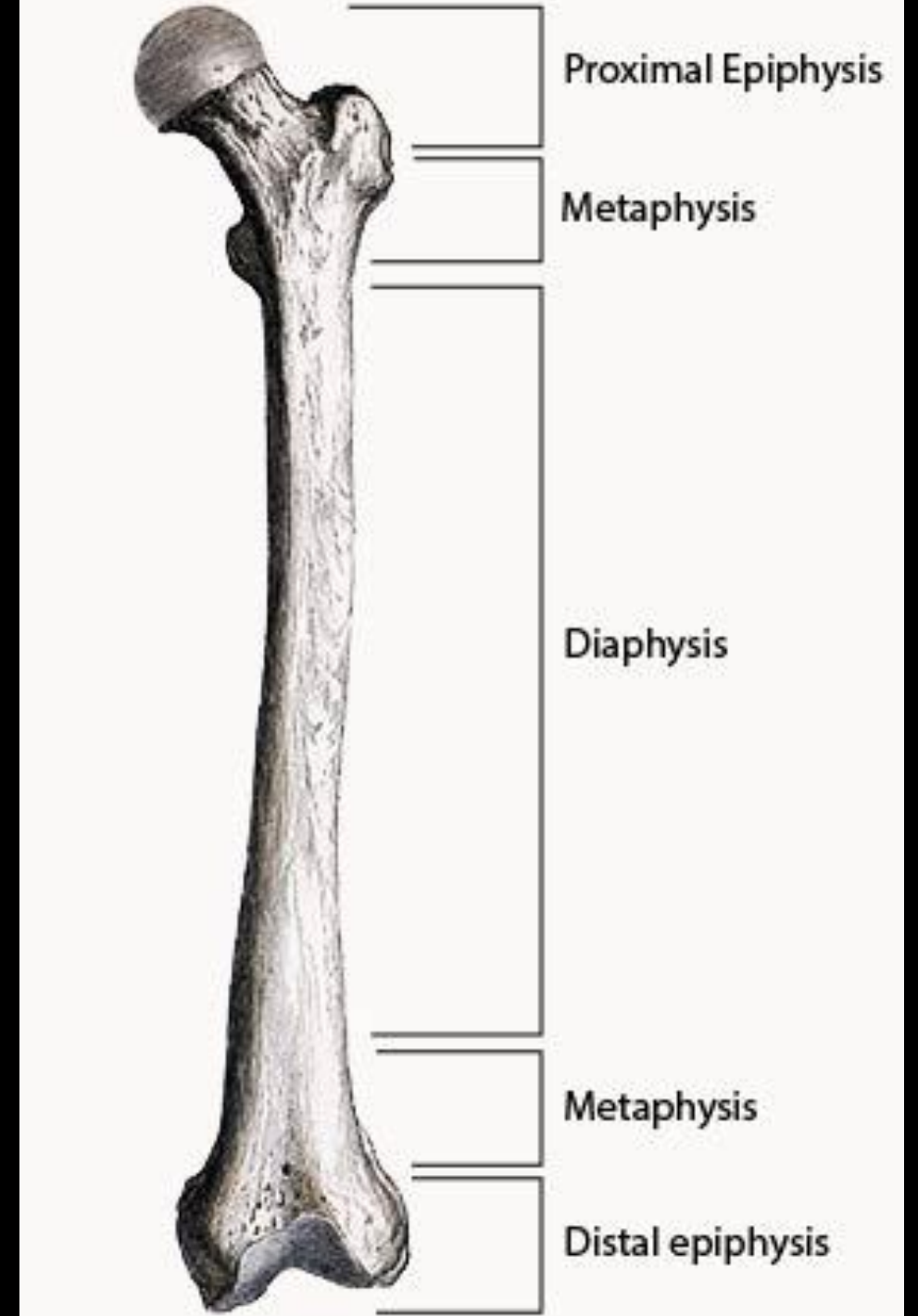


A. long bones - bones whose lengths are greater than their breadths; found in the extremities

1] diaphysis - shaft

2] metaphysis - part of diaphysis nearest to ossification center

3] epiphysis - secondary ossification center at the ends of bone





nb

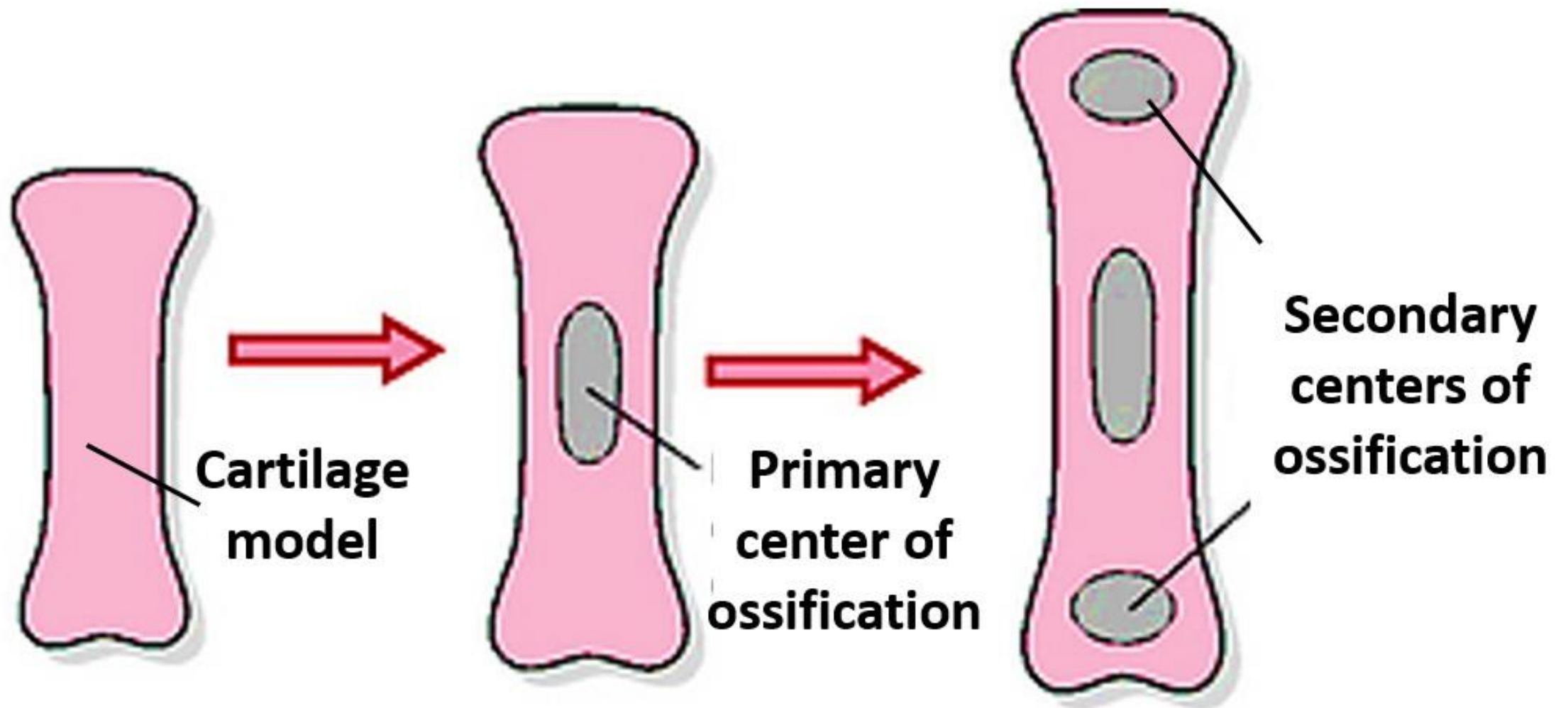
1.6 yrs

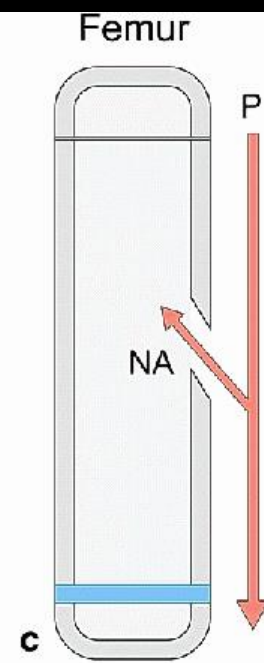
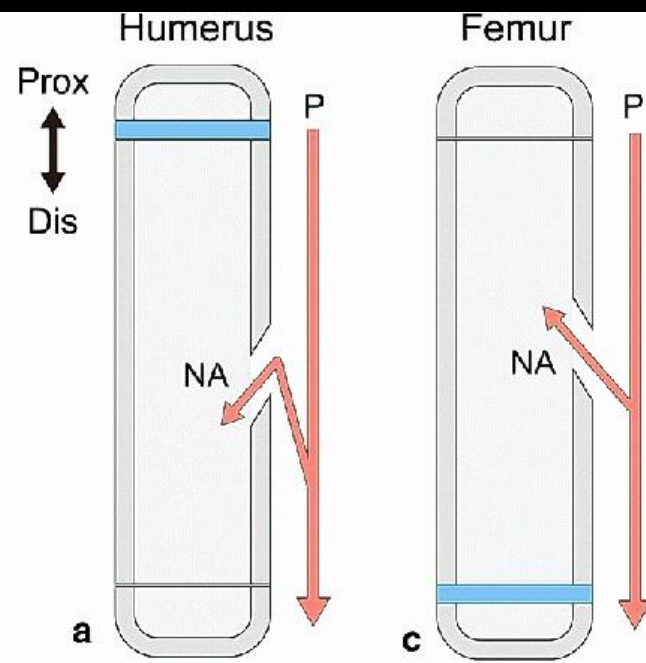
6 yrs

10 yrs

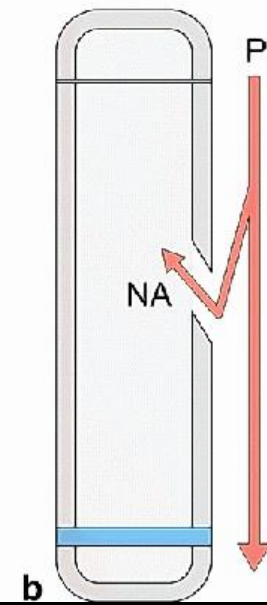
12 yrs

18 yrs

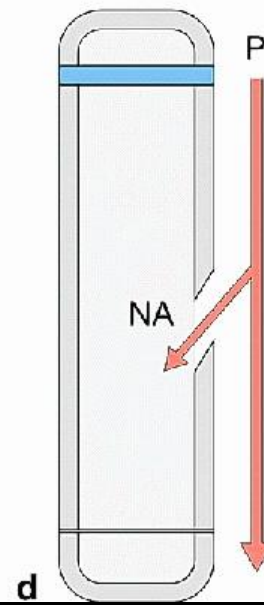




Radius / Ulna

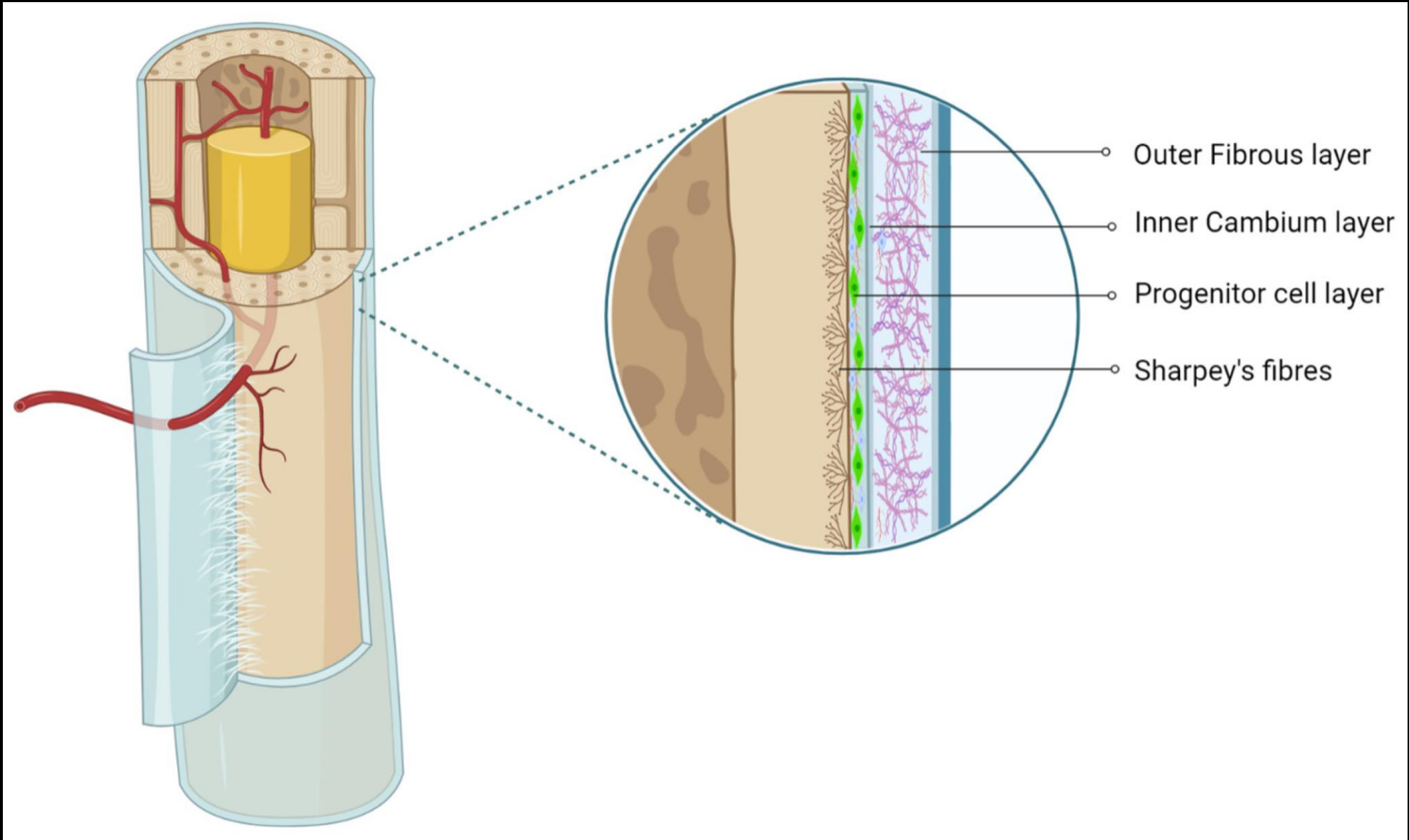


Tibia / Fibula



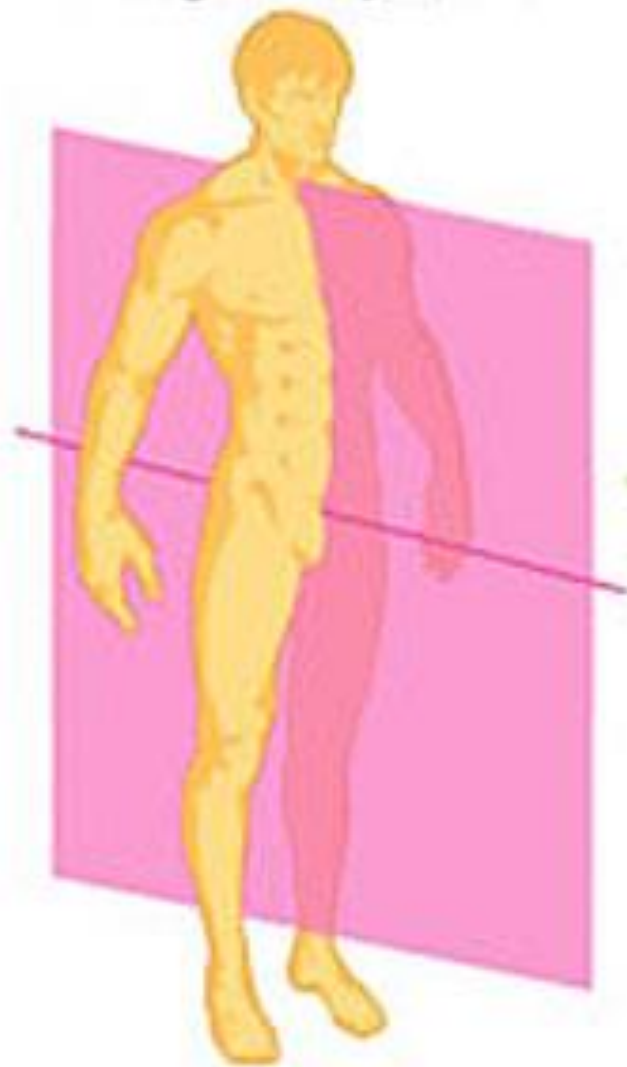


Periosteum

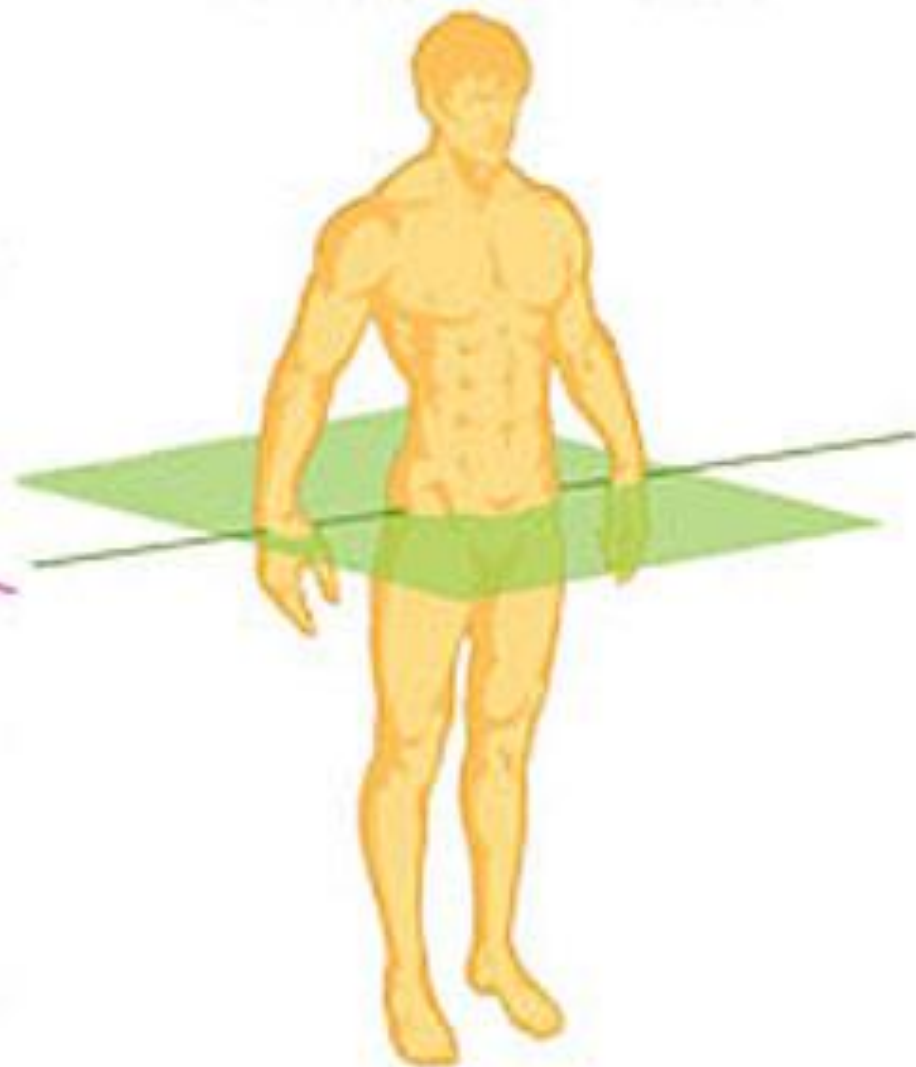


Planes

Sagittal plane

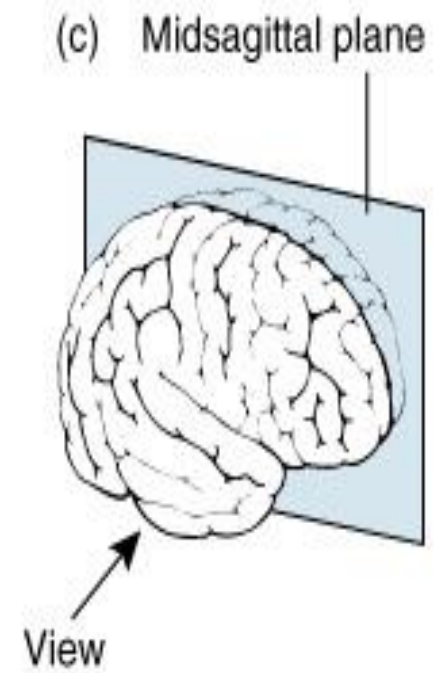
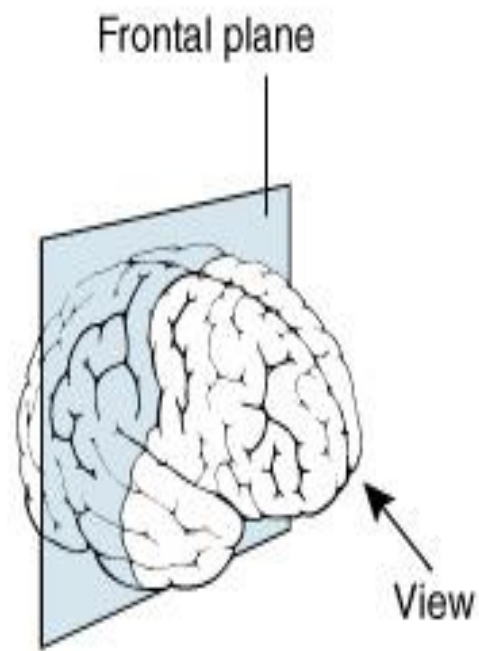
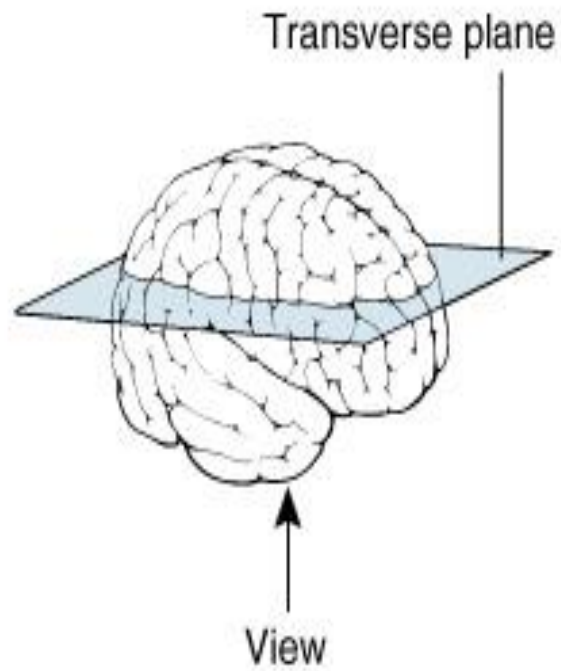


Horizontal plane

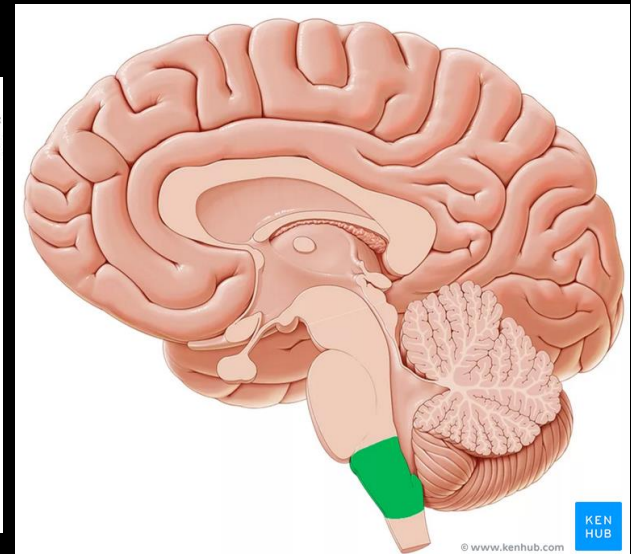
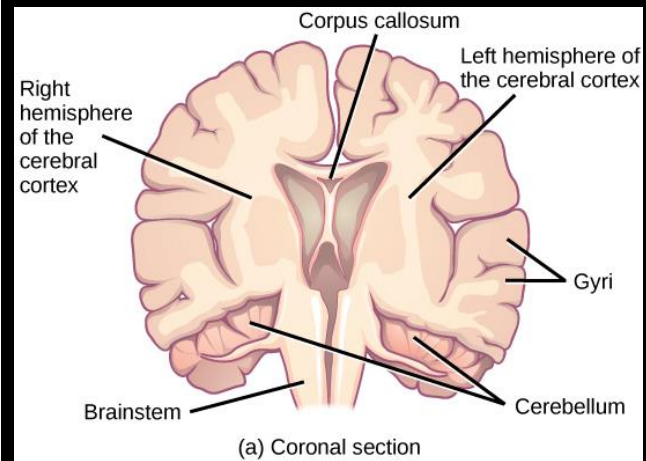
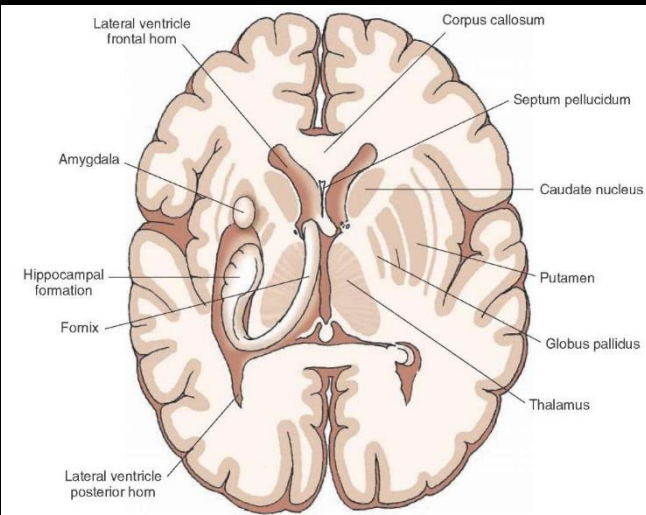


Frontal plane





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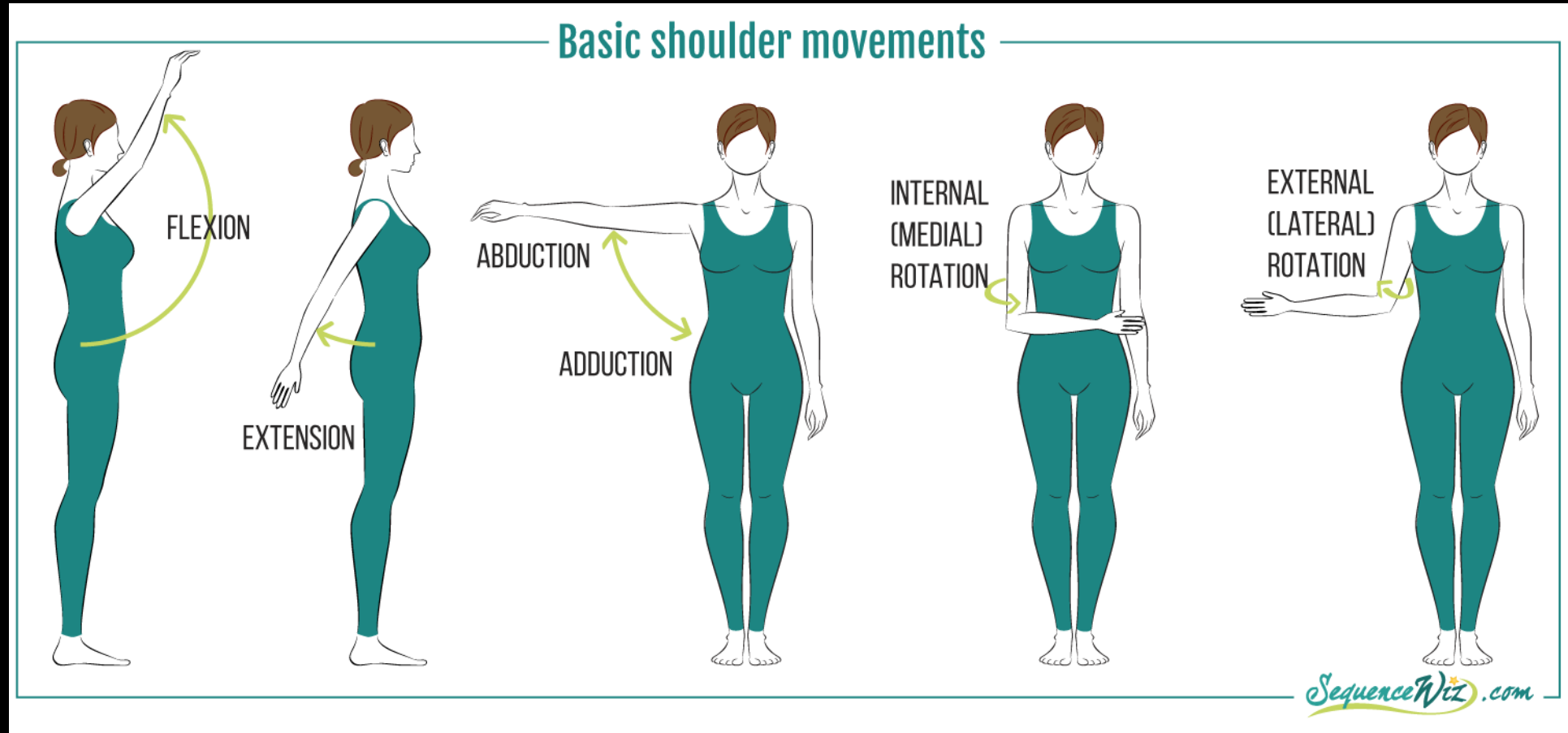
MOVEMENTS

Shoulder movements

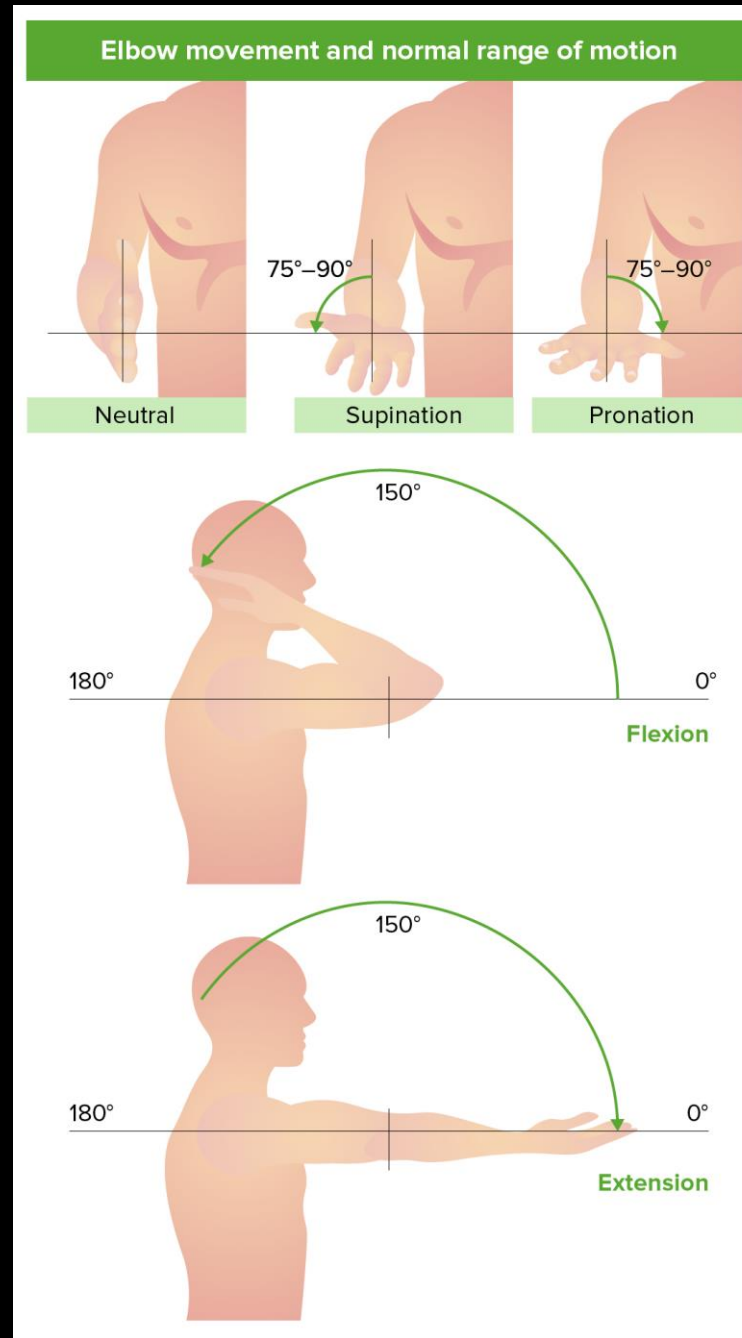


Protraction vs Retraction Quiz

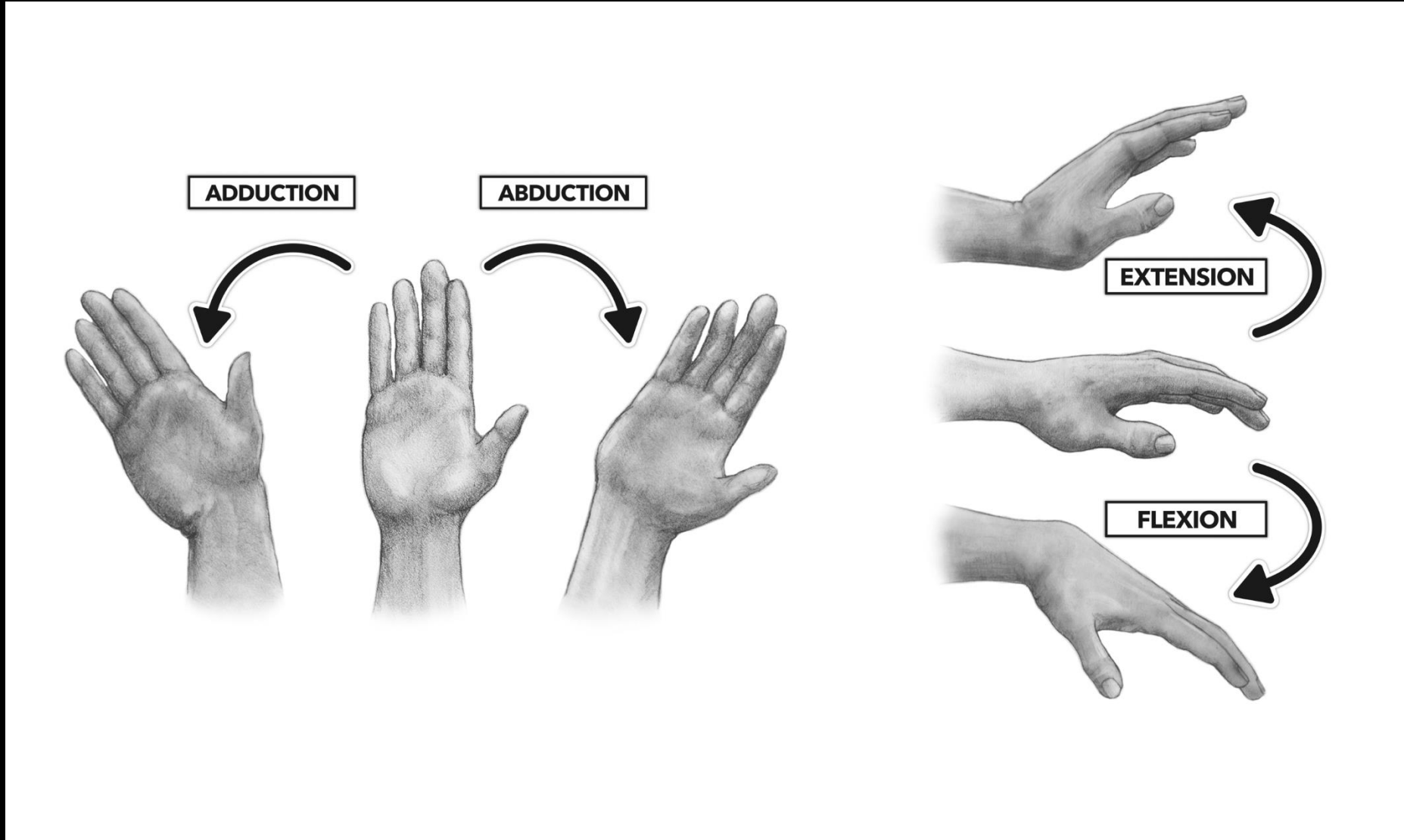
Types of movement



Elbow & forearm movements



Wrist movements



Thumb movements



Abduction

Adduction

Extension

Flexion

Opposition

Reposition

Muscle names - muscles are named for the following:

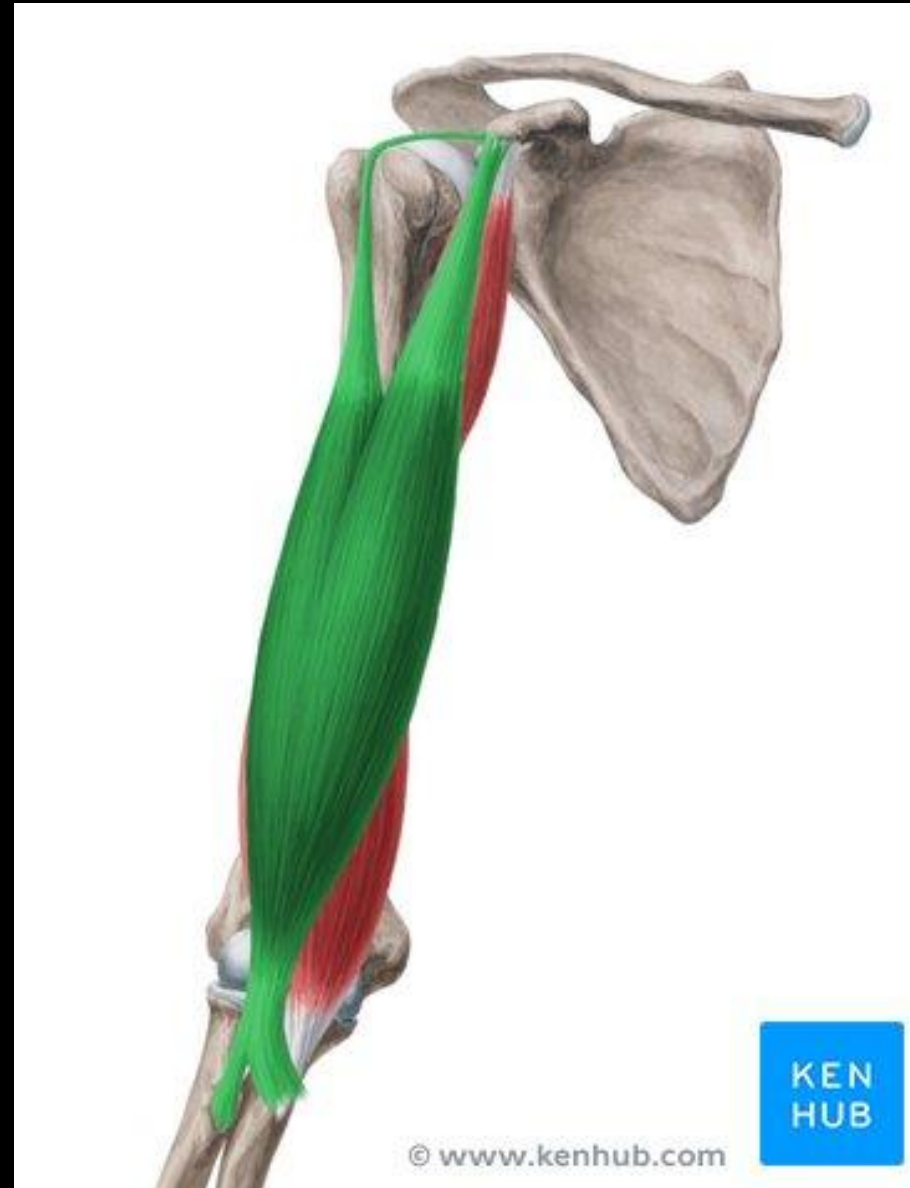
a] shape

b] action

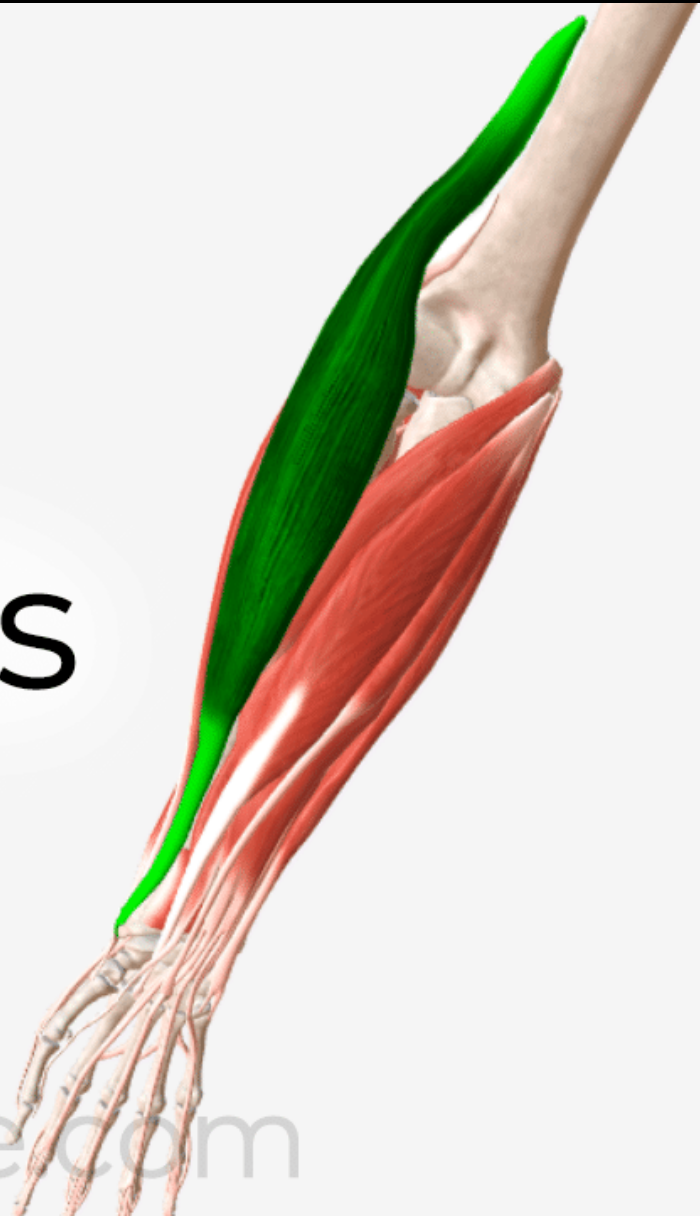
c] attachment

d] location

biceps brachii muscle



Brachioradialis



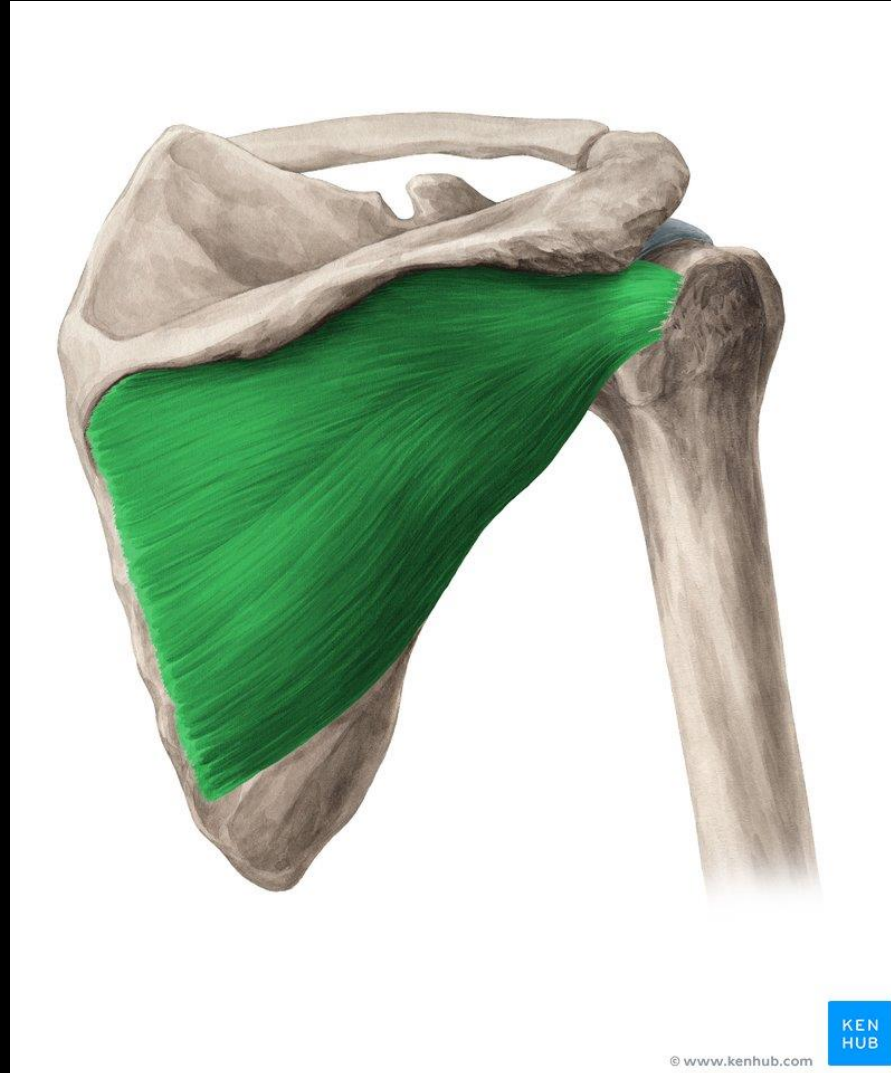
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Supinator



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• Infraspinatus muscle



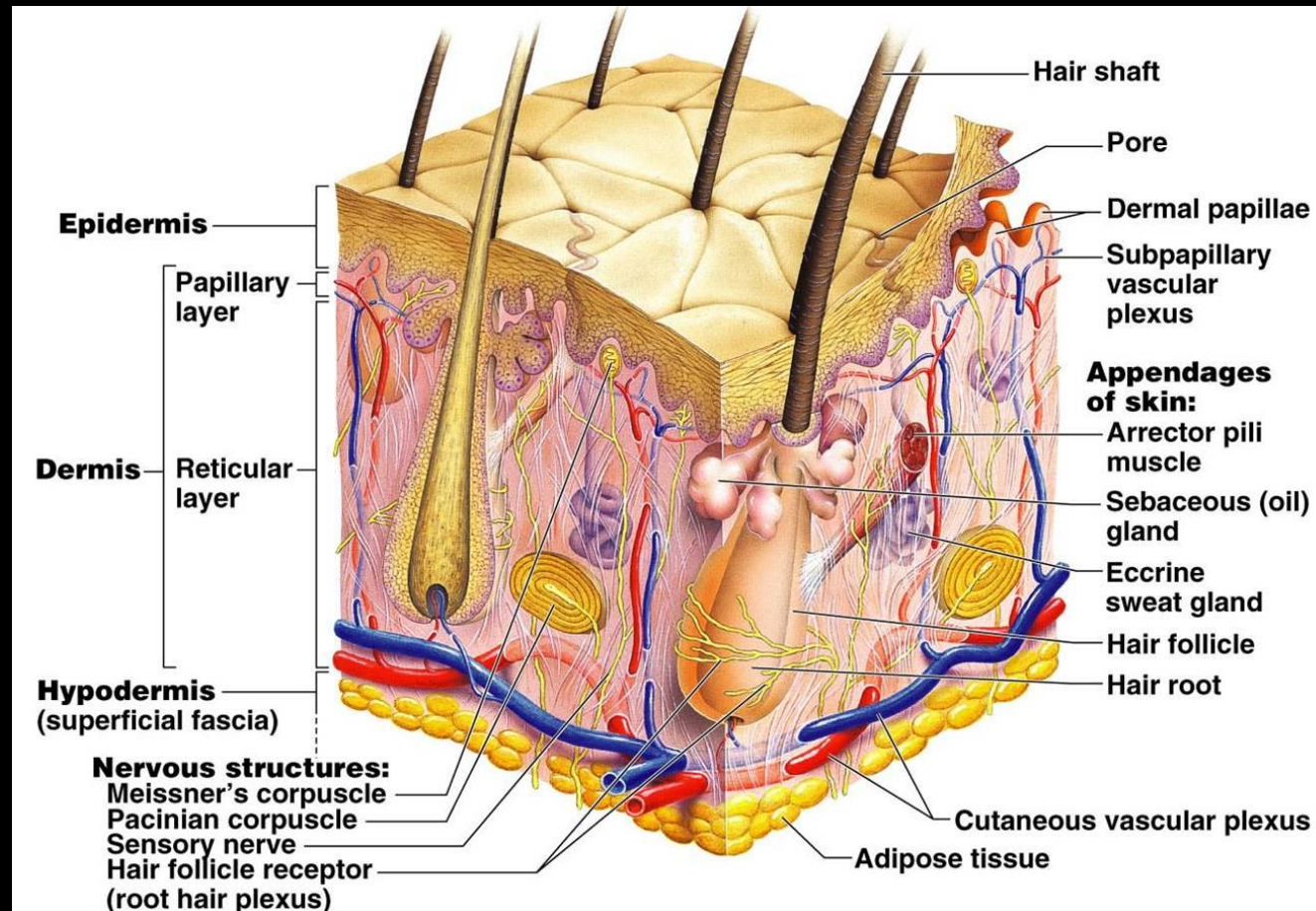
- ORIGIN

- INSERTION

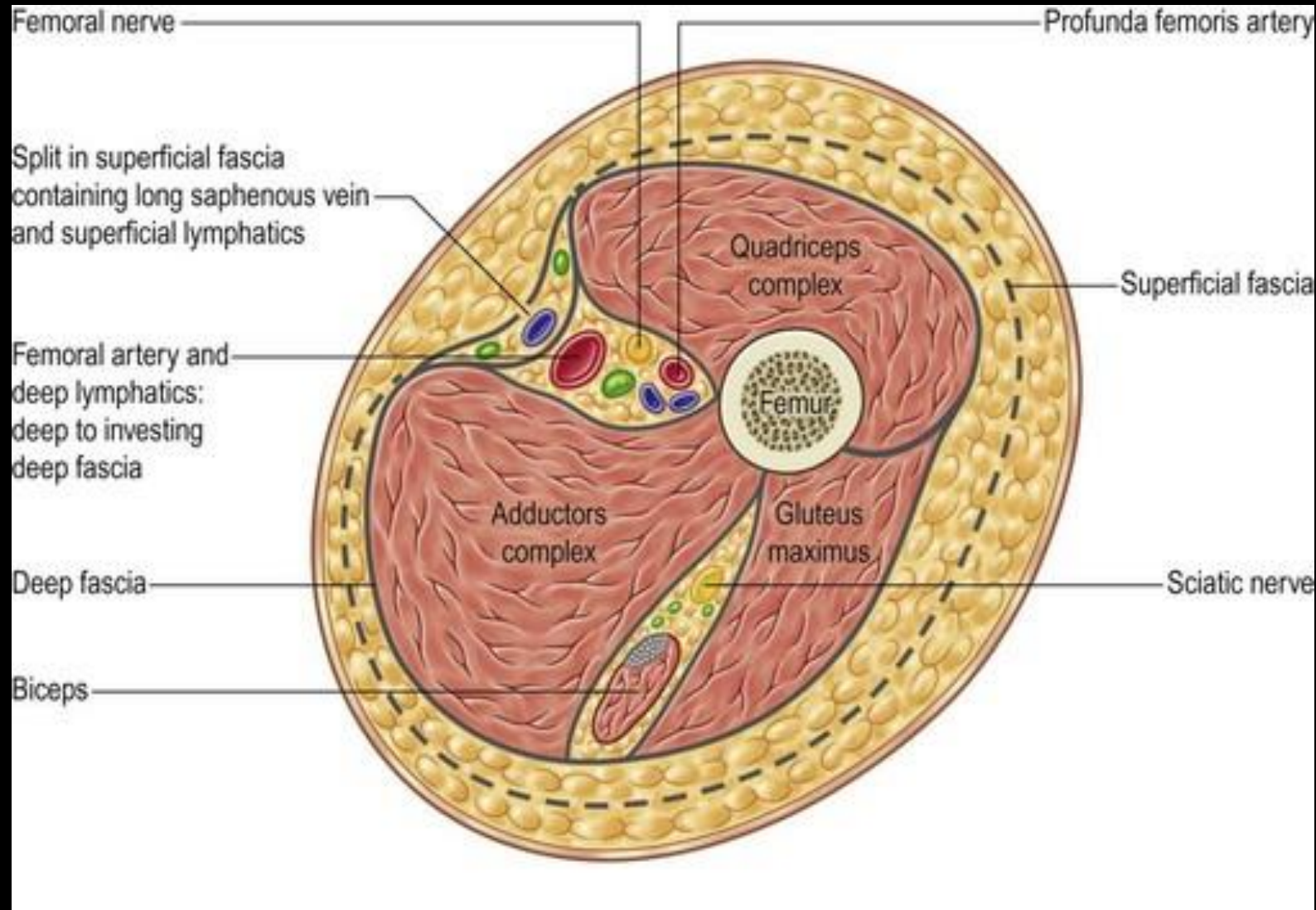
- INNERVATION

- FUNCTION

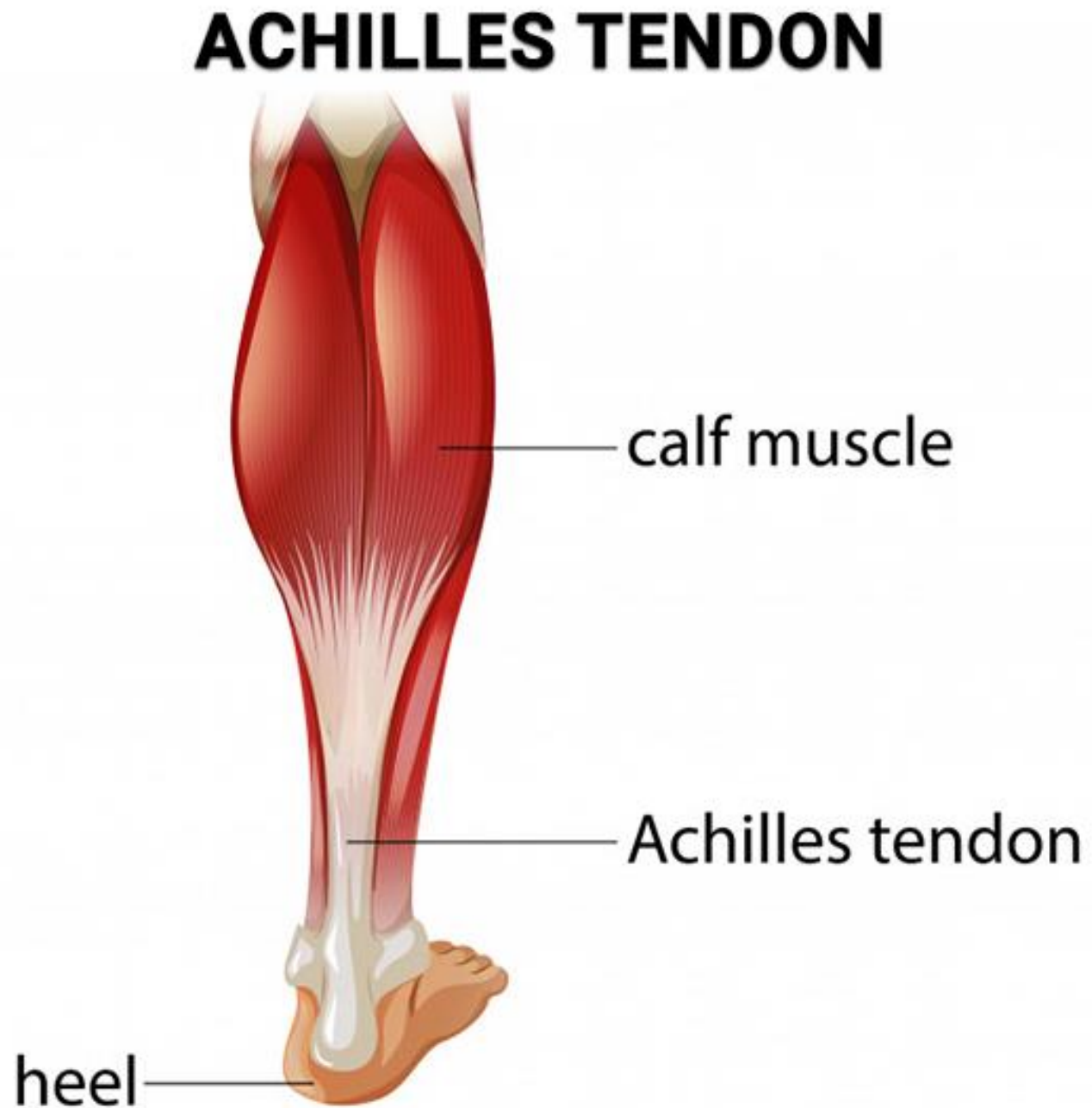
Superficial fascia, the thin layer of loose fatty connective tissue underlying the dermis and binding it to the parts beneath. It is called also HYPODERMIS.



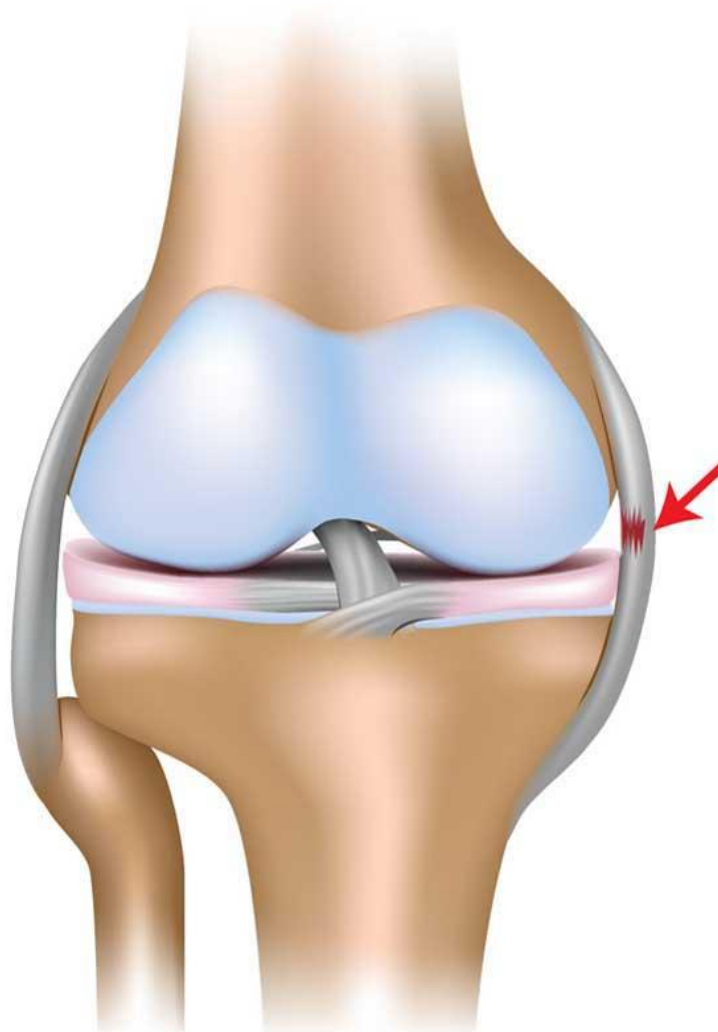
Deep fascia, a layer of dense connective tissue which can surround individual muscles and also surround a groups of muscles to separate into fascial compartments



Tendon



Ligament

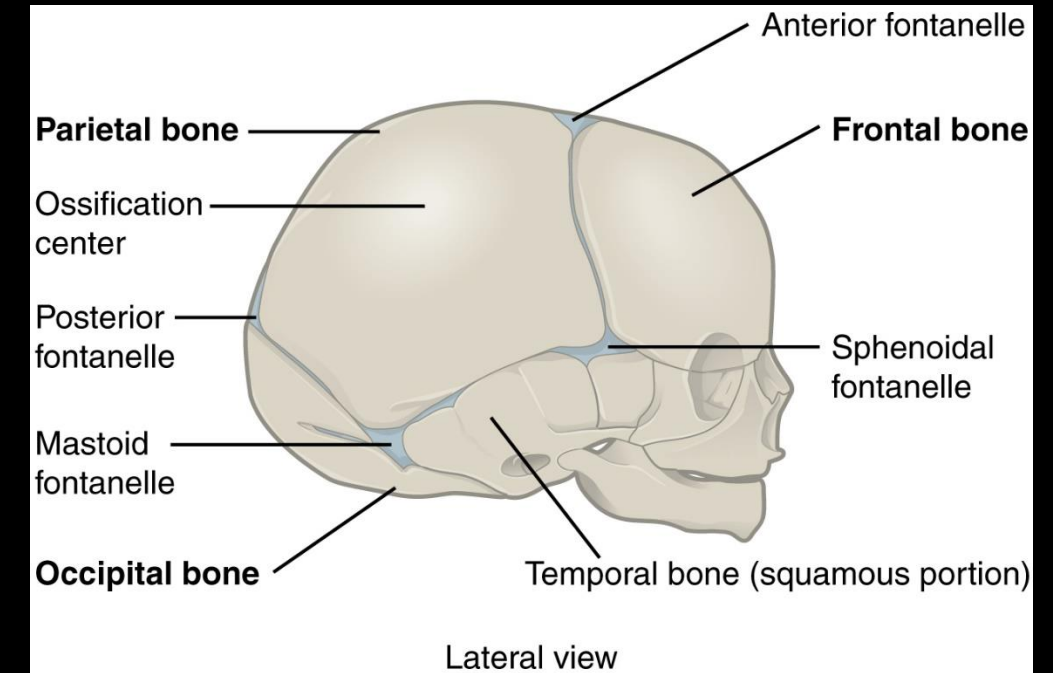


Torn medial collateral
ligament (MCL)

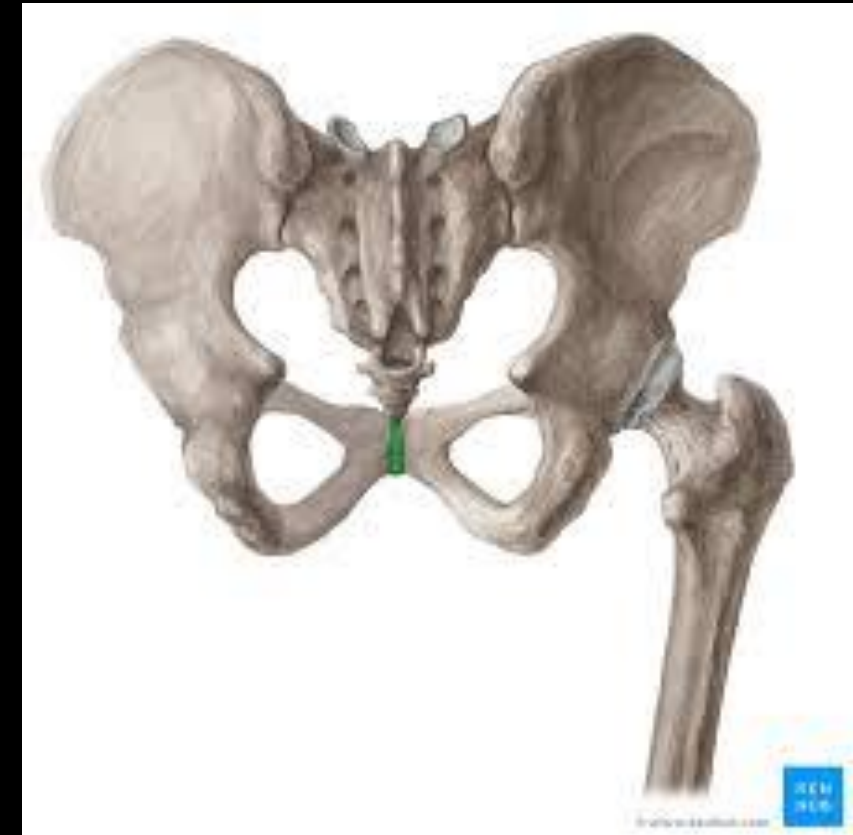
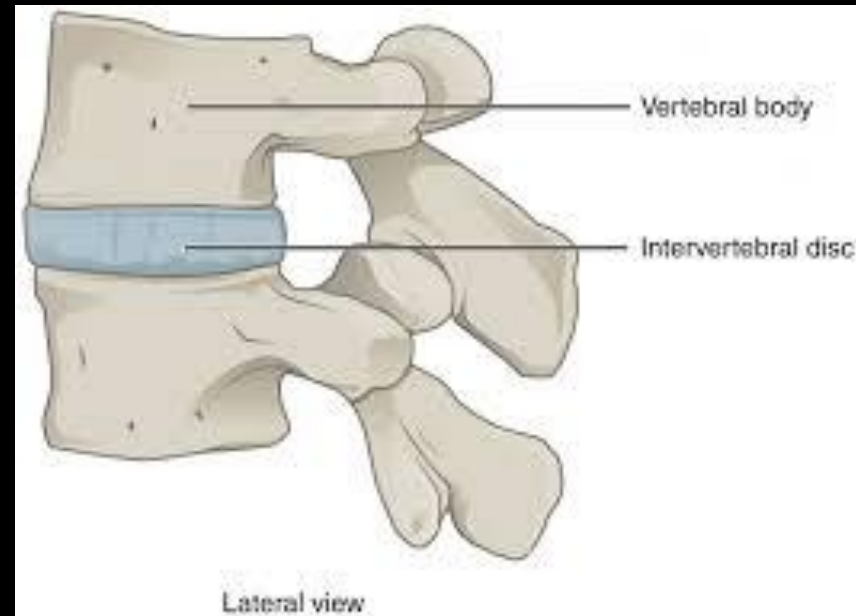
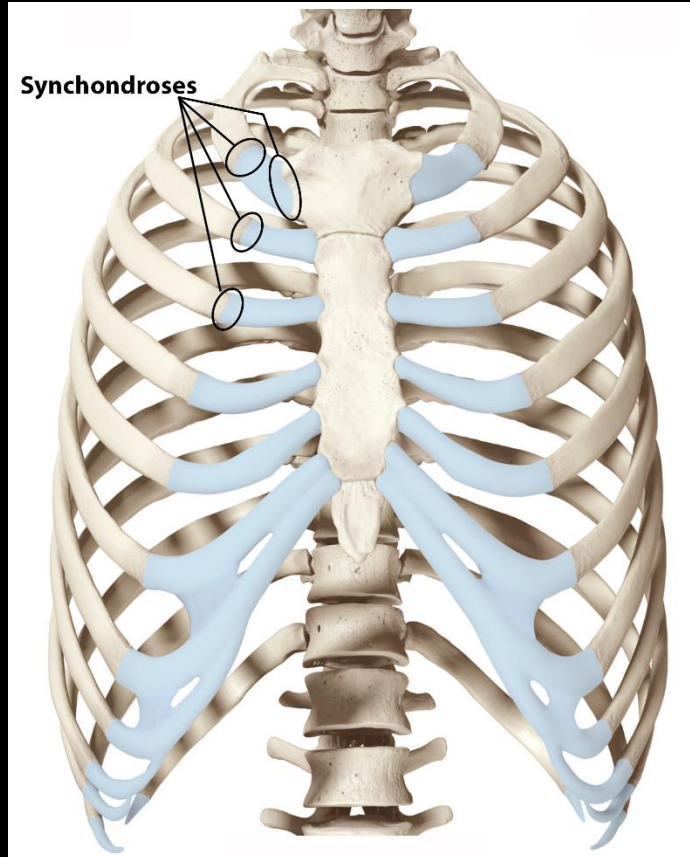
Joints

- A joint is the part of the body where two or more bones meet to allow movement.
- There are four structural classifications of joints:
FIBROUS, CARTILAGINOUS, SYNOVIAL and FACET joints

Fibrous joints are defined as the joints in which the bones are connected by fibrous tissue.



Cartilaginous joints are connected entirely by cartilage: Type 1 and 2

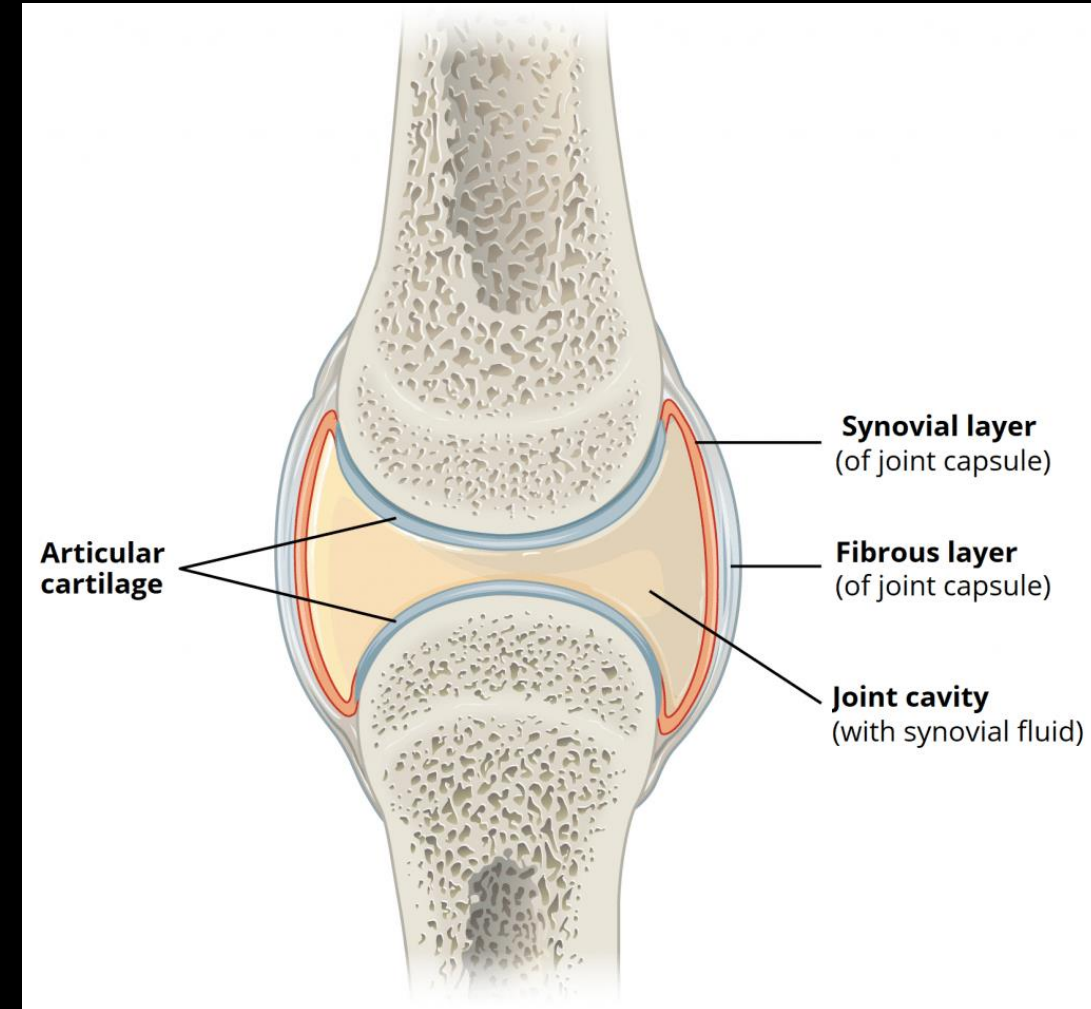


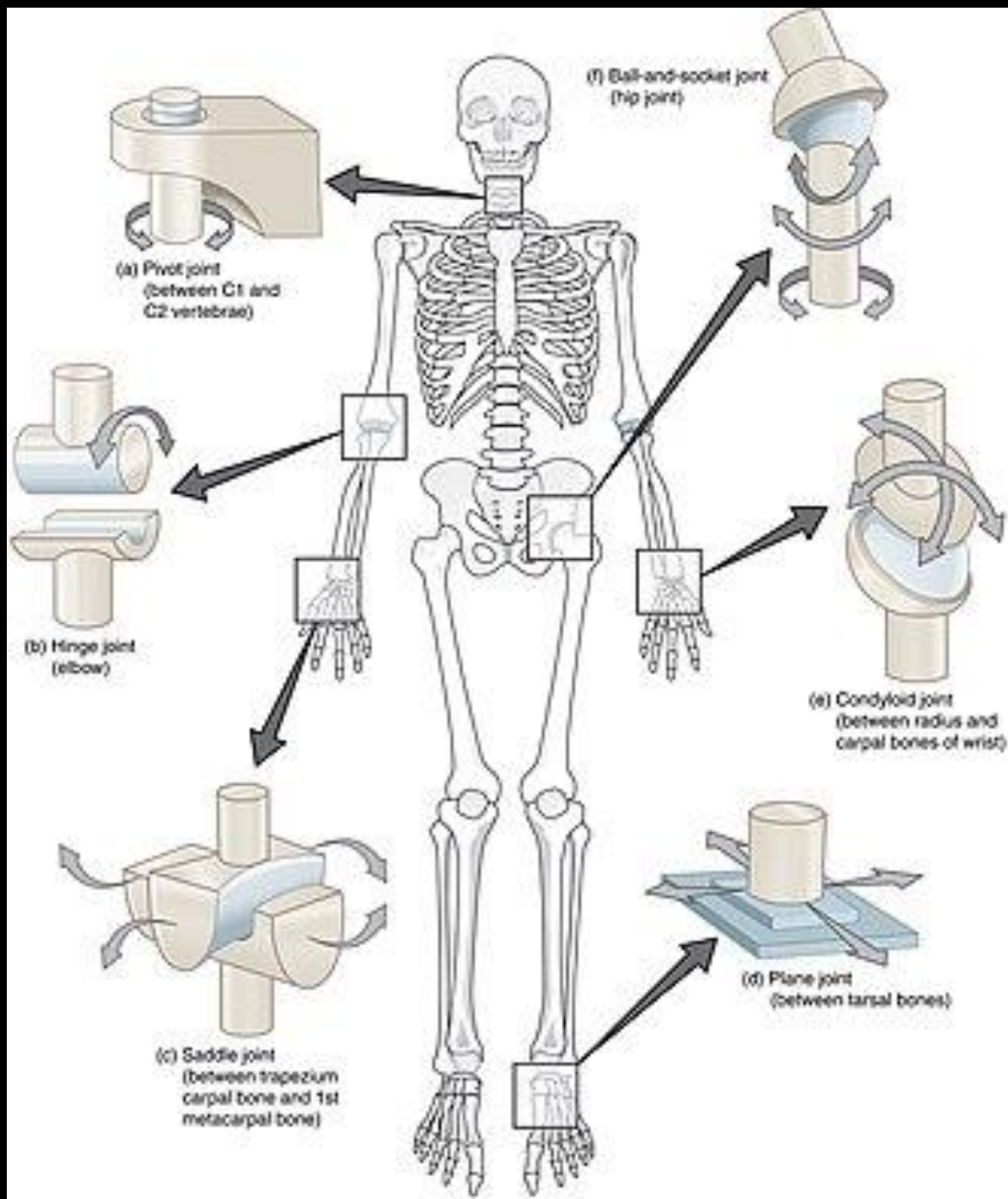
Synovial joints

- It is the most common type of joint found in the human body, and contains several structures which are not seen in fibrous or cartilaginous joints.

The six main features of a synovial joints are:

- (1) articular capsule
- (2) articular cartilage
- (3) joint cavity
- (4) synovial membrane
- (5) synovial fluid
- (6) mobility





Bursa is an important lubricated fluid-filled thin sac located between bone and surrounding soft tissue, bones and tendons, and/or muscles around joints, and are useful to the human body by reducing tension and negative effects of wear-and-tear at points of friction and ...

