The Muscular System

Functions of the Muscular System:

1.

2.

3.

4.

5.

Structures of the Muscular System

Has over _____ muscles, which makes up about _____ of the body's weight

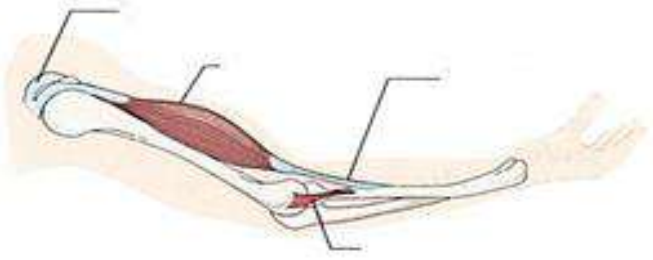
Muscle Fibers

- Muscles are composed of long, slender cells known as _____
- Each muscle consists of a group of fibers that are held together by connective tissue and enclosed in a fibrous sheath
-

Fascia

-

Tendons

• Example:	

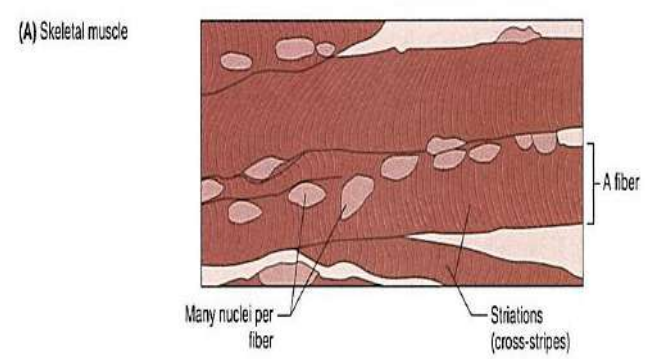
Label the picture

The Muscular System

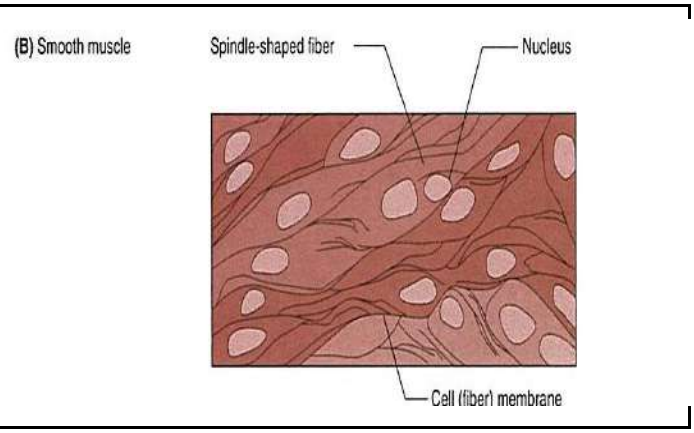
Types of Muscle Tissue

Described according to their appearance and function.

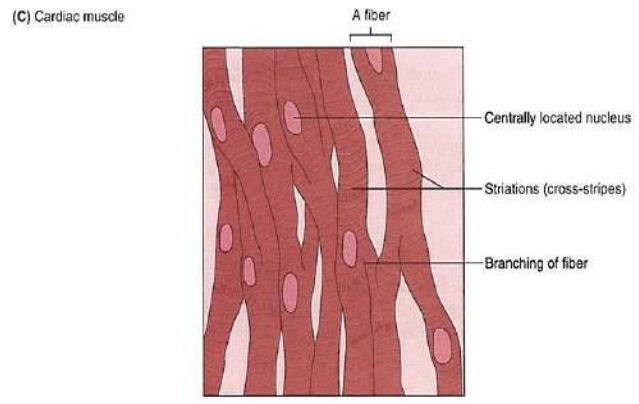
Skeletal Muscle -

1. 2. 3. 4.	

Smooth Muscle -

1. 2. 3. 4. 5.	

Cardiac Muscle -

1. 2. 3. 4. 5.	

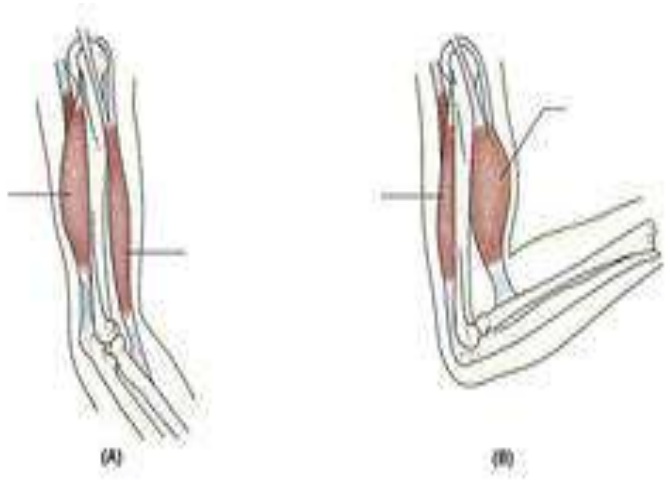
The Muscular System

_____: the study of muscular activity and the resulting movement of body parts

Characteristics of Muscles

_____ Muscle Pairs -
They work in opposition of each other. In an antagonistic pair, one muscle produces movement in one direction, and the other muscle produces movement in the opposite direction.

Contraction and Relaxation -
Specialized cells that make up muscles allow them to change shape or length by contracting and relaxing. These contrasting actions make motion possible.

● **Contraction** – ●	
● **Relaxation** – ●	
● **Muscle Tone** - (tonus)	

Label pictures

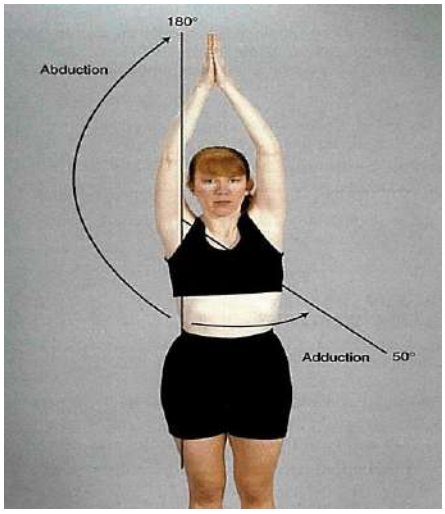
Muscle Innervation
The stimulation of the muscle by an impulse transmitted by a motor nerve; causes the muscle to contract and will relax when the stimulation stops

- **Neuromuscular** - pertaining to the relationship between nerve and muscle.
    - If the nerve impulse is interrupted because of injury of pathology of the nervous system, the muscle is paralyzed and cannot contract.

The Muscular System

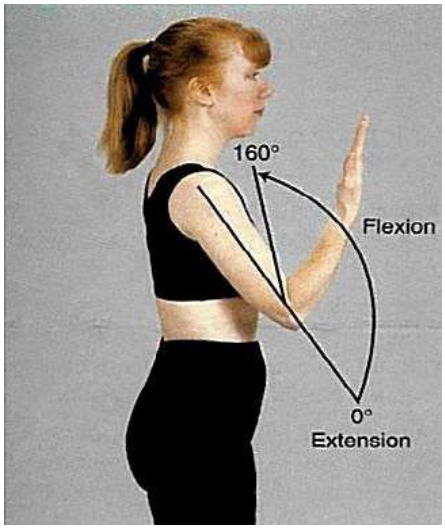
Range Of Motion

-



Abduction:

Adduction:

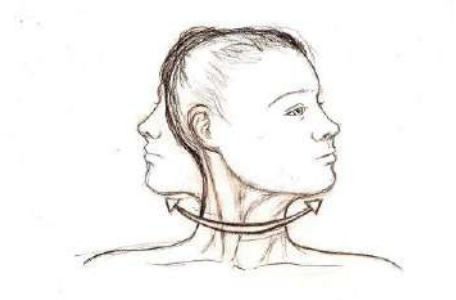


Flexion:

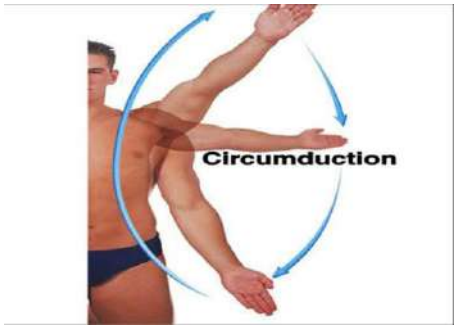
Extension:

Elevation:

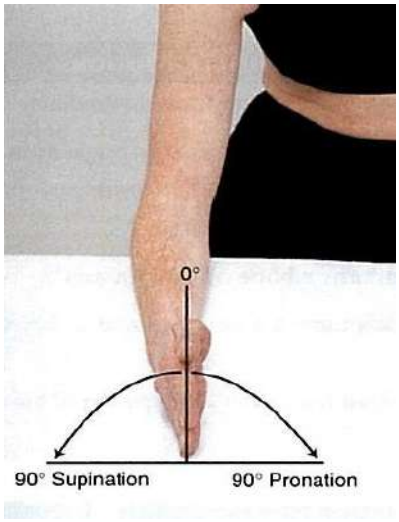
Depression:



Rotation:

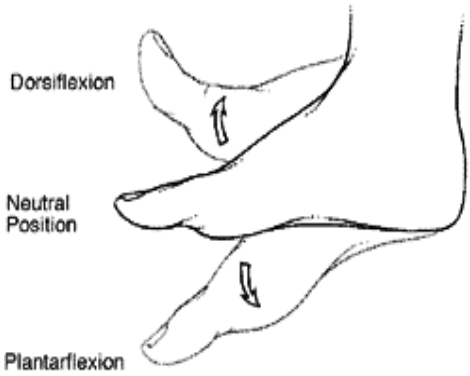


Circumduction:



Supination:

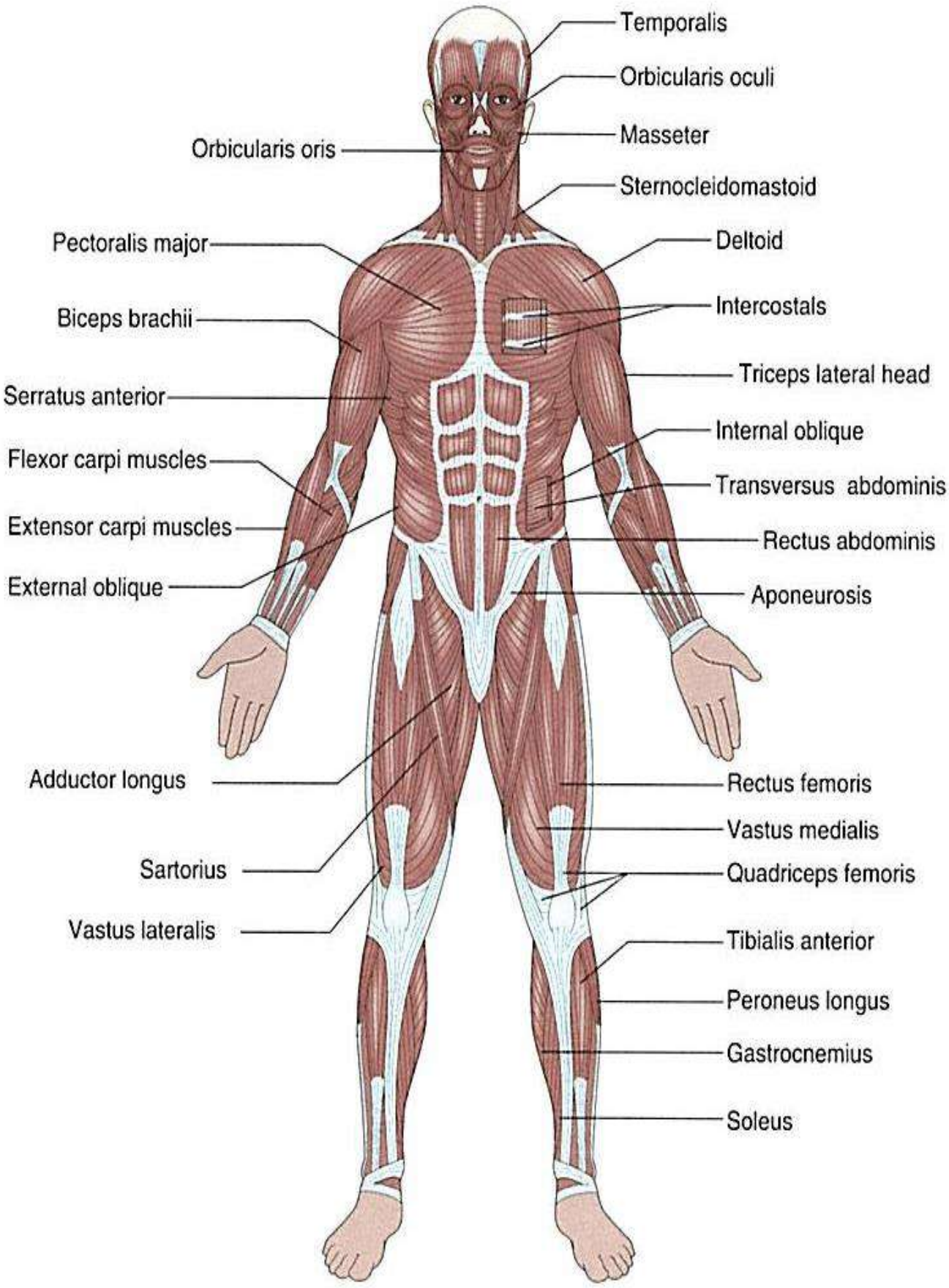
Pronation:



Dorsiflexion:

Plantar Flexion:

The Muscular System



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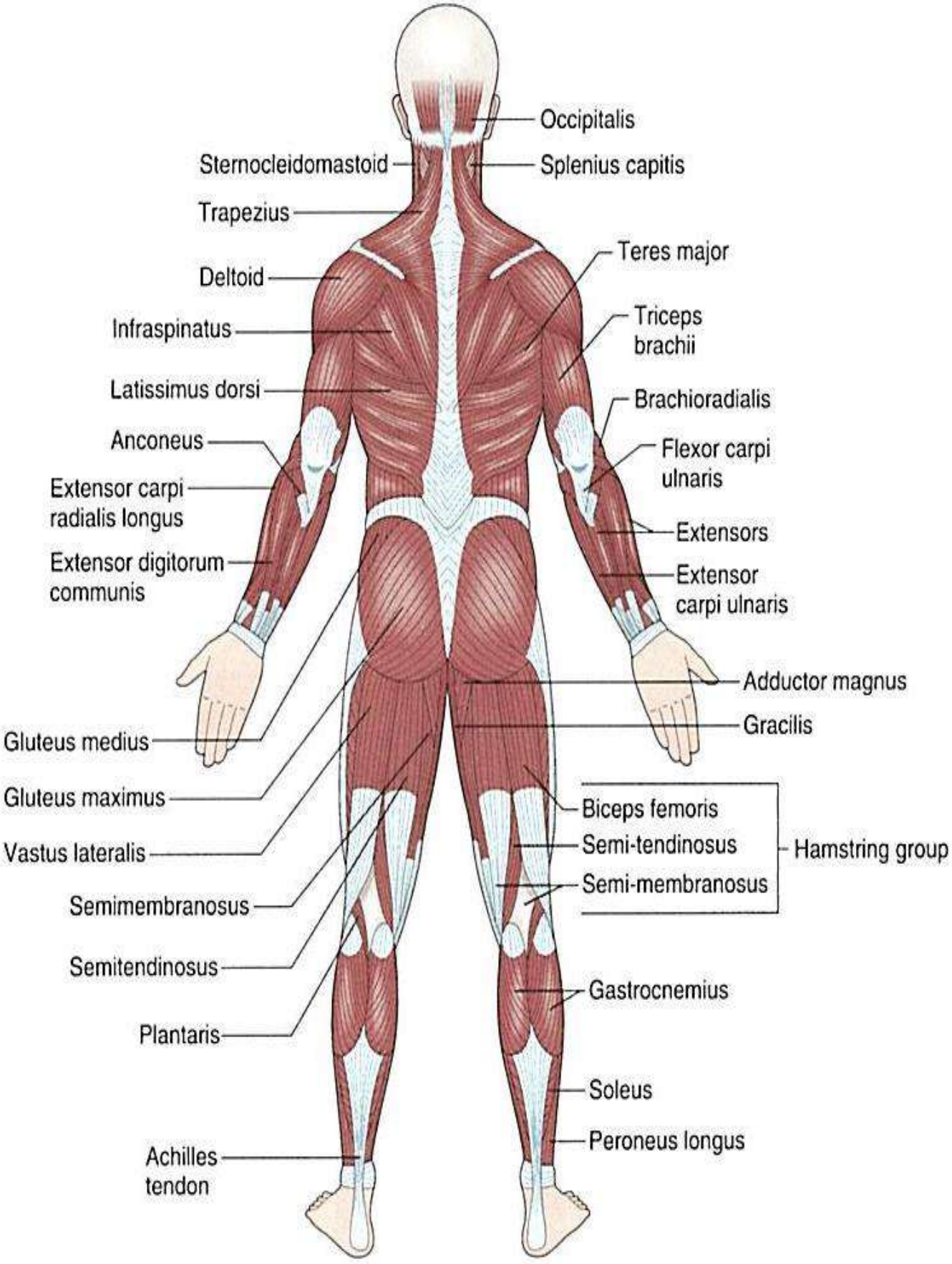
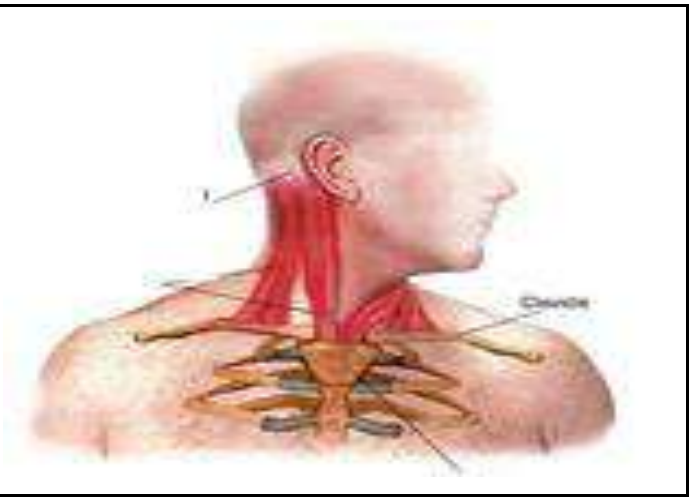


The Muscular System

How Muscles are Named

Origin and Insertion -
Muscles named by joining the name of the place of origin to the name of the place of insertion.

• **Muscle Origin** -	
• **Muscle Insertion** -	
• Ex. sternocleidomastoid	

Muscles Named For Their Action

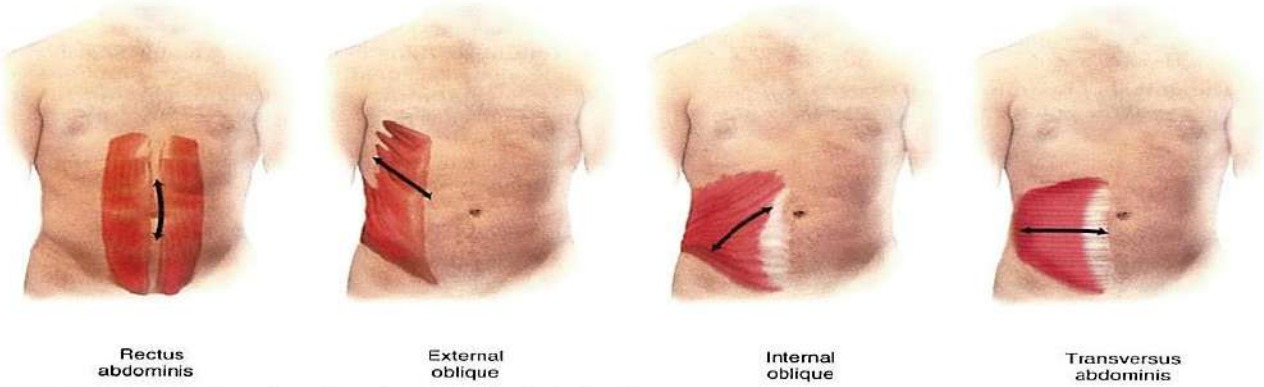
-
- Ex. flexor carpi and extensor carpi

Muscles Named For Their Location

-
- Ex. pectoralis major

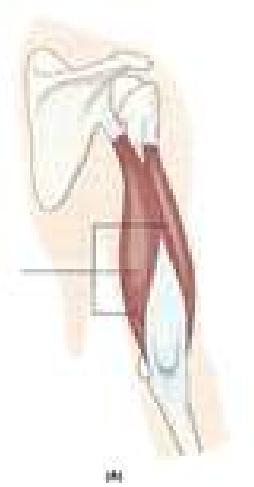
Muscles Named For Fiber Direction

•	• Ex. Abdominals - rectus, oblique, transverse, sphincter



The Muscular System

Muscles Named For Number of Divisions

•	
• Ex. Bicep, Tricep, Quadriceps Femoris	

Muscles Named For Their Size

-
- Ex. gluteus maximus

Muscles Named For Their Shape

-
- Ex. deltoid muscle looks like an inverted triangle or the Greek letter delta