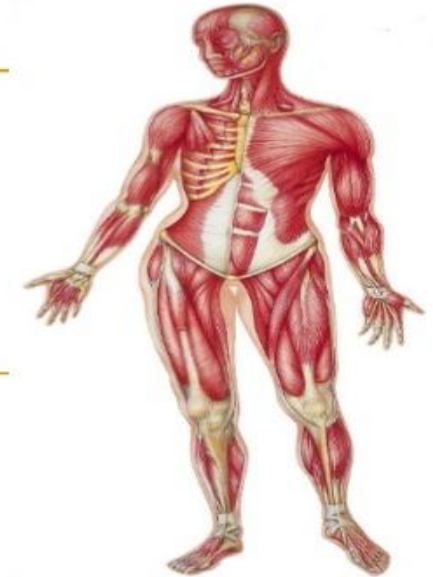


THEME

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**Muscular
System**



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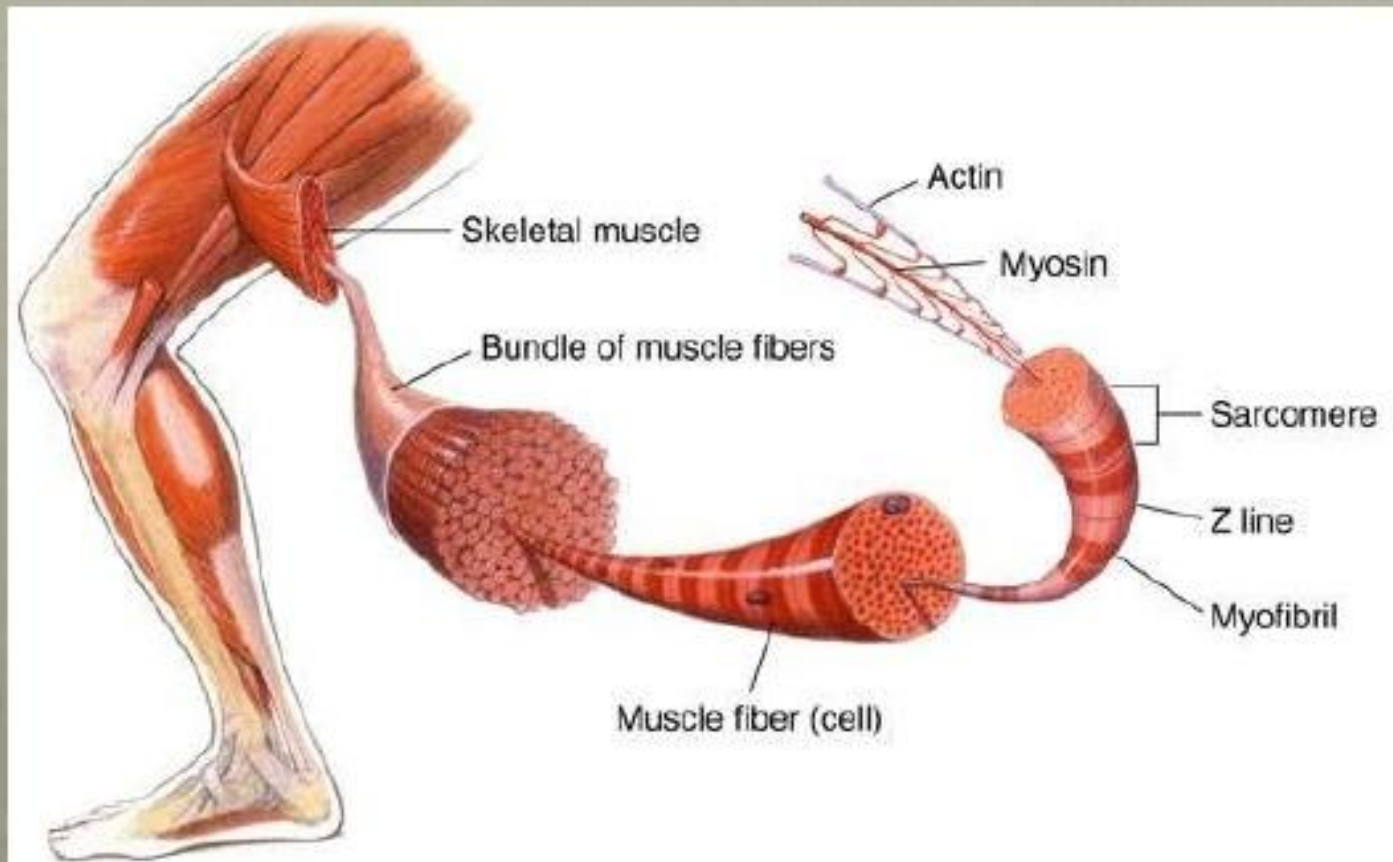
Muscular system

- Nearly half of body weight is muscle weight.
- The 206 bones of the skeletal framework are covered by nearly 650 muscles.



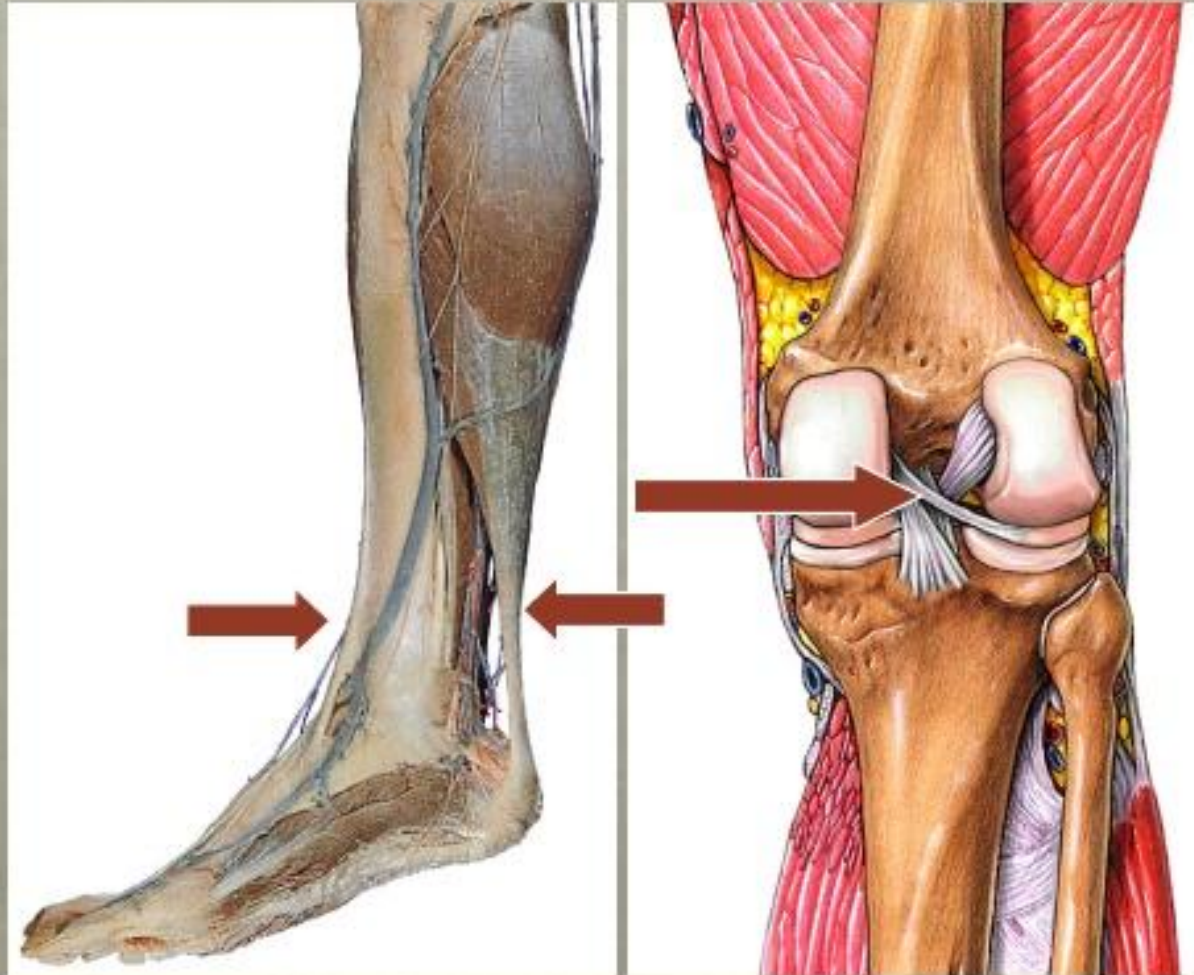
Muscle fibers

- Muscles are composed of many bundles of stringy fibers bound together in bunches.



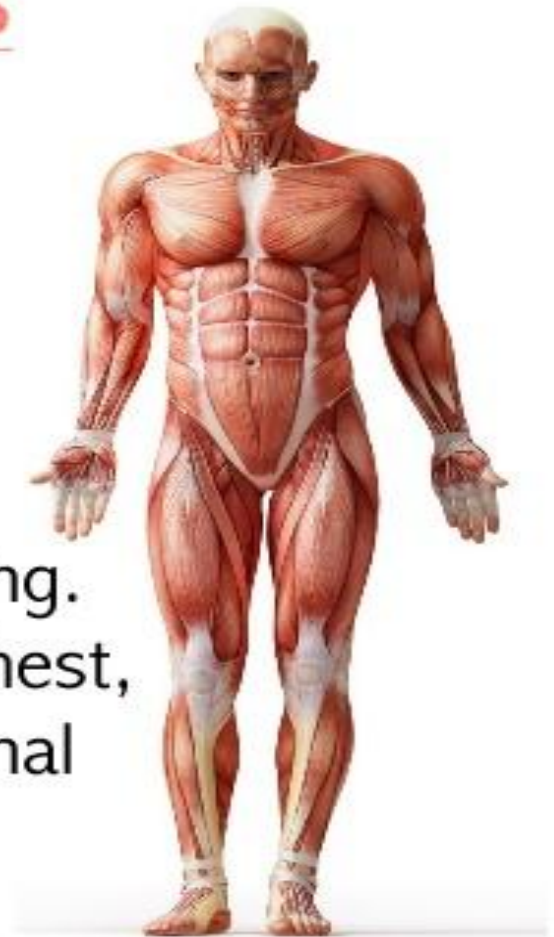
Tendons & ligaments

- Muscles are connected to bones by tendons, which are tough, elastic-type bands of connective tissue.
- Bones are connected to each other by ligaments.



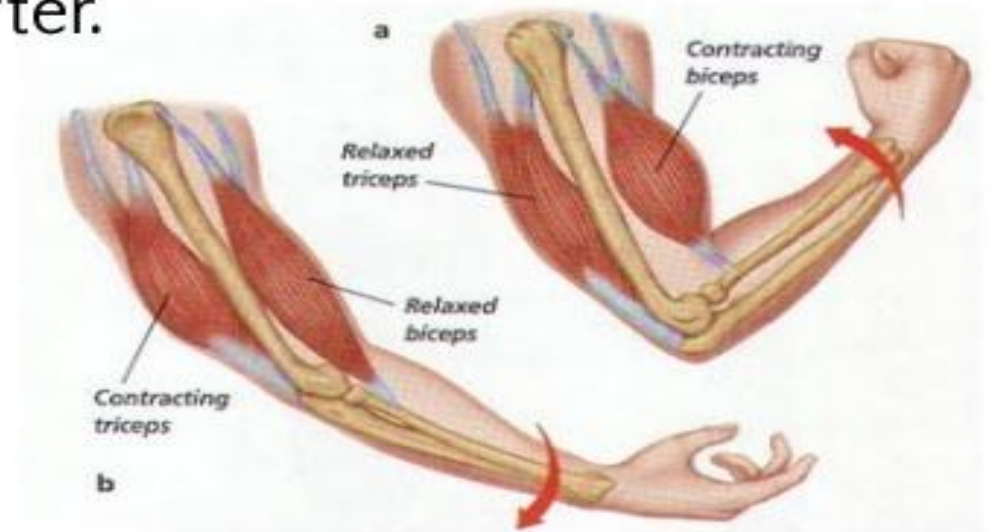
Functions Protection

- Muscles protect your body. They cover most of your skeleton.
- Muscles also cover most of the organs inside your body.
- Muscles are like a layer of padding. They surround your abdomen, chest, and back, and protect your internal organs.



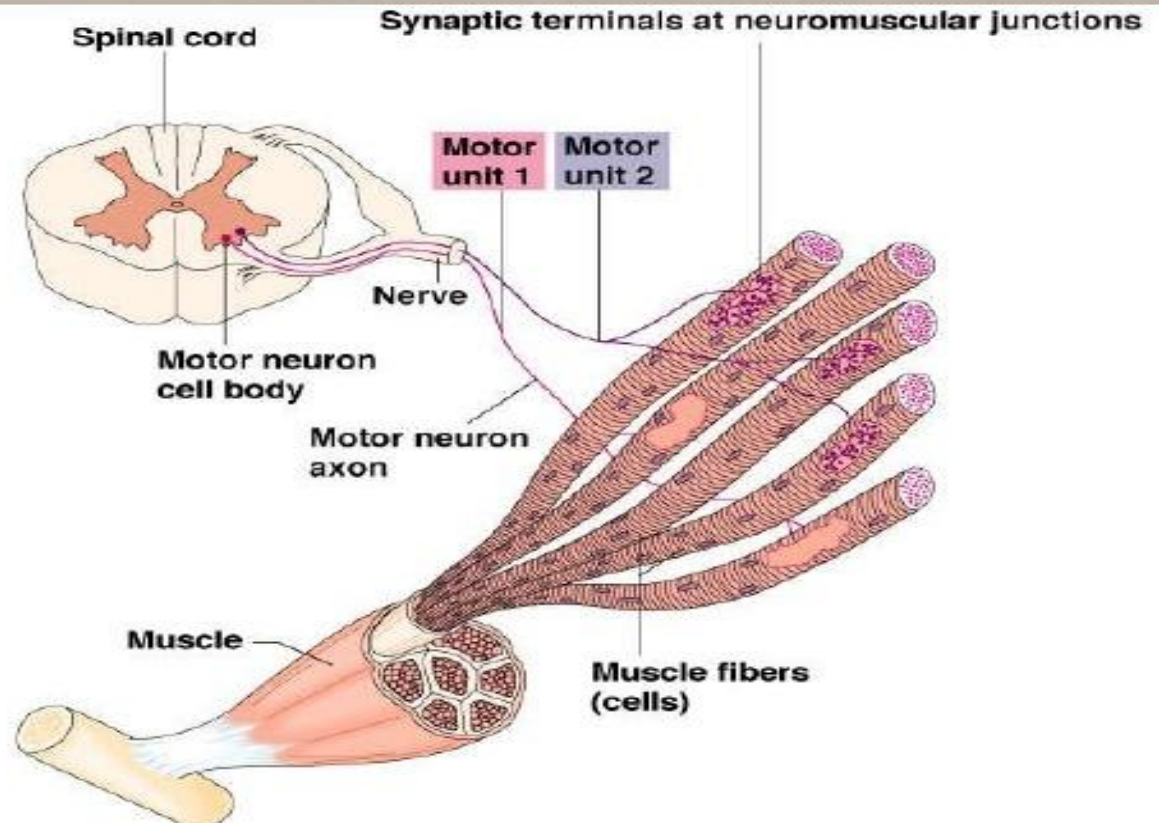
Muscular System

- All muscle tissues are made of cells that contract.
- When the cells of a muscle contract, the muscle tissues become shorter.
- The muscle tissues return to their original length when the cells relax.

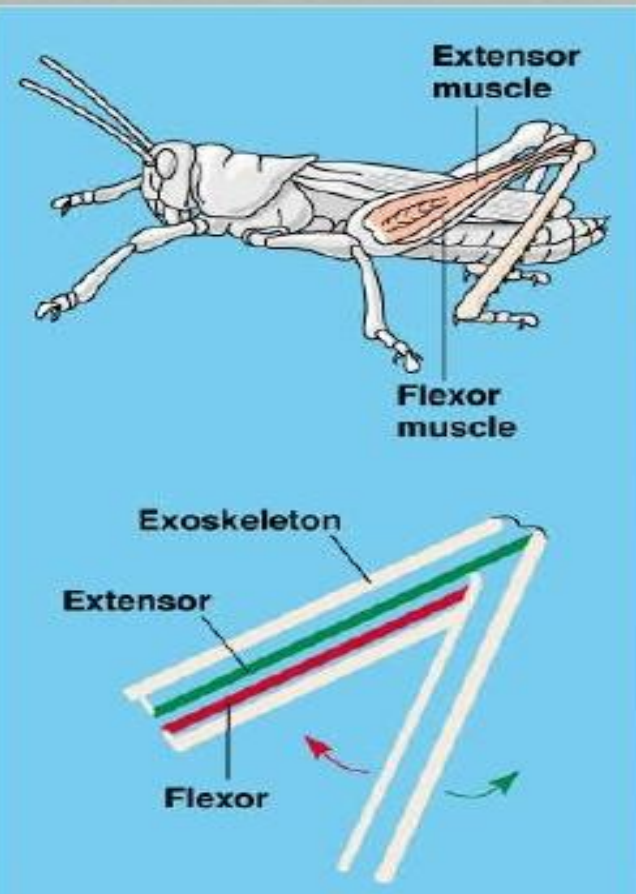
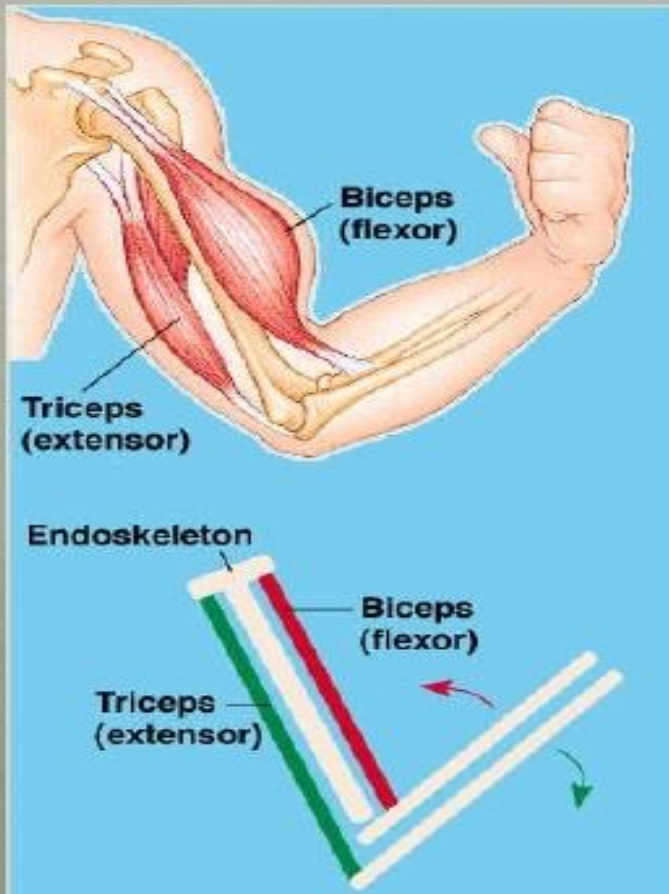


Muscle Contraction

- Muscles, when stimulated by a nerve to act, contract and produce body heat.

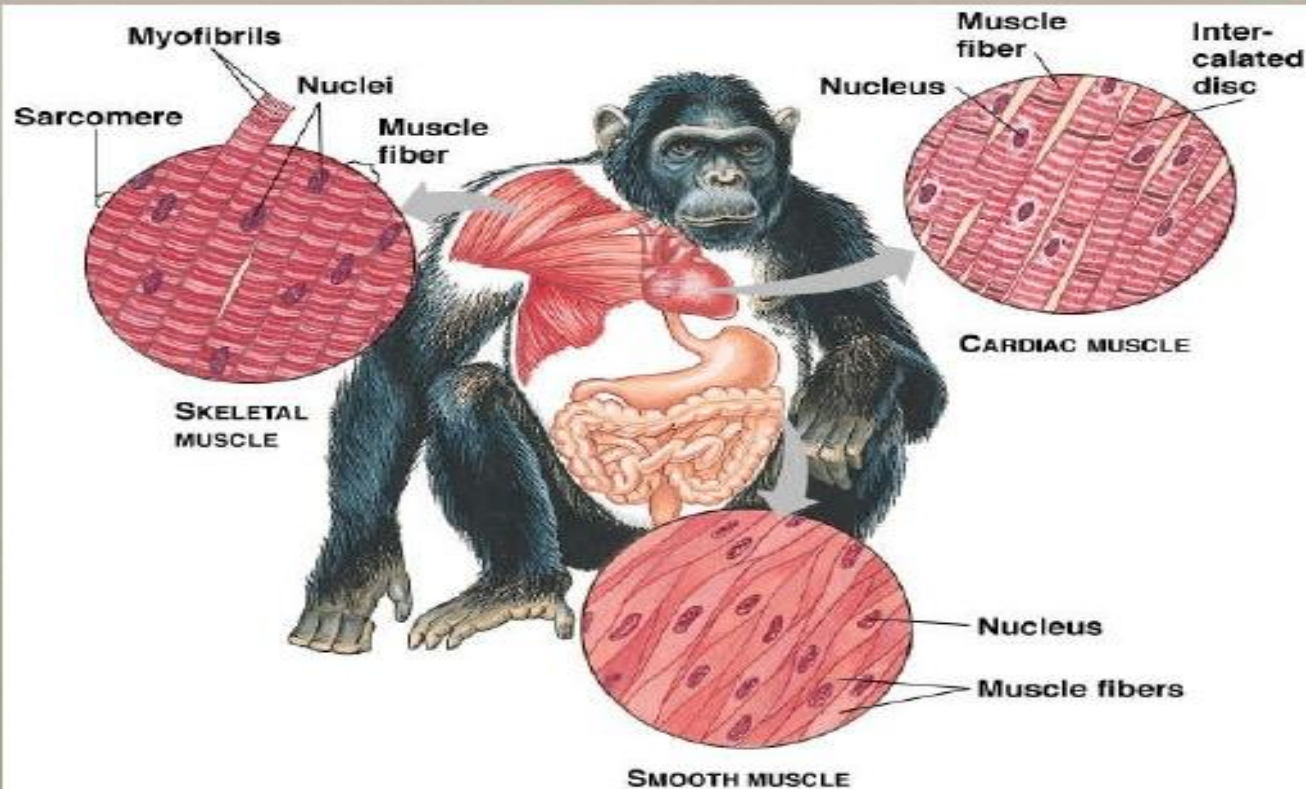


Muscles work in pairs

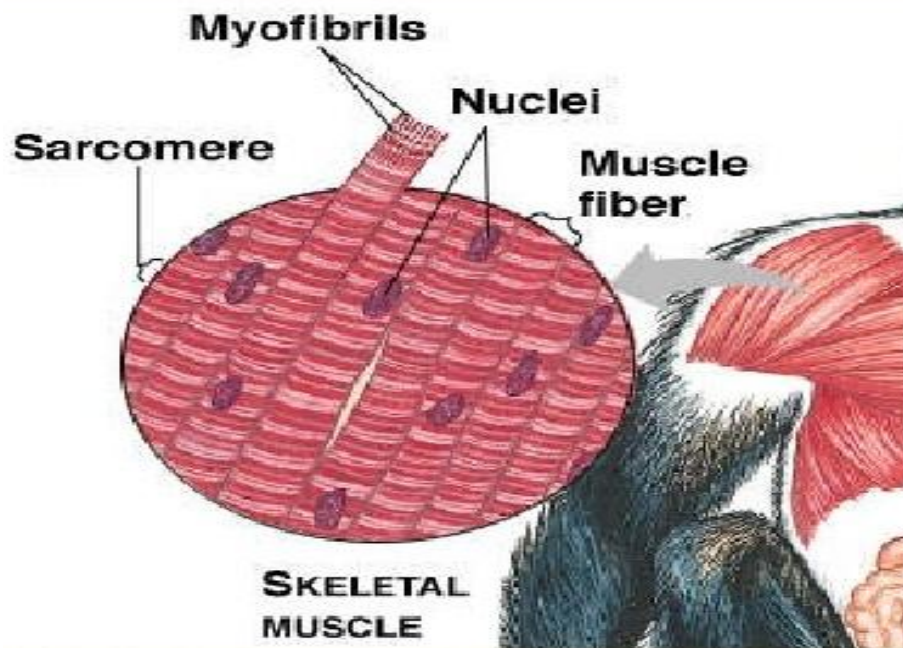


3 Types of muscles

- Skeletal Muscle
- Smooth Muscle
- Cardiac Muscle



Skeletal muscle



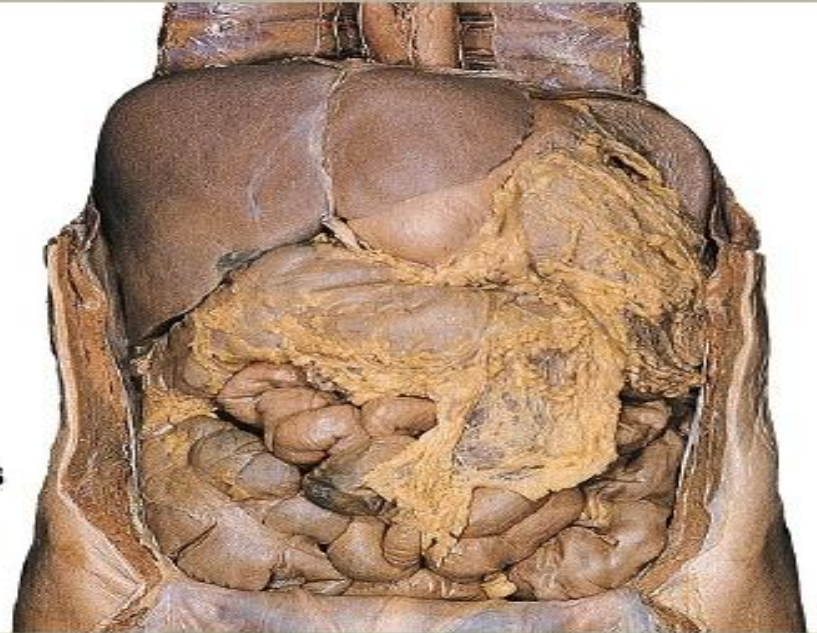
Smooth muscle



Nucleus

Muscle fibers

SMOOTH MUSCLE



The Muscular System

Problems of the Muscle System

Bruise- is a area of discolored skin that appears after an injury.

Tendonitis- is a inflammation of the tendon, caused by injury or over use aging

Hernia- when a organ or tissue protrudes through an area of weak muscle.

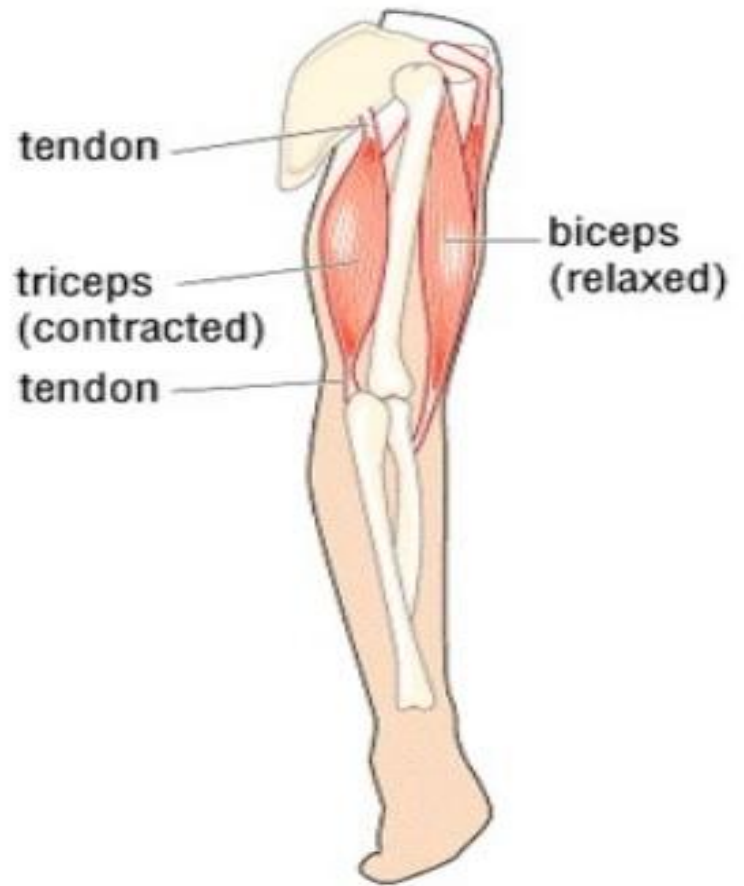
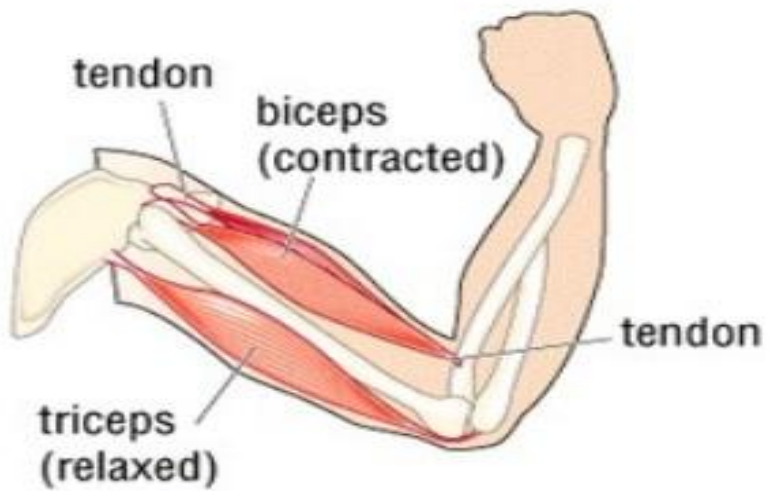
SKELETAL or VOLUNTARY MUSCLES

They are under our **conscious control**.

This means we instruct them to perform everyday actions such as walking, running and jumping.

How many can you name?





MUSCLES CAN WORK AS:

- **Flexors** - contracting to bend our joints.
 - **Extensors** - contracting to straighten joints.
 - **Prime movers (agonists)** - contracting to start a movement.
 - **Antagonists** - relaxing to allow movement to take place.
 - **Fixators** - contracting to give the working muscles a firm base.
 - **Synergists** - stabilising the area around the prime mover and fine tuning our movement.
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