

Biology 2nd 9 Weeks, Weeks 2.6-2.7 Homework 3 (Muscular System)

Let's revisit the levels of organization.

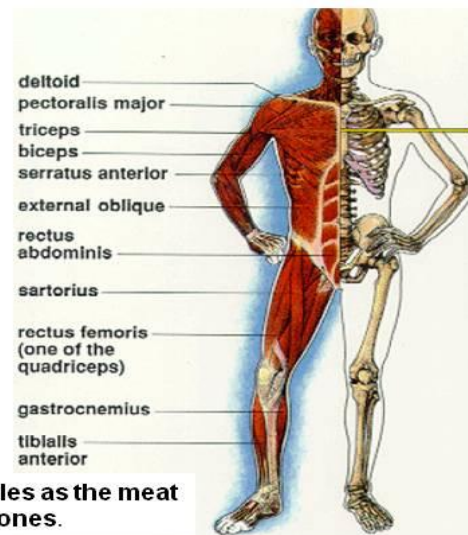
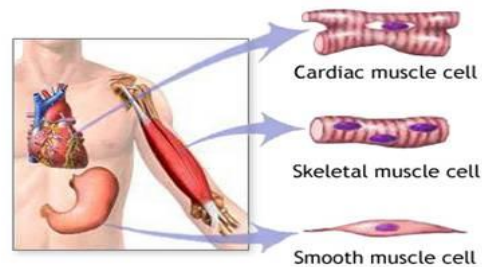
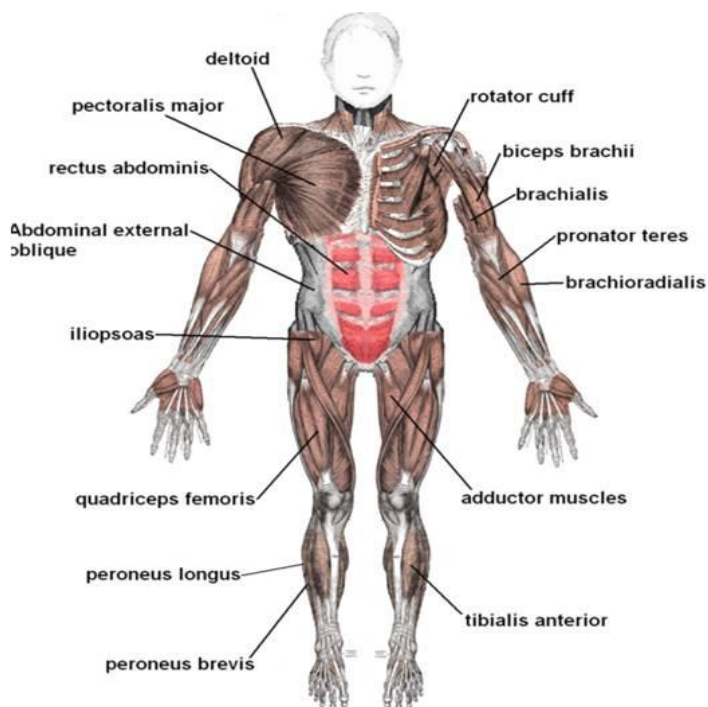
cells → tissues → organs → organ systems → organisms

The **muscular system** is responsible for movement. **Muscles** are the organs of the muscular system. There are three types of muscles: skeletal, smooth, and cardiac.

Skeletal muscles attach to bones of the skeletal system and allow the body to move. Skeletal muscles usually work in pairs. For example, biceps allow the arm to bend while triceps extend the arm. The paired coordination allows for a smooth range of motion. Skeletal muscles are attached to the bones by tendons. Since these muscles can be controlled by a person, they are known as voluntary muscles.

Smooth muscle is found within the walls of organs like the intestines, bladder, and the diaphragm allowing these organs to expand and contract. Smooth muscle is not under conscious control, so it is known as involuntary muscle. You previously learned that food moves through the digestive because of contractions produced through peristalsis. Smooth muscles allow peristalsis to occur.

Cardiac muscle is not under your control, so it is also considered involuntary muscle. It is only found in the **heart** which is why it is called cardiac muscle.



Think of the muscles as the meat on the bones.

1. The muscular system functions to _____.
 - a. provide structure and support
 - b. produce movement
 - c. allow the exchange of oxygen and carbon dioxide in the body
 - d. Transport nutrients to every cell in the body

Justification –

2. Muscles use a lot of energy. What organelles should be plentiful in muscle cells?
 - a. mitochondria
 - b. lysosomes
 - c. vacuoles
 - d. golgi body

Justification -

3. Muscles use a lot of ATP. If oxygen is not available, muscle cells will convert the energy in glucose to ATP using _____.
 - a. aerobic respiration
 - b. anaerobic respiration
 - c. cellular respiration with oxygen

Justification -

4. Muscles attach to bones of the skeletal system through _____.
 - a. ligaments
 - b. joints
 - c. tendons

Justification-

5. Which muscles are under your conscious control?
 - a. cardiac muscles
 - b. involuntary muscles
 - c. smooth muscles
 - d. skeletal muscles

Justification-