

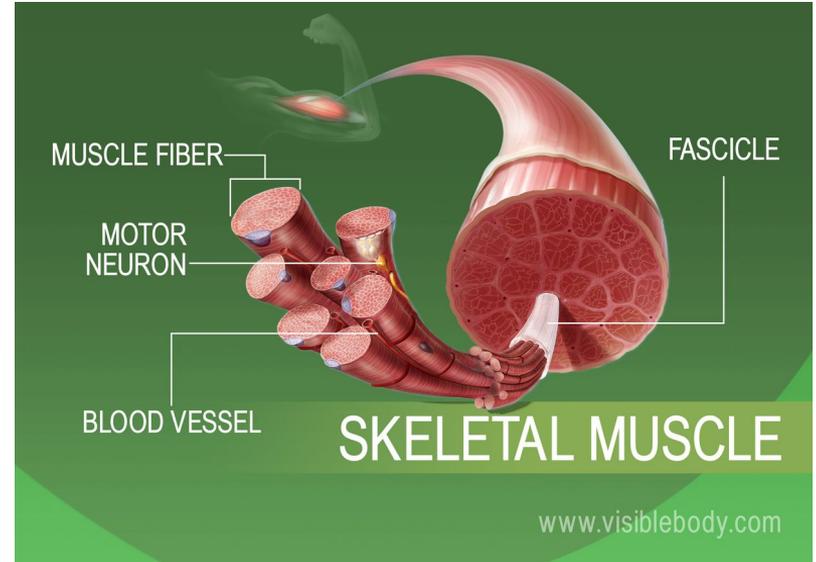
Aim: SWBAT differentiate between the different skeletal muscles and understand what they do.

Do Now:

- A) What is the strongest muscle in the human body?
- B) Does it differ from person to person?
- C) What other muscles do you know in the body?

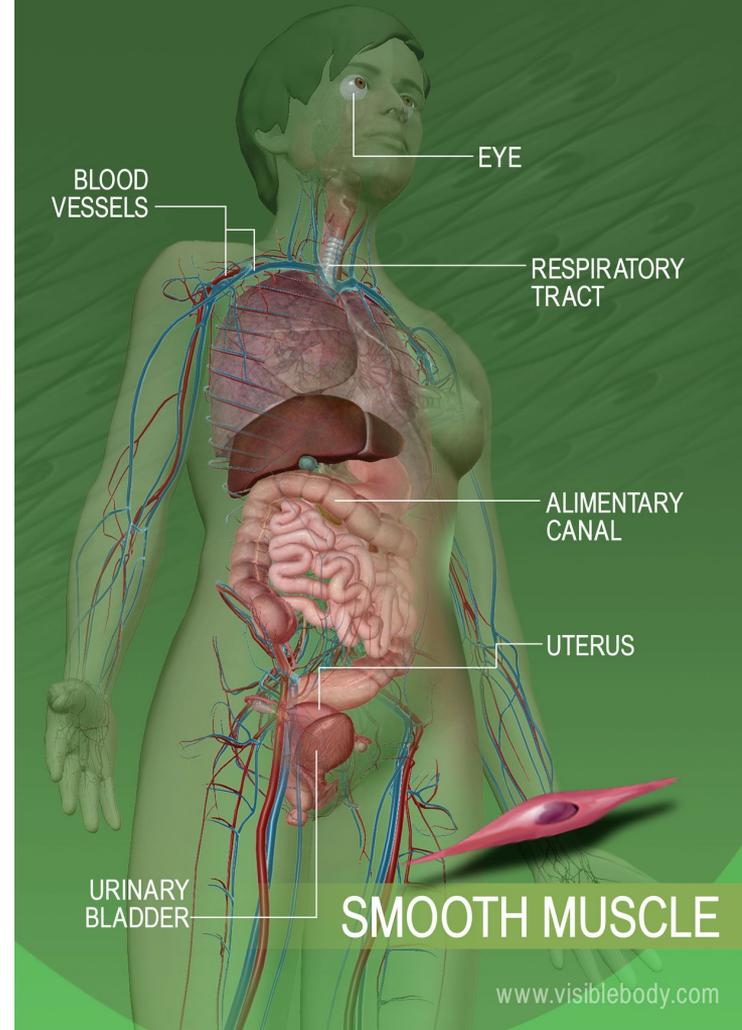
Skeletal Muscle

- Skeletal muscles attach to and move bones by contracting and relaxing in response to voluntary messages from the nervous system.
- Skeletal muscle tissue is composed of long cells called muscle fibers that have a striated appearance.
- Muscle fibers are organized into bundles supplied by blood vessels and innervated by motor neurons.



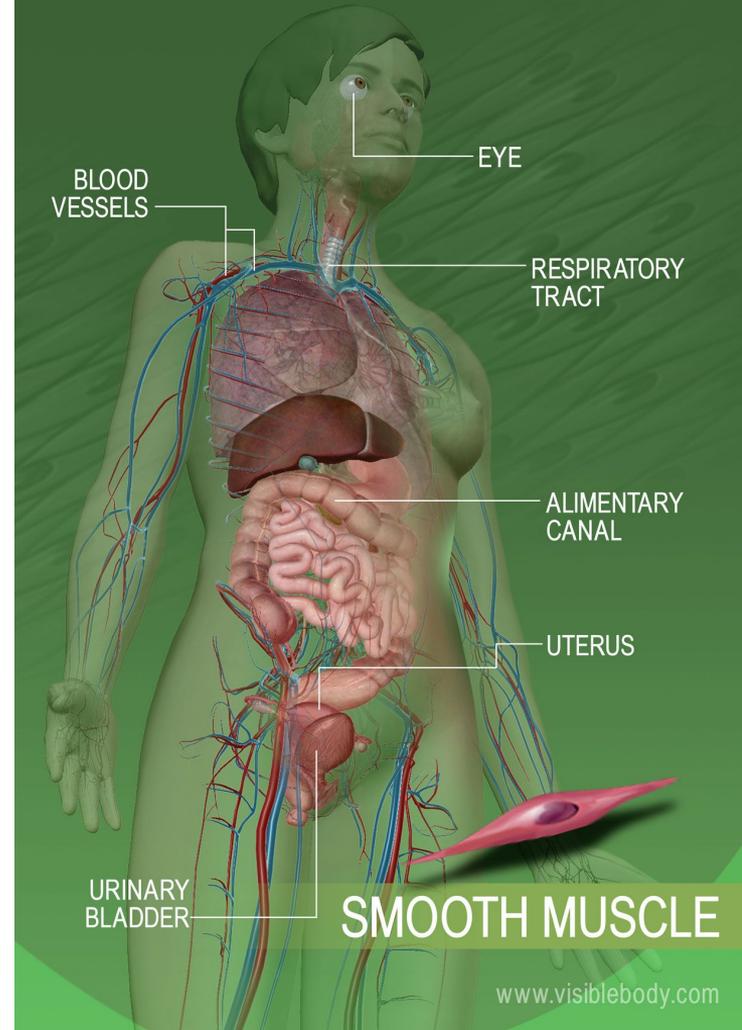
Smooth Muscle

- Smooth muscle is found in the walls of hollow organs throughout the body.
- Smooth muscle contractions are involuntary movements triggered by impulses that travel through the autonomic nervous system to the smooth muscle tissue.
- The smooth muscle of the alimentary canal (the digestive tract) facilitates the peristaltic waves that move swallowed food and nutrients.



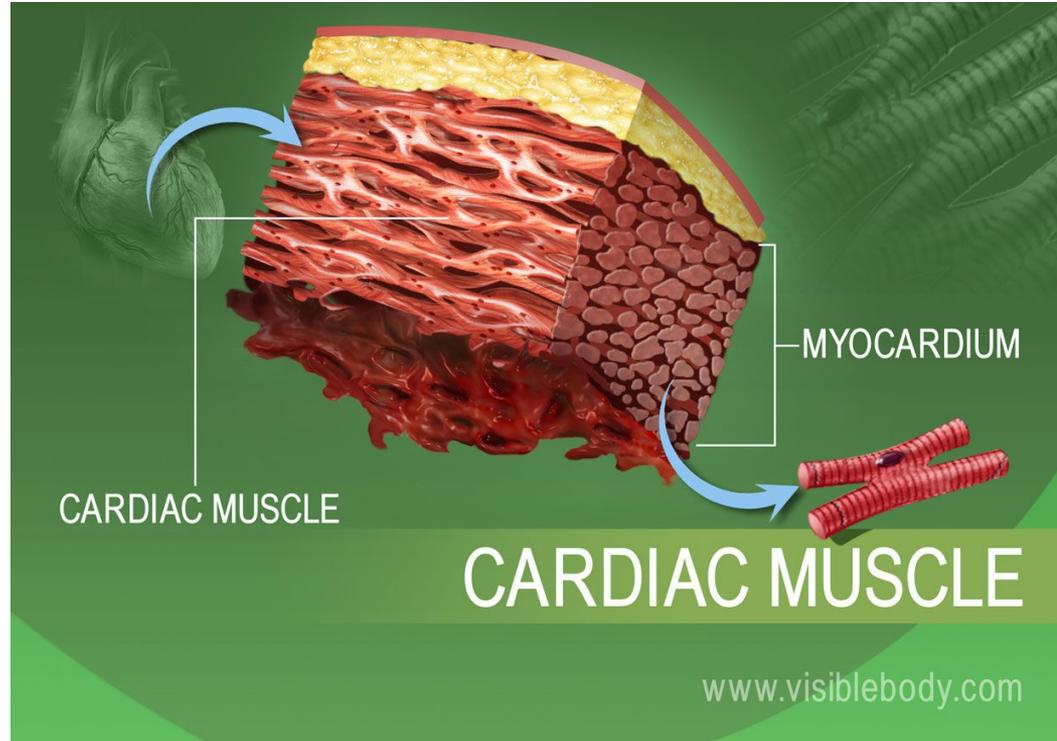
Smooth Muscle (cont)

- In the eye smooth muscle changes the shape of the lens to bring objects into focus.
- Artery walls include smooth muscle that relaxes and contracts to move blood through the body



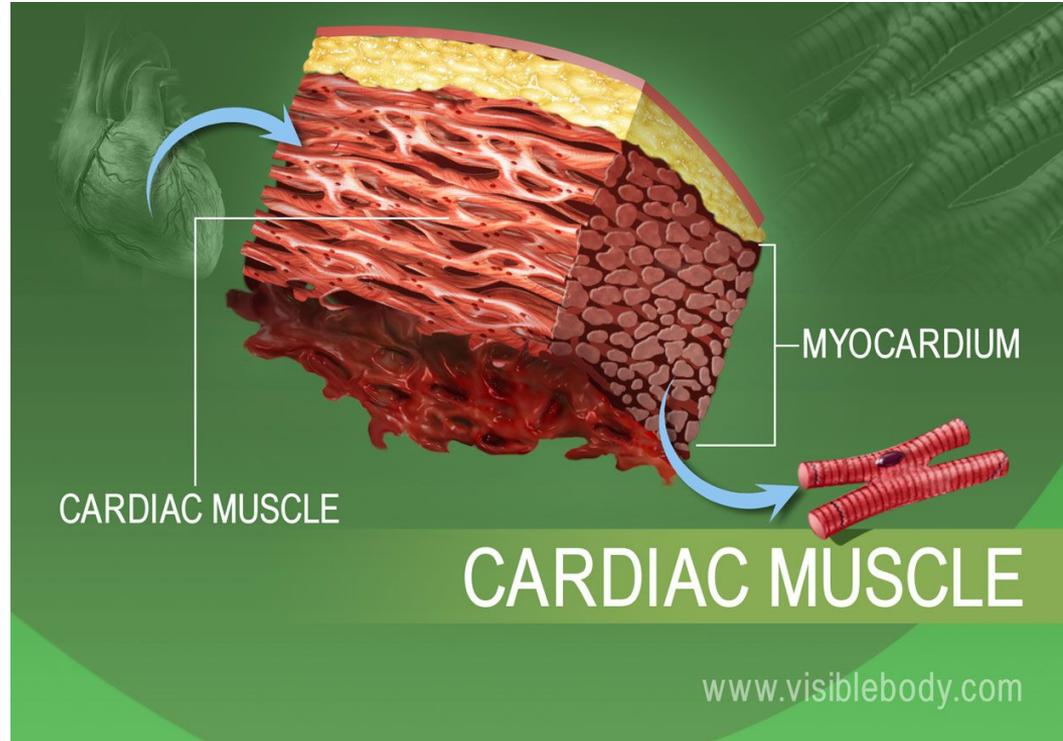
Cardiac Muscle

- The heart wall is composed of three layers.
- The middle layer, the myocardium, is responsible for the heart's pumping action.
- Cardiac muscle, found only in the myocardium, contracts in response to signals from the cardiac conduction system to make the heart beat.



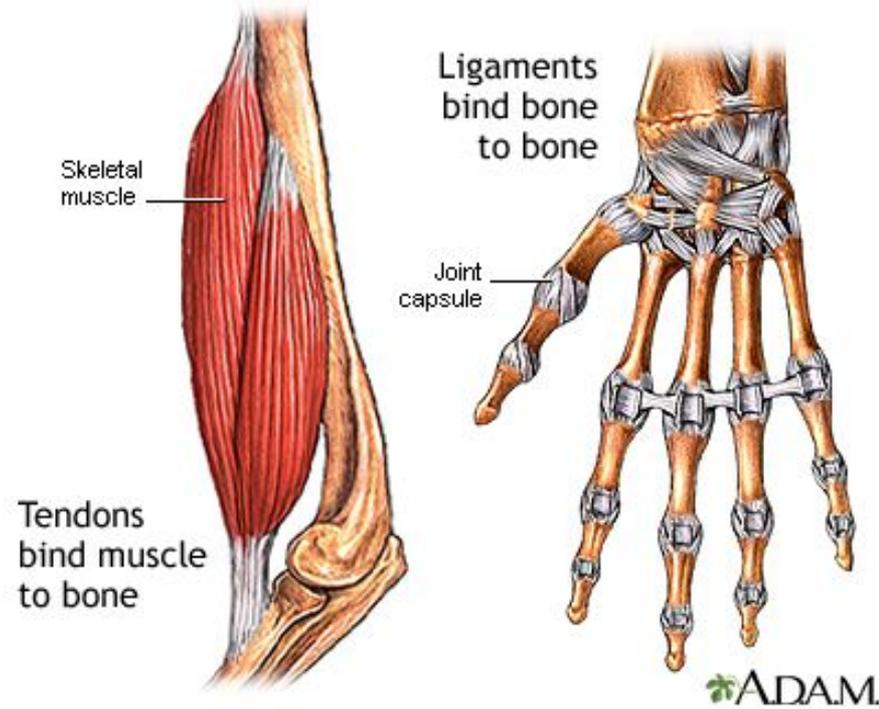
Cardiac Muscle (cont)

- Cardiac muscle is made from cells called cardiocytes.
- Cardiocytes are branched, allowing them to connect with several other cardiocytes, forming a network that facilitates coordinated contraction.



Tendon Vs Ligament

- A tendon is a fibrous connective tissue which attaches muscle to bone. Tendons may also attach muscles to structures such as the eyeball. A tendon serves to move the bone or structure.
- A ligament is a fibrous connective tissue which attaches bone to bone, and usually serves to hold structures together and keep them stable.



Try this...

Bend your middle finger and place the centre section on a table or hard surface. You will be able to lift your thumb, index, and little finger without moving your middle finger. But it is impossible to lift your ring finger.

What is happening?

The tendons in your fingers are independent from one another apart from the ones in your middle and ring finger. These tendons are connected, so that when your middle finger is folded down you cannot move your ring finger. It feels like your ring finger is stuck!

