

Muscle tissue

Muscle tissue is composed of cells specialized for contraction. Muscle is classified into three types according to their structure and function:

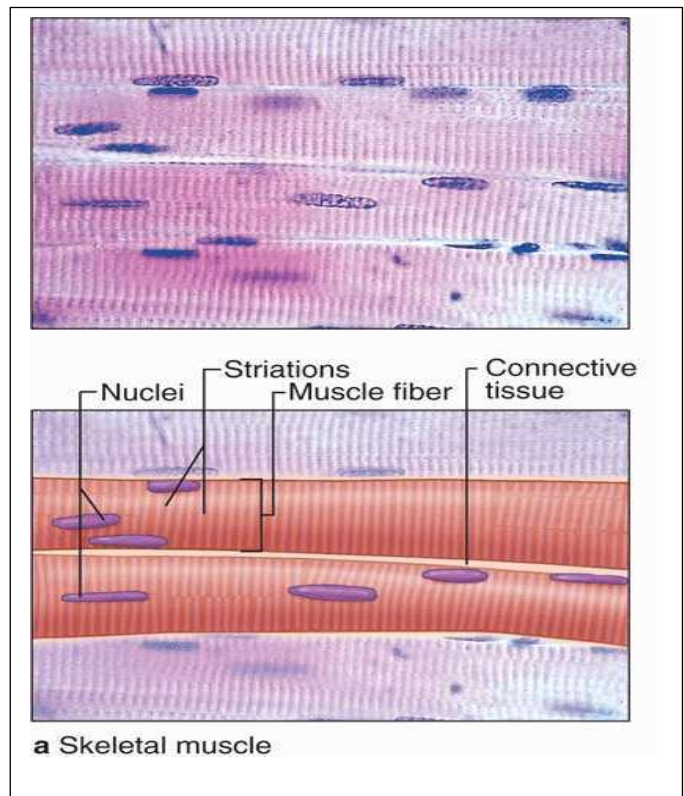
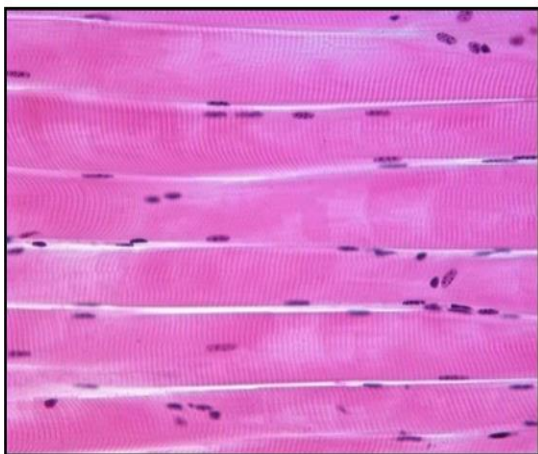
- Skeletal and cardiac muscle cells are called **striated** because they show an alternating series of bands.

The terms **muscle cell** and **muscle fiber** are synonymous.

Skeletal Muscle

Skeletal muscle fibers are

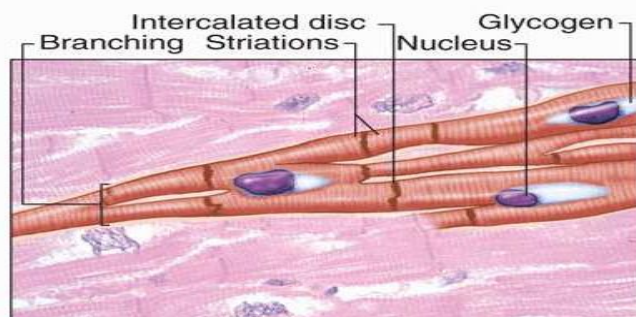
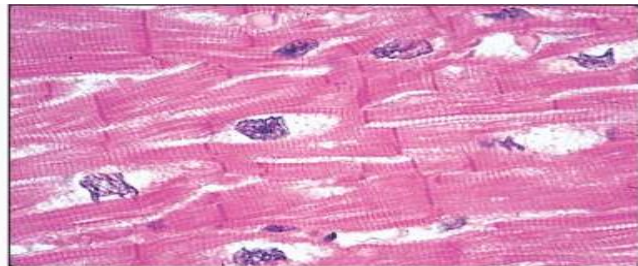
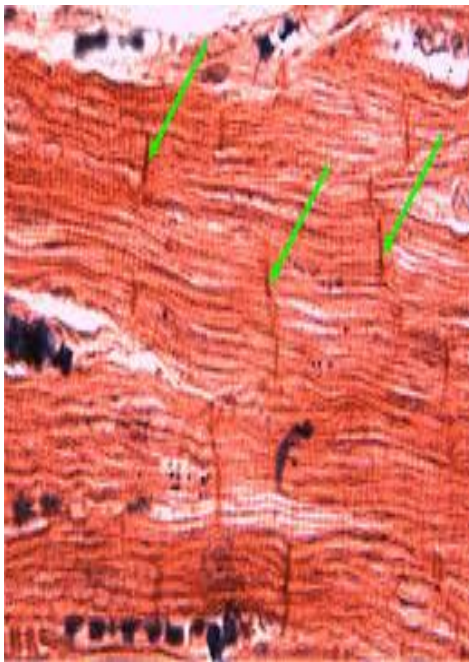
- 1- long cylindrical.
- 2- multiple peripheral nuclei.
- 3- striated.
- 4- voluntary control.



Cardiac Muscle

Cardiac muscle are

- 1- short branching fibers.
- 2- have a single, centrally located nucleus.
- 3- show the same striations as skeletal muscle.
- 4- involuntary control.
- 5- have the intercalated disc

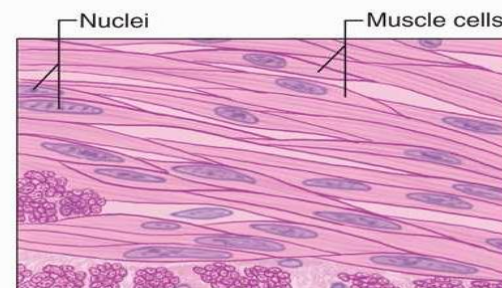
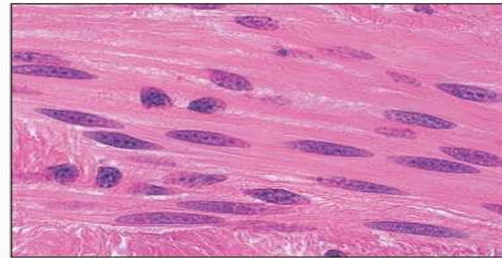
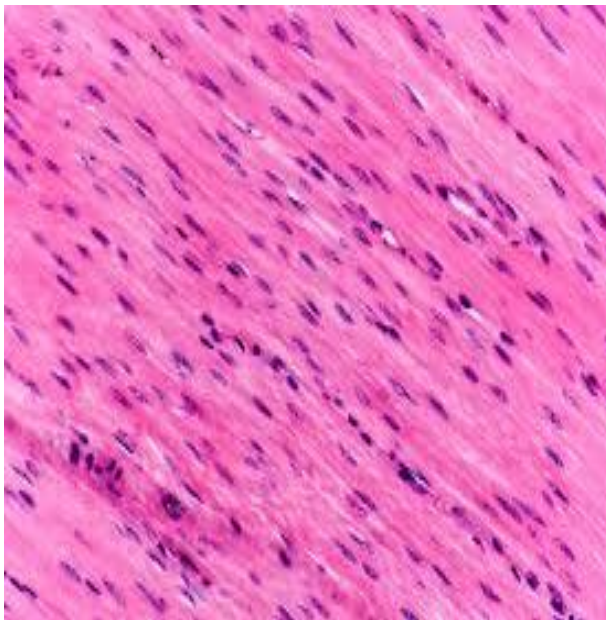


b Cardiac muscle

Smooth Muscle

Smooth muscle cells are

- 1- spindle-shaped.
- 2- have a single, centrally located nucleus.
- 3- involuntary control.
- 4- non-striated appearance gives rise to the name smooth muscle



c Smooth muscle

nerve tissue

Neurons = nerve cells

Nervous tissue is composed of

- neuron: The main cell type in nervous tissue.
- neuroglia: Supporting cells in nervous tissue.

Structure of Neurons

- . □ **Dendrites**- fibers that receive impulses and send signals toward the cell body.
 - . □ **Cell body**- central unit of neuron. Contains nucleus, cytoplasm.
 - . □ **Axon**- process that takes impulses away from the cell body.
- Neurons have at least 1 axon.

