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Muscle tissue

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

- **Skeletal muscle cells** - striated, voluntary control
- **Cardiac muscle cells** - striated, involuntary control
- **Smooth muscle cells** - nonstriated, involuntary control

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

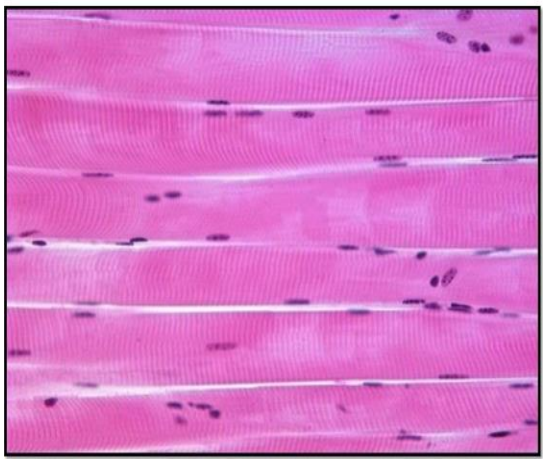
Skeletal muscle fibers are

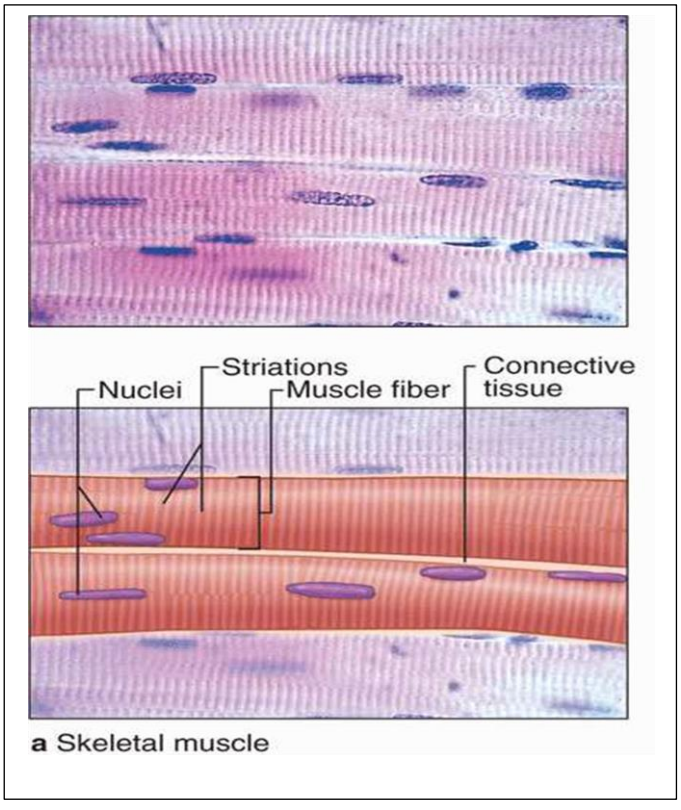
1- long cylindrical.

2- multiple peripheral nuclei.

3- striated.

4- voluntary control.





a Skeletal muscle

Cardiac Muscle

Cardiac muscle are

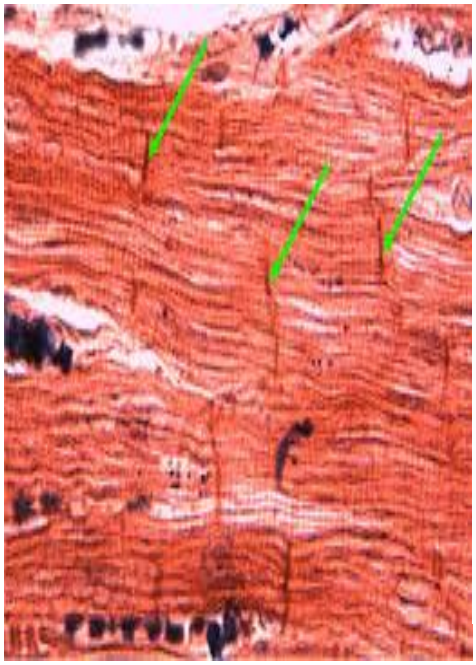
1- short branching fibers.

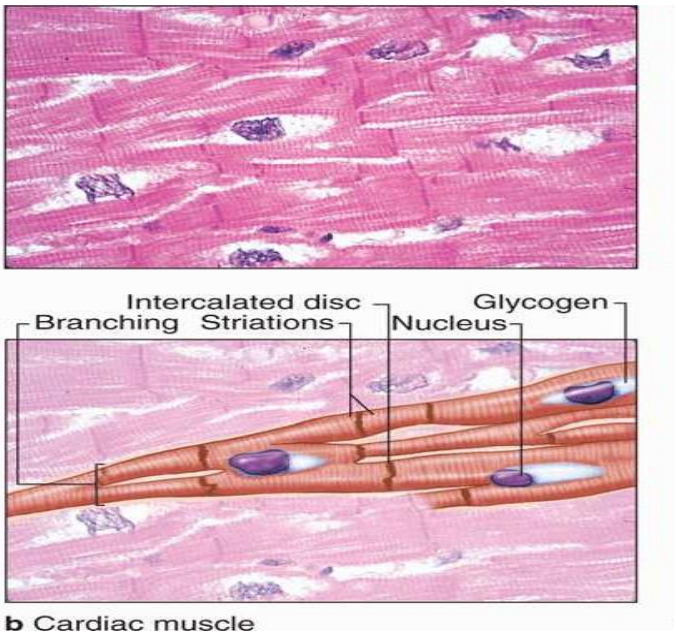
2- have a single, centrally located nucleus.

3- show the same striations as skeletal muscle.

4- under involuntary control.

5- have the intercalated disc





b Cardiac muscle

Smooth Muscle

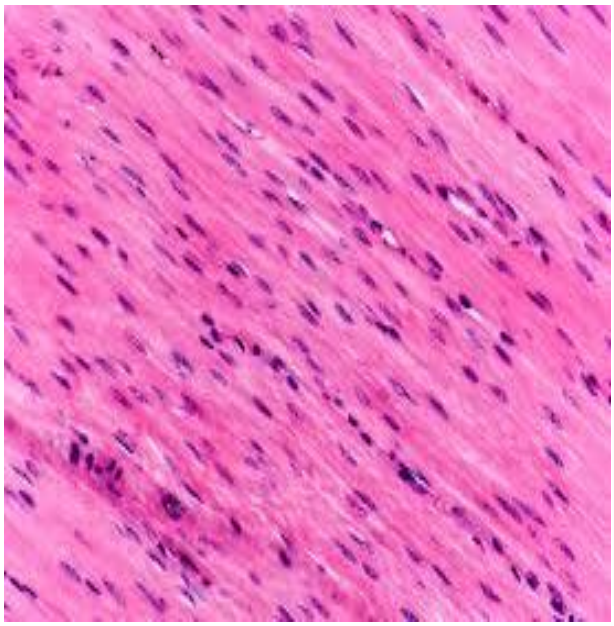
Smooth muscle cells are

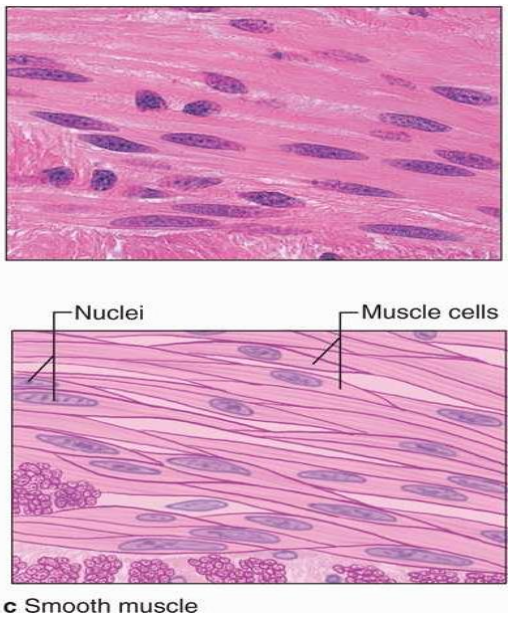
1- spindle-shaped.

2- have a single, centrally located nucleus.

3- under involuntary control.

4- nonstriated appearance gives rise to the name smooth muscle





c Smooth muscle