Almaaqal University
College of Health and Medical Techniques
Department of Medical Laboratory Techniques

Lectures in Histology laboratories

for 2nd year students

By

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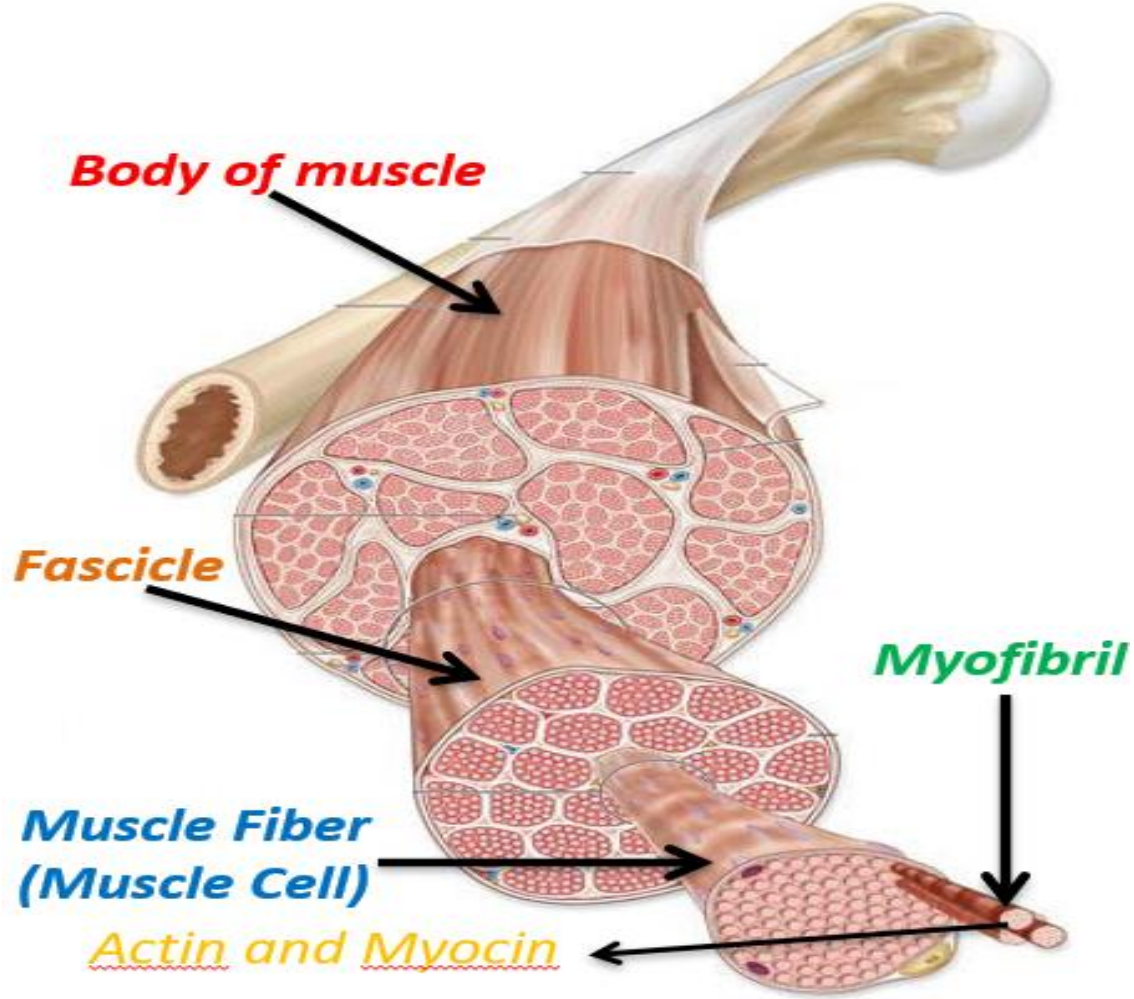
Lecture 5

Muscular tissue

• Muscle tissue

Muscle tissue is made up of muscle cells. That produces shrinkage and connective tissue that connects muscle cells to each other and carries nerve fibers and capillaries to them. Muscle cells are long and narrow, so they are called muscle fibers.



- ***There are more than 600 muscles in the Human Body***

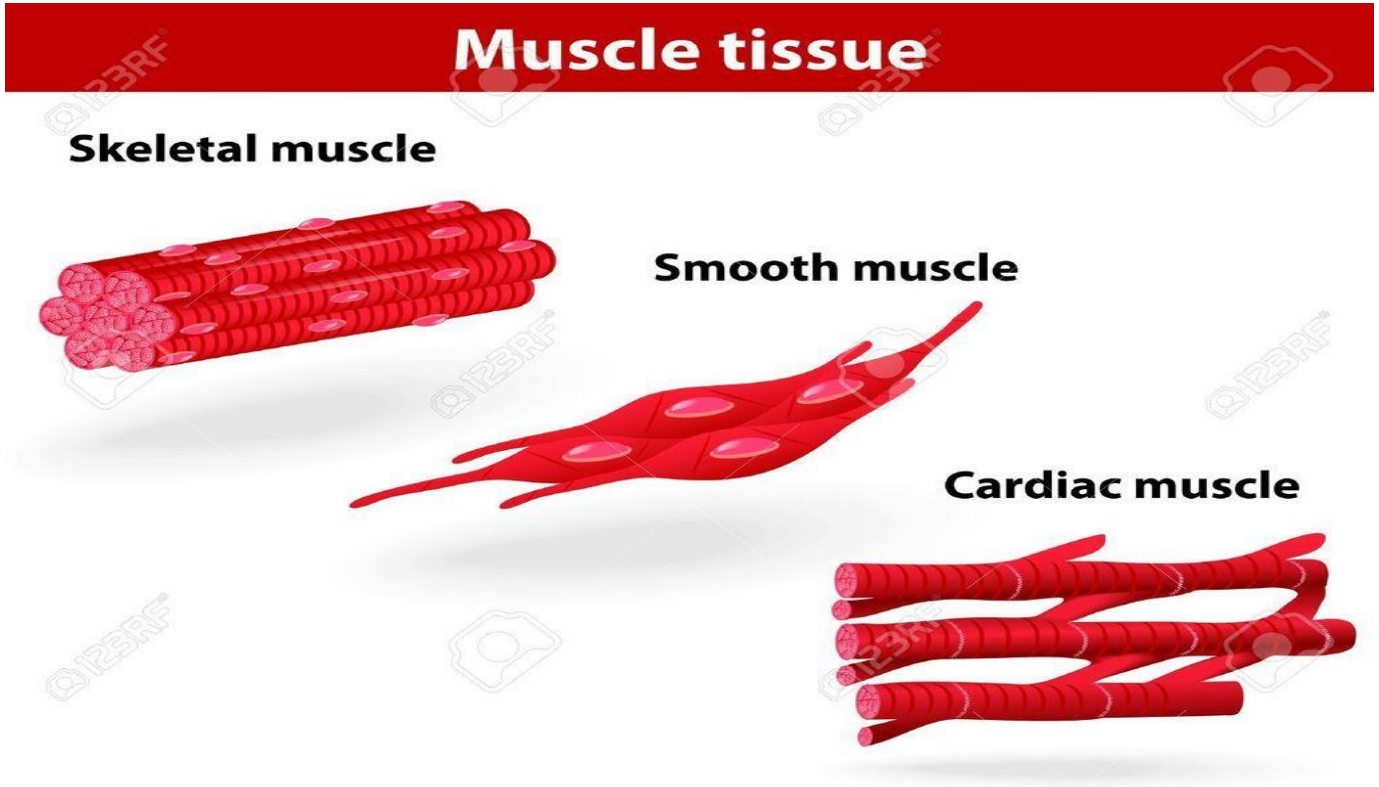
- *Needed for all types of movement
- *Needed to pump blood
- *Needed to breathe (diaphragm muscle).
- *Needed to produce body heat and regulate body temperature.
- *Needed to Protect internal organs.

According to its function and structure, muscle tissue is classified into:

1- Striated skeletal voluntary muscle (Skeletal muscle).

2. Smooth visceral involuntary muscle (Smooth muscle).

3- Cardiac striated involuntary muscle (Cardiac muscle).



• Skeletal muscle :

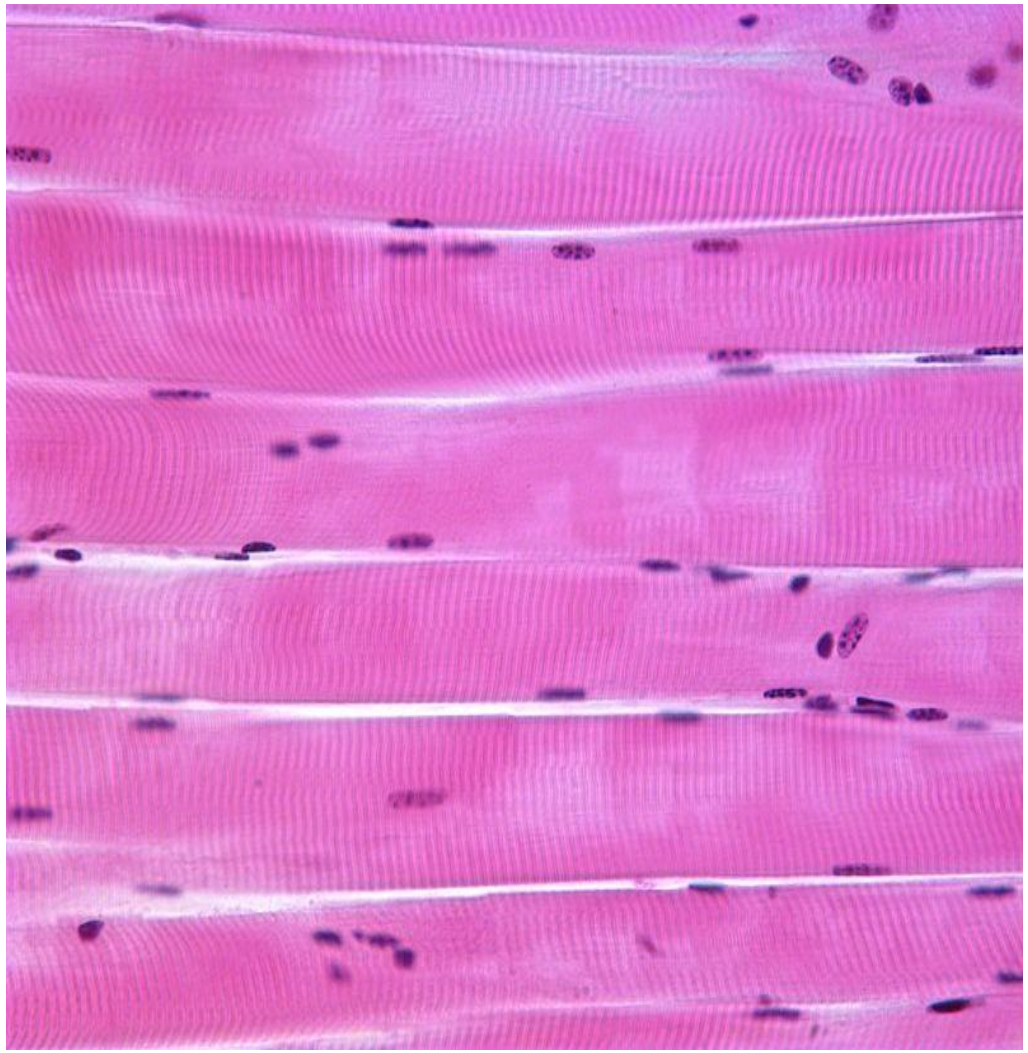
1- Size, large .

2- nuclei, multiple and peripheral.

3- Action, voluntary muscle.

4- fibers , Striated (regular arranged).

5- Responsible for body movement.



• Smooth muscle :

1- Size, small, shape, spindle .

2- nuclei , single and central.

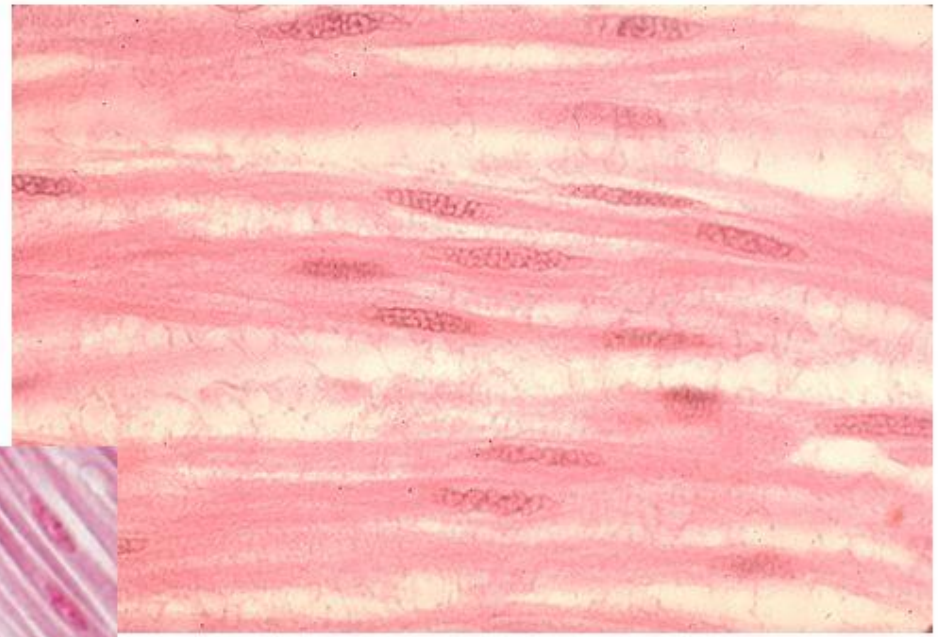
3- Action, involuntary muscle.

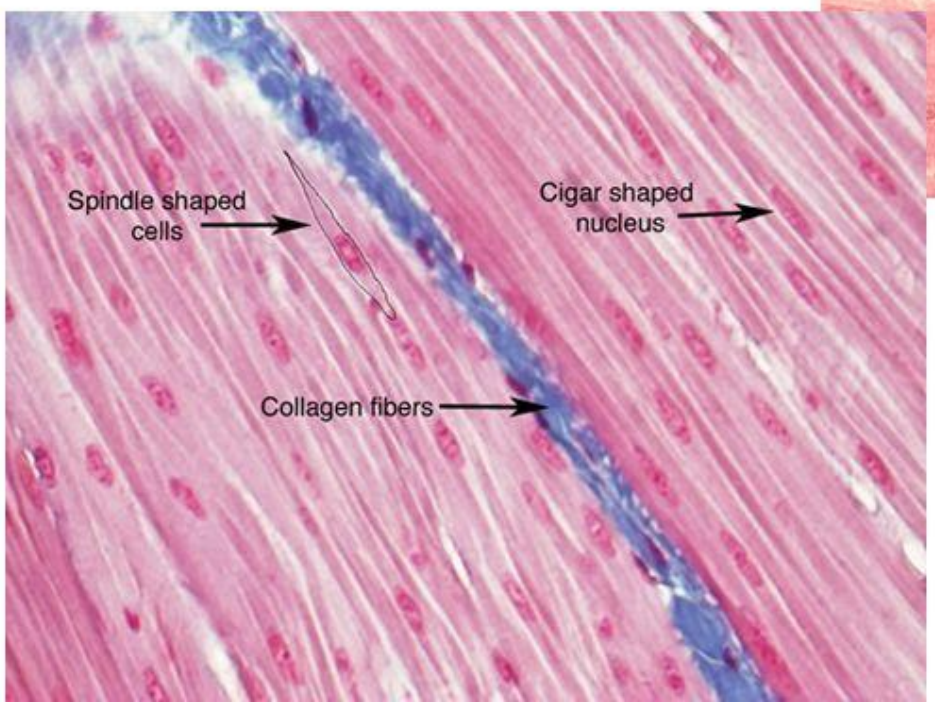
4- Its fibers , no Striated (Scattered).

5- location: It is visceral because it is found in the walls of blood vessels and hollow organs such as the intestine. And Therefore it is multifunctional.

Smooth Muscle

- Tapered ends
- No striations
- Single nucleus





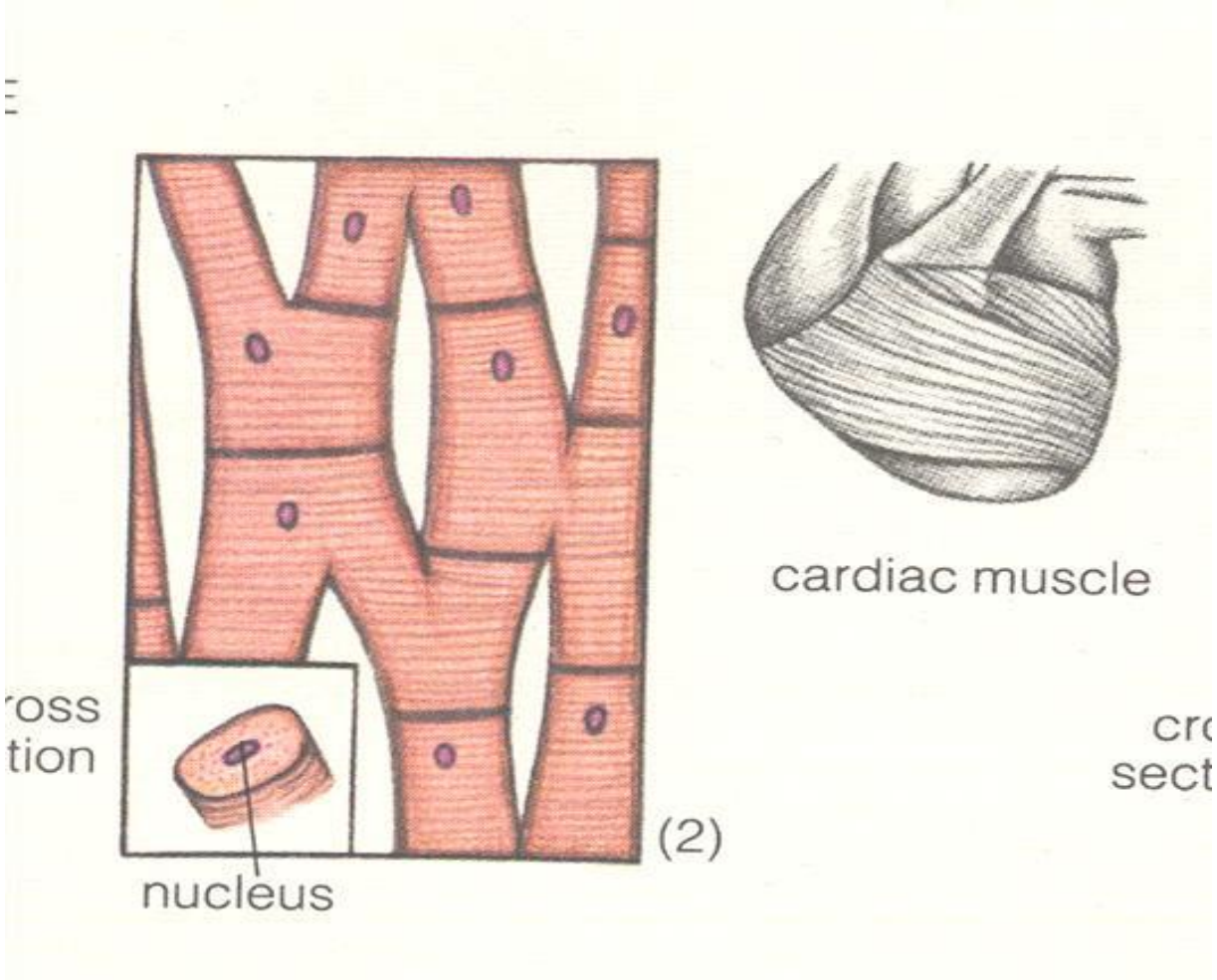
• Cardiac muscle :

1- Is the Striated, involuntary muscle of the heart.

2- nuclei , single, oval and location in the center of the fiber.

3- Neighboring cells connect with each other to form branching fibers, and these connections are called (intercalated disc), It appears as cross-sections between the fibers.

4- Its function, is to pump blood.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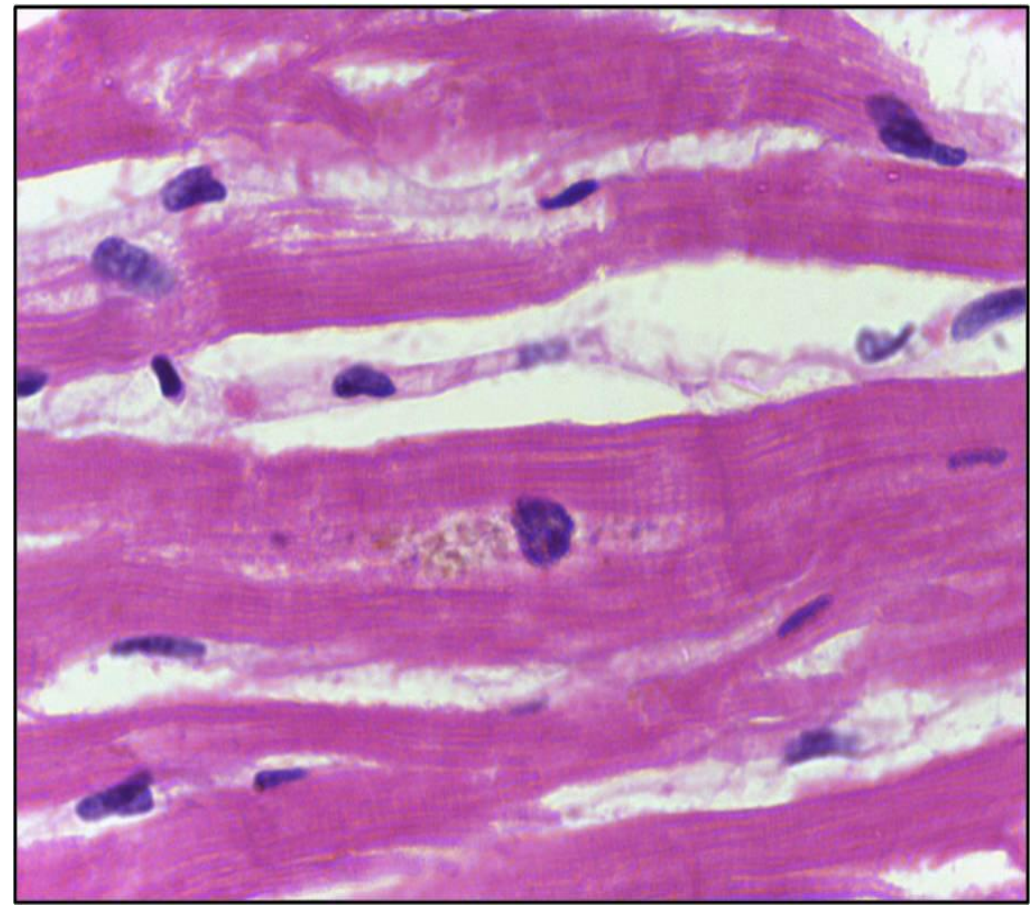

Thank you