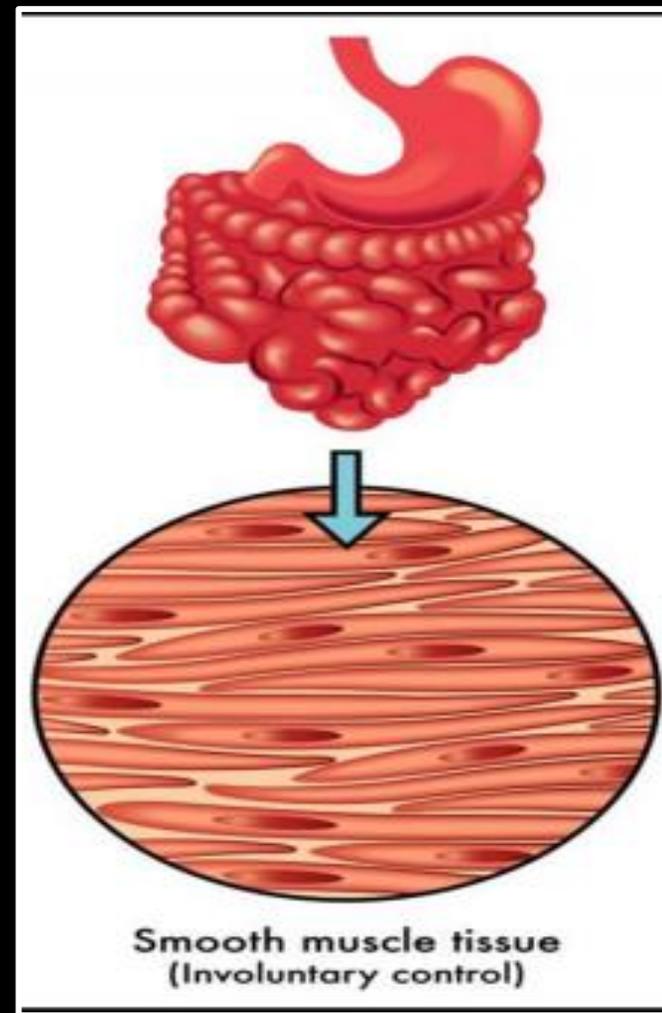




SMOOTH MUSCLE FIBERS

- **Non-striated.**
- **Involuntary Except:**
 - **Ciliary muscle**
 - **Special Muscle in urinary bladder**
- **Site:**
 - **Walls of the blood vessels.**
 - **Viscera of various systems (G.I.T., G.U.T., and Respiratory system)**
- **Arrangement:**
 - **Bundles:- Branching and anastomosing.**
 - **Separated by C.T.**
- Layers:**
 - **Circular.**
 - **Oblique.**
 - **Longitudinal.**
 - **Spiral.**



Smooth Muscle Fiber is formed of a single cell.

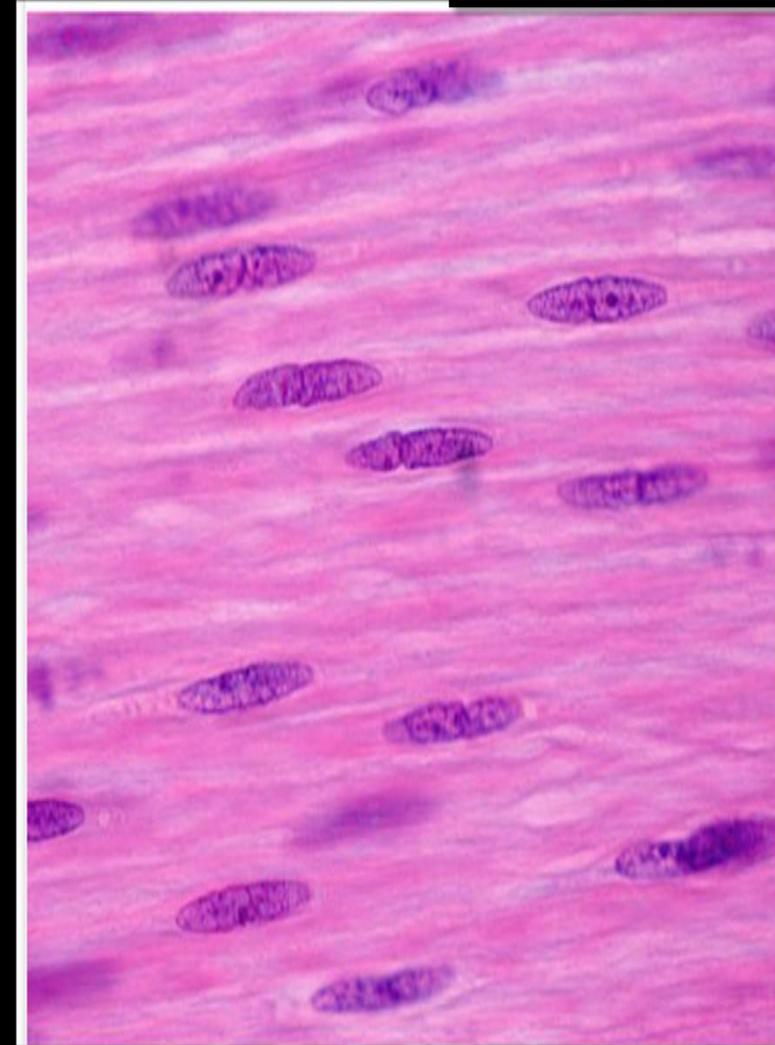
-Shape: spindle (fusiform).

-Size: 4-10 μm .

-Length: 30 μm in blood vessels, and up to 500 μm in pregnant uterus.

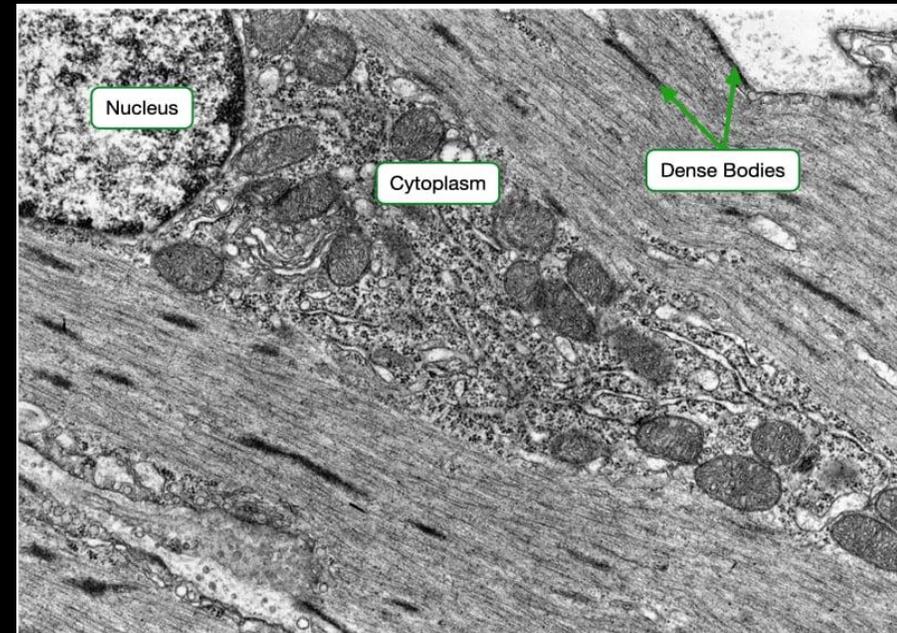
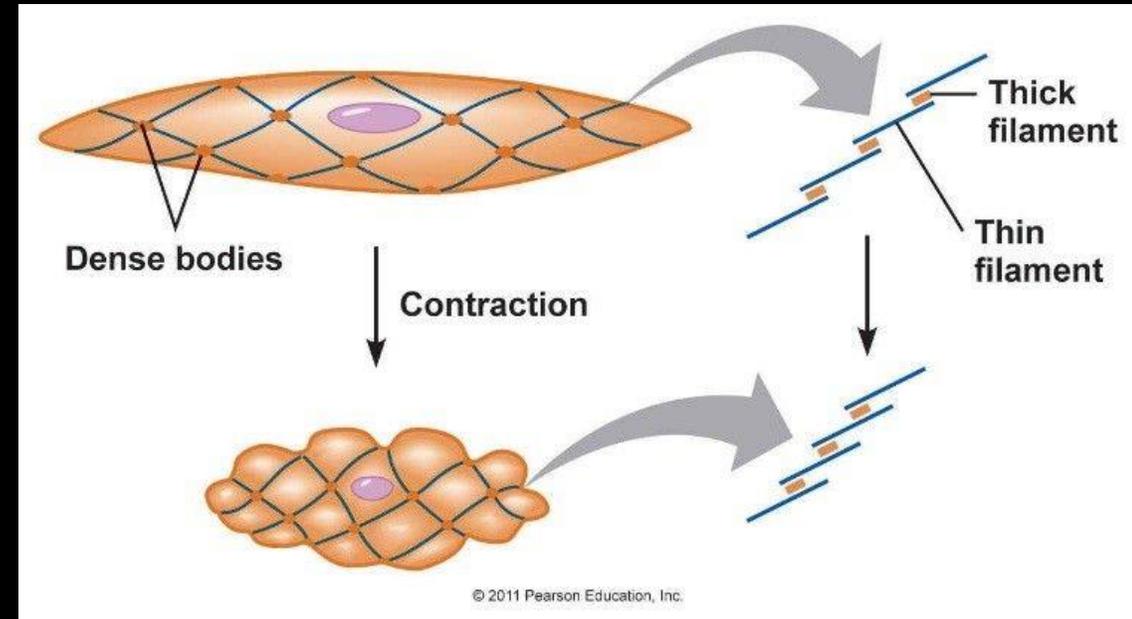
-Nucleus: single-central-oval or rod shape, in the widest part (middle part).

-Cytoplasm -: acidophilic non-striated.



EM

- **Homogenous except for some dark patches (dense bodies).**
- **It is full of large number of mitochondria, glycogen, RER, Golgi saccules and ribosomes.**
- **The myofibrils are not regularly arranged & no striation.**
- **Intermediate filaments (desmosomes and vimentin) are also present in addition to actin and myosin.**





	Skeletal muscle	Smooth muscle
striation	Distinct.	Non-striated
Branching	Do not branch.	Do not branch.
site	Muscles attached to skeleton. -Eye. -Tongue. -Pharynx. -Larynx	Wall of blood vessels. - Walls of organs in various systems (G.I.T., G.U.T. and respiratory system).
Shape	Elongated	Spindle (fusiform).
nuclei	Multiple peripheral flattened oval.	Central oval or rod-shaped
cytoplasm	Acidophilic with regular striations	Acidophilic non-striated.
fibrils	Thin + thick filaments	Thin + thick + intermediate filament
T tubules	Present	absent