

Introduction to Locomotion and Muscles

Movement

- Move body parts
- No change in position



Locomotion

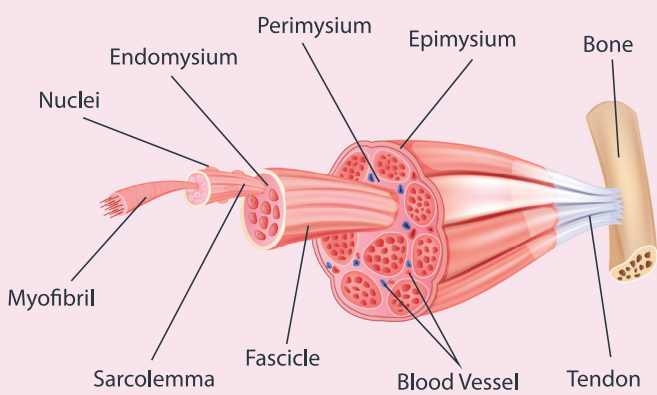
- Move body parts
- Change in position



Muscle

- Muscular system and skeletal system are responsible for the movement and locomotion
- Muscle is the unit of muscular system
- Muscles are made up of protein (actin, myosin, troponin) and fibre

Structure of a Skeletal Muscle



- **Epimysium:** connective tissue sheath surrounding muscle
- **Perimysium:** surrounds and protects fascicle
- **Fascicle:** bundle of muscle fibres
- **Endomysium:** surrounds muscle fibres
- **Myofibrils:** make up muscle fibres
- **Sarcomere:** unit of myofibril
- **Sarcolemma:** cell membrane of fibres
- **T-tubules:** extension from sarcolemma, conduct electrochemical impulses

Types of Movement

Amoeboid
(Pseudopodia)

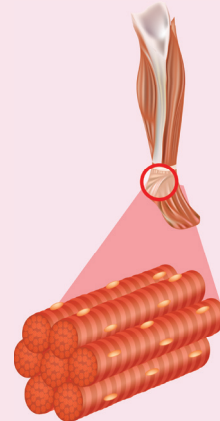
Ciliary
(Cilia)

Muscular
(Muscle-skeleton)

Types of Muscles

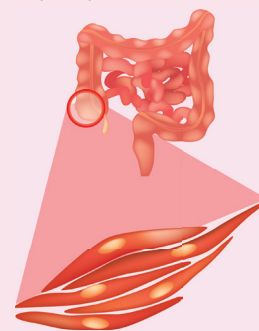
Skeletal Muscles

- Voluntary, responsible for posture and location
- Striations present, called as striated muscles
- Attached to bone through tendon
- Rich in mitochondria



Smooth Muscles

- Involuntary
- Found in the visceral organs, called as visceral muscles
- No striations
- Found in digestive, reproductive and urinary systems, blood vessels



Cardiac Muscles

- Striated involuntary muscles
- Found in heart
- Branched cells connected to adjacent cells via intercalated discs

