

**Note from SI:**

We are starting the muscular system! I highly suggest utilizing a lot of your lab visuals to make connections in this chapter.

**Reminders(Skeletal system):**

- Osteoclasts:
- **Growth hormone:**
- **Thyroid hormone:** watches activity of growth hormone
- **Testosterone:** a hormone that is produced used for maintaining and gaining bone mass in men  
  
\*Excess hormones cause abnormal growth\*
- **Parathyroid hormone:**
- Osteoblasts:

### **Vocab:**

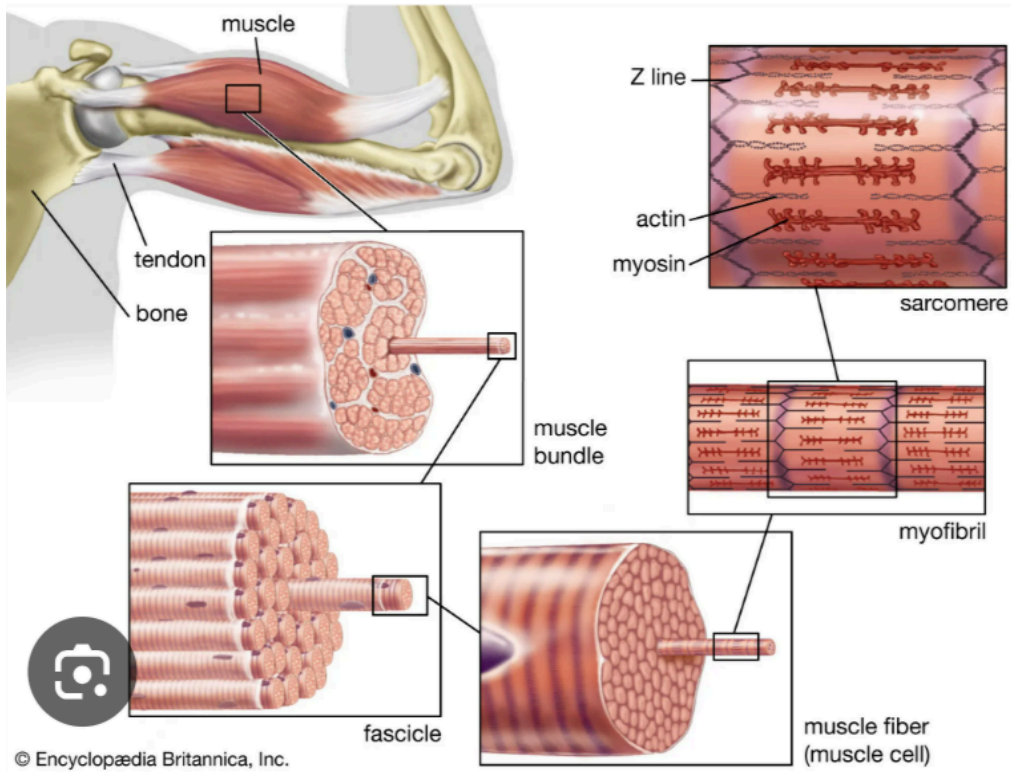
- Muscle tissue (3 types): skeletal, cardiac, smooth
- Skeletal muscle (voluntary):
  - Skeletal muscle fibers: contract to help move bones and keep body shape
  - Voluntary muscles:
  - Cardiac muscle (involuntary): only in heart, makes up heart walls, striated
  - Involuntary:
  - Smooth muscle (involuntary):
- Muscle tissue characteristics: excitability, contractility, elasticity, extensibility
- Muscle functions:
  - Skeletal muscle anatomy:
  - Actin filaments:
  - Myosin filaments:
  - Thick filaments:
  - Thin filaments:
  - Tropin:

### **Questions:**

- 1) What muscle is the longest of all muscles due to its vast contractibility?
  - a) Smooth muscle
  - b) Cardiac muscle
  - c) Skeletal muscle
  - d) Involuntary muscle
- 2) What form of muscle cannot be controlled due to its connections with the nervous system?
  - a) Voluntary muscle
  - b) Controlled muscle
  - c) Myofibril muscle
  - d) Involuntary muscle
- 3) What are examples of muscle tissue characteristics?
  - a) Excitability, contractility, flexibility, transitional properties
  - b) Excitability, contractility, elasticity, extensibility
  - c) Excitability, shrinking, stability, extensibility
  - d) Contractility, elasticity, stability, transitional properties
- 4) What is the plasma membrane of a muscle cell called?
  - a) Endomysium
  - b) Sarcoplasm
  - c) Sarcolemma
  - d) Myofibril

- 5) The perimysium surrounds which of the following structures?
- a) Whole muscle
  - b) Myofibril
  - c) Muscle fiber
  - d) Fascicle
- 6) The attachment of a muscle to a movable bone is known as the:
- a) Origin
  - b) Insertion
  - c) Joint
  - d) Ligament
- 7) The connective tissue covering surrounding an entire muscle is called the:
- a) Endomysium
  - b) Sarcolemma
  - c) Perimysium
  - d) Epimysium
- 8) What molecule stores oxygen in muscle cells?
- a) Hemoglobin
  - b) Myosin
  - c) Myoglobin
  - d) Glycogen

## Visuals:



## Structure of a Skeletal Muscle

