

# What is the Muscular System?

## Worksheet

The muscular system consists of skeletal, smooth, and cardiac muscle tissue, which together produce body movement, maintain posture, generate heat, and move substances through internal organs and vessels.

## Questions

1. Which muscle type is striated and voluntary?
  - A) Smooth
  - B) Cardiac
  - C) Skeletal
  - D) None of the above
2. What structure allows cardiac muscle cells to contract in sync?
  - A) Sarcomeres
  - B) Intercalated discs
  - C) Tendons
  - D) Fascicles
3. Which muscle type lines the walls of the stomach and intestines?
  - A) Skeletal
  - B) Cardiac
  - C) Smooth
  - D) Striated voluntary
4. Which of these is NOT a function of the muscular system?
  - A) Producing movement
  - B) Maintaining posture
  - C) Generating heat
  - D) Producing red blood cells
5. You decide to lift a dumbbell. Which muscle type contracts, and what are its key features?
6. Food moves through your intestines without you thinking about it. Which muscle type is responsible?
7. Your heart keeps beating rhythmically your whole life without rest. Which muscle type and why is it fatigue-resistant?
8. Define: What are the three types of muscle tissue?
9. Define: Which muscle type is voluntary?
10. Define: What connects adjacent cardiac muscle cells?

## Answer Key

1. C) Skeletal - Skeletal muscle is striated and under conscious control.
2. B) Intercalated discs - Intercalated discs electrically couple adjacent cardiac cells.
3. C) Smooth - Smooth muscle lines hollow organ walls and drives peristalsis.
4. D) Producing red blood cells - Red blood cell production is a function of bone marrow, not muscle.
5. Lifting a weight requires voluntary, conscious control skeletal muscle contracts it is striated, multinucleated, and attached to bone by tendons.
6. Peristalsis in the gut wall is involuntary smooth muscle contracts in coordinated waves it is non-striated, spindle-shaped, with a single nucleus per cell.
7. The heart wall is made of cardiac muscle cardiac cells are striated and joined by intercalated discs for synchronized contraction an enormous number of mitochondria make it highly resistant to fatigue.
8. Skeletal, smooth, and cardiac muscle.
9. Skeletal muscle - under conscious, somatic nervous control.
10. Intercalated discs, which allow synchronized, rapid electrical signaling.

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