

Section 36-2 The Muscular System (pages 926-931)

Key Concepts

- What are the three types of muscle tissue?
- How do muscles contract?
- Why is exercise important?

Types of Muscle Tissue (pages 926-927)

1. List the three different types of muscle tissue.
 - a. _____
 - b. _____
 - c. _____
2. Is the following sentence true or false? Each type of muscle has the same function.

3. Is the following sentence true or false? Skeletal muscles are usually attached to bones.

4. Circle the letter of each sentence that is true about skeletal muscles.
 - a. They have striations.
 - b. Most of them are consciously controlled by the central nervous system.
 - c. Their cells have just one nucleus.
 - d. Their cells are long and slender.
5. Circle the letter of each sentence that is true about smooth muscle cells.
 - a. They are spindle-shaped.
 - b. They can function without nervous stimulation.
 - c. They have two or more nuclei.
 - d. They are connected by gap junctions.
6. What are three functions of smooth muscles? _____

7. Is the following sentence true or false? Cardiac muscle cells always have two nuclei.

8. Complete the table that compares and contrasts the three types of muscle tissue.

TYPES OF MUSCLE TISSUE

Muscle Tissue Type	Striated/Not Striated	What It Controls
Skeletal	Striated	
	Not striated	Involuntary movements
Cardiac		

Muscle Contraction (page 928)

9. Circle the letter of the choice that lists the muscle structures from largest to smallest.
- a. Myofibrils, filaments, muscle fibers
 - b. Muscle fibers, myofibrils, filaments
 - c. Muscle fibers, filaments, myofibrils
 - d. Myofibrils, muscle fibers, filaments

Match each type of muscle filament with the protein it contains.

Type of Filament	Protein It Contains
_____ 10. thick	a. Actin
_____ 11. thin	b. Myosin

12. The filaments are arranged along the muscle fiber in units called _____.
13. Is the following sentence true or false? When a muscle is relaxed, there are only thin filaments in the center of a sarcomere. _____
14. How does a muscle contract according to the sliding-filament model of muscle contraction? _____
15. The energy for muscle contraction is supplied by _____.

Control of Muscle Contraction (page 929)

16. Complete the flowchart to show the missing steps in the stimulation of a muscle cell by a neuron.

