

## chapter 9

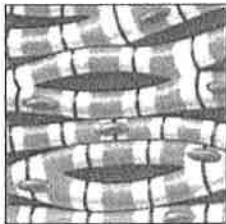
# MUSCULAR SYSTEM

*The body contains over 600 muscles, which comprise about 40 percent of an adult's body weight.*

Muscles are a unique form of tissue that transform energy into motion. Everything your mind conceives is transmitted to your muscles to perform. The words you speak, the expression on your face, the motion of your fingers as you write or play an instrument are possible only because of muscular movement. Even more, muscles operate behind the scenes to propel blood through blood vessels, drive the flow of air into and out of the lungs, digest food, and produce body heat. Indeed, this sophisticated tissue helps sustain life.

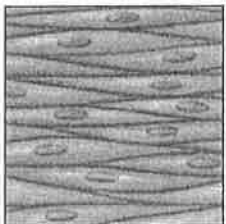
## Types of Muscle

The body contains three types of muscle: cardiac muscle, smooth muscle, and skeletal muscle.



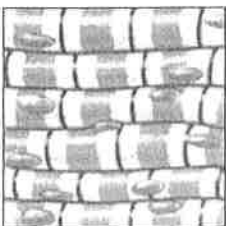
### Cardiac Muscle

- Found only in the heart
- Consists of short, branching fibers that fit together at **intercalated discs**
- Appears striped, or **striated**, when viewed under a microscope
- Is a type of **involuntary** muscle because it contracts automatically



### Smooth Muscle

- Found in the digestive tract, blood vessels, bladder, airways, and uterus
- Does not appear striped when viewed under a microscope, so is called **nonstriated**
- Known as **involuntary** muscle, because it contracts automatically (such as when the digestive tract processes food)



### Skeletal Muscle

- Attached to bone and causes movement of the body
- Known as **voluntary** muscle because it can be contracted at will
- Appears markedly **striated** when examined with a microscope

The remainder of this chapter will focus on skeletal muscle.