Skeletal Muscle Structure

Skeletal muscle consists of bundles of tiny fibers that run the length of the muscle. Most fibers are about 1 1/5 inches (3 cm) long and 1/500 inch (0.05 mm) wide.

A skeletal muscle cell is called a **muscle fiber.**

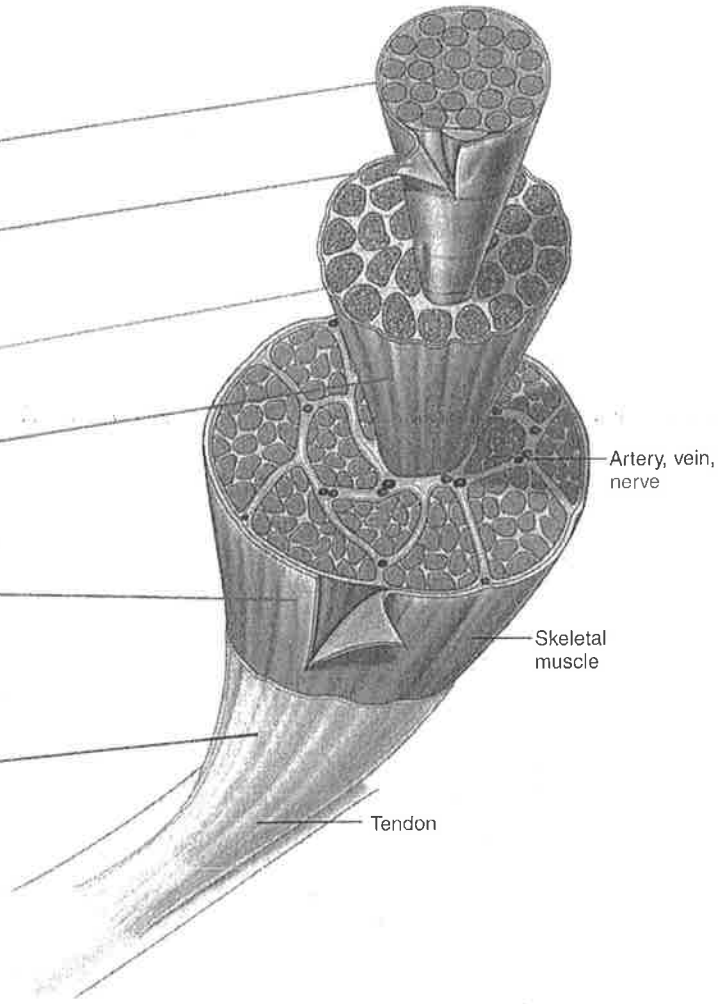
A delicate connective tissue called **endomysium** covers each muscle fiber.

Muscle fibers are grouped in bundles called **fascicles.**

A sheath of tougher connective tissue called the **perimysium** encases the fascicles.

Still another layer of connective tissue, called the **epimysium,** surrounds the muscle as a whole and binds all the muscle fibers together.

Connective tissue called **fascia** surrounds the muscle outside the epimysium. **Deep fascia** lies between muscles, while **superficial fascia** (hypodermis) resides just under the skin.



FAST FACT

Tendons and aponeuroses are so strong that they rarely break, even by forces strong enough to break a bone or tear a muscle. They can, however, be pulled away from a bone.

The Body AT WORK

Skeletal muscle may attach to a bone in one of two ways: direct attachment or indirect attachment.

- *In **direct attachment**, muscle fibers merge with the periosteum of the bone, forming a strong attachment.*
- *In **indirect attachment**, the epimysium extends past the muscle as a tendon (a strong, fibrous cord). The tendon then merges with the periosteum.*

*Occasionally, instead of attaching to bone, a muscle attaches to another muscle. In these instances, the epimysium extends past the muscle as a flat, broad tendon called an **aponeurosis.** The aponeurosis then fuses with the covering of the other muscle. Occasionally, aponeuroses also attach to bone.*