

INTRODUCTION

Organization is one of the features of living things. You have already discovered that living cells are highly organized. Most complex organisms carry that organization several steps further. Today you will study animal tissues, the basic materials from which organs are built.

PART A — MUSCULAR TISSUE

Your instructor may choose to show Kodachromes of the tissues before you begin to examine the prepared slides.

The cells that make up muscular tissue contain contractile fibers, and the contraction of these accounts for the movement associated with animals.

There are three types of vertebrate muscles: **skeletal**, **smooth**, and **cardiac**.

1. OBTAIN A MICROSCOPE.
2. OBTAIN A PREPARED SLIDE LABELED SKELETAL OR STRIATED MUSCLE. Examine the slide and compare with Figure 1. You may have to adjust both the light contrast and fine focus to distinguish the striations. Remember: Always begin with 4x objective. If there is a three-dimensional model on demonstration table, study it.

Striated muscle is the mover of your torso, arms, legs, jaws, and tongue. When finished with the slide, return it to its source.

3. OBTAIN A PREPARED SLIDE LABELED CARDIAC MUSCLE. Examine the slide and compare with the illustration. Note that striations are present as in skeletal muscle. However, the cells appear to be branched, and are separated on the ends by intercalary discs. Cardiac muscle is involuntary, i.e. not subject to voluntary control.

What is the function of cardiac muscle?

When finished with the slide, return it to its source.

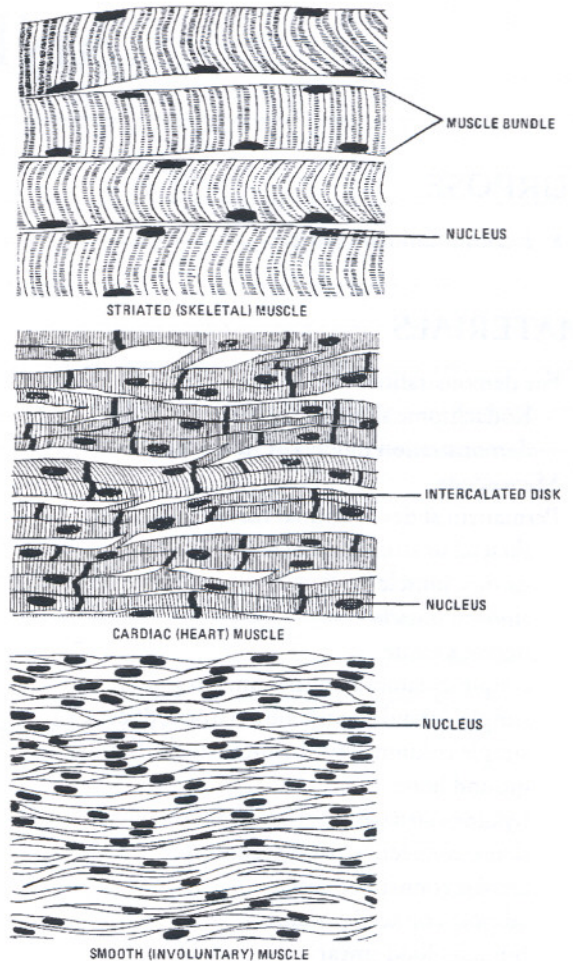


Figure 1. Muscle tissue.