

# CORNELL NOTES

Name: \_\_\_\_\_

Period: \_\_\_\_\_

Class: \_\_\_\_\_

Date: **19 and 22 April**

**Topic: Muscular System**

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Skeleton, joints, cartilage, tendons, ligaments, and muscles all for movement.

Types of Muscle

Muscles are bundles of cells and fibers.  
Muscles work in a very simple way. All they do is tighten up - that is, contract - and relax.  
You have two sets of muscles attached to many of your bones which allow them to move.  
There are 630 active muscles in your body and they act in groups.  
Muscles can only pull. They never push.

Skeletal Muscle:

These muscles contract to move bones.  
Tough cords of connective tissue attach skeletal muscle to bone. Your brain controls the movement of these muscles and they are called voluntary muscles.  
They are controlled by nerves that tell it to contract or relax. They also work in pairs to bend and straighten parts of your body - When one contracts the other relaxes.  
Examples are biceps and triceps. When biceps contract, the triceps relax and vice versa.  
These muscles work in groups to help you move.  
Skeletal muscles work together with bones and joints to form lever systems.

Smooth Muscle:

Smooth muscles are involuntary muscles. These are muscles that are not under your conscious control.  
Found in the walls of many organs (intestines, esophagus, stomach)

Cardiac Muscle:

Cardiac muscles are also involuntary muscles. These muscles are found in your heart. Your heart beats without your controlling it. This muscle beats from the moment

It is formed to the moment a human dies.

The cells of cardiac muscle tissue are striated—that is, they appear to have light and dark stripes when viewed under a light microscope.

### Cornell Notes Continued:

#### Functions:

1. Movement – contractions of muscles expend energy.
2. Maintenance of posture and body position, holding Up the body.
3. Helps move substances inside the body – blood and Food from one part of the body to the other.
4. Generation of body heat – rise in body temperature And sweating.

**Muscle Metabolism and Fatigue:** Muscles use aerobic respiration (oxygen) to Produce energy. Mitochondria in muscle cells do this. When muscles get tired, they produce lactic acid, which Causes them to be sore.

#### Diseases of the Muscle:

**Muscle strains and tears:** Injuries to the muscle. Takes time To heal.

**Myocarditis:** Inflammation of the heart muscle usually Caused by a viral infection

**Tendonitis:** Inflammation of the tendons

**Muscular Dystrophy:** Genetic disorder of the muscle fibers, Causes the muscles to weaken.

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