

Life Science 7

Chapter 22-3

“The Muscular System”

p 588-591

Objectives

- List the major parts of the muscular system
- Describe the different types of muscle.
- Describe how skeletal muscles move bones.
- Compare aerobic exercise with resistance exercise.
- Give an example of a muscle injury

Functions of the Muscular System

- maintain posture
- move bones
- move substances through the body
- maintain body heat

Types of Muscles

- **skeletal muscle**: _____
 - voluntary
 - has **striations**

Types of Muscles

- **smooth muscle**: _____
 - no striations
 - involuntary

Types of Muscles

- **cardiac muscle**: _____
 - only found in the _____

How Muscles Move Bones

- Muscles provide the force needed for movement.
 - a muscle _____ to provide the force (gets shorter)
 - since muscles can only get shorter, another muscle is needed if the reverse motion is desired (called the _____)
 - ex: _____ used for arm flexion, it's antagonist is the _____, which causes arm extension

- Bones provide a _____ for the force to act upon
- Muscles connect to bones through _____, which are made up of connective tissue

Exercising

- Like bones, muscles must be exercised to maintain strength
- If left alone, muscles can become _____!
- There are two types of exercise used for muscle development

Resistance Exercises

- Make use of heavy weights which force muscles to go into anaerobic respiration
- Used to build larger muscles, powerful muscles
- ex: _____, etc

Aerobic Exercises

- Involves exercises where muscles contract easily (low resistance)
- builds muscle endurance, and is excellent for your heart
- ex: running, walking, bike riding, skating, swimming

Muscle Injury

- **muscle strain**: (pulled muscle) occurs when a muscle is _____

- **tendinitis**: occurs when a tendon becomes _____, and _____

- **sprain**: not a muscle problem, _____

- ligaments connect _____ to other _____
- To avoid these injuries:
 - 1) make sure you don't _____ an exercise regiment at first
 - 2) do a proper _____ before exercising

Anabolic Steroids

- used to _____
- consists of hormones that resemble _____ (male hormone)
- threatens the _____, bone growth
- obviously, gives _____, so is banned by major sports