**Muscle Introduction Notes \***(Attach to ISN-61)

**MMHS Anatomy and Physiology**

[Three Types of Muscle Continued…]

3. **Cardiac or Myocardium**

* Found only in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_tissue.
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_with 1 nucleus and

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_discs.

* Involuntary (about \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ beats/day)
* Pacemakers (SA node of right \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_) artificially controls the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_of the heart.

**General Characteristics**

* \_\_\_\_\_\_\_\_ muscles in the human body
* Muscles makes up \_\_\_\_\_\_\_\_% of the body weight
* \_\_\_\_\_\_main types that make up the human body
* Viewed as “\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_” of the body
* Prefixes associated with muscles

myo- and mys- = “­\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_”

Sarco = “\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_”

Globin = “\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_”

**Muscle Properties**

* Muscles can only \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ or shorten.
* Muscles can’t \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, they only \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
* Muscle occur in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ pairs.

**Prime Mover:** causes the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ movement.

**Antagonist:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ or \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ a movement.

**Example:** Prime mover is the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_and the antagonist is the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

🡪Body building adds very little new \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ but instead adds \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. (these additions make muscles work more efficiently).

**The 3 Types of Muscle (***SKELETAL, SMOOTH, AND CARDIAC*)

1. Skeletal or Striated Muscle

 a. \_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ with many nuclei (=multinucleate)

 b. Under both \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_(shiver) movement.

**Tendons attach muscle to bone at 2 points.**

 a. Origin: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ muscle point (anchor)

b. Insertion: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ attachment point

**Skeletal Muscles occur in pairs that have opposing motion.**

a. Flexors: decrease the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ between body parts.

b. Extensors: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ the angle between body parts.

**Example:** The ***biceps brachii*** is the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and the ***triceps brachii*** is the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

 **Skeletal Muscle Properties**

4 Main Properties of Skeletal Muscles

1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_:shorten with \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_: will return to its \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_form.
3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_: responds to a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_(nerve)
4. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_: can be \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

2. Smooth Muscle

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ with 1 nucleus (uninucleate)
* Under \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Movement
* Located in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, urinary \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, and vascular system.
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_: the term for the rhythmic, synchronized \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of smooth muscle.