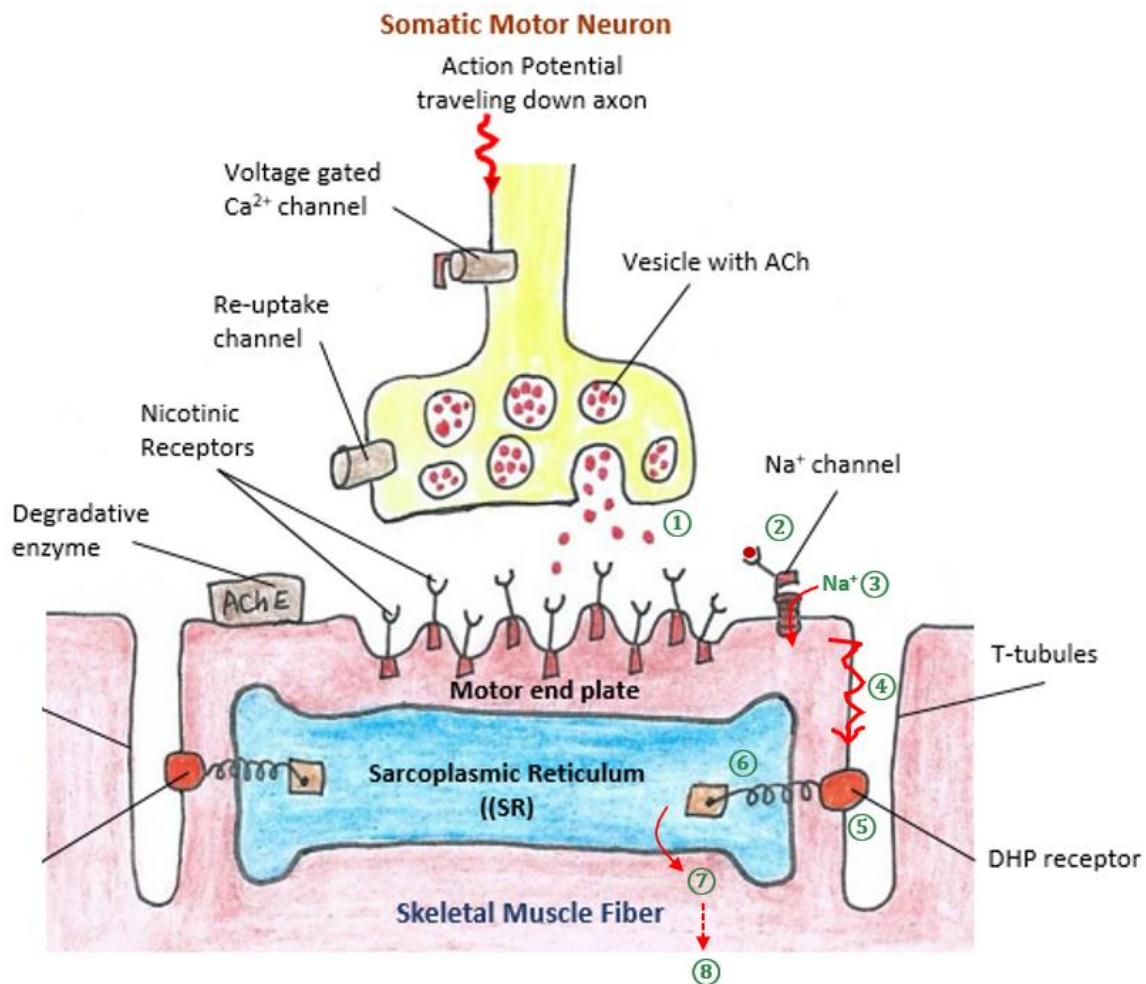


# Class/Lab Activity #6 Physiology

## A. Questions to Consider from the Skeletal Muscle Lecture

- What 4 **properties** do all muscle tissues have? Give a brief definition of each of these:
  - 1)
  - 2)
  - 3)
  - 4)
- The \_\_\_\_\_ controls skeletal muscle.
- It is primarily \_\_\_\_\_ Control that regulates cardiac muscle.
- The muscle in the walls of the bladder are \_\_\_\_\_ muscle.
- Give two other examples of smooth muscle in the body: 1) \_\_\_\_\_ and 2) \_\_\_\_\_.
- Do skeletal muscles cells have action potentials?  Yes  No
- What is a motor end plate of skeletal muscle? What does it contain?  
\_\_\_\_\_.
- Looking at the diagram below, start with ① being when ACh is released from a \_\_\_\_\_ motor neuron.





## B. Multiple Choice Questions to Consider for Skeletal Muscle Lecture

- How many different types of muscle are there in the human body?  
a) 502   b) 206   c) 5   d) 3   e) 2
- Muscle tissue that has a striped appearance is described as being: *(What are these patterns?)*  
a) elastic   b) non-striated   c) excitable   d) smooth   e) striated
- All muscle tissue has the following properties, except for:  
a) excitability   b) intercalated discs   c) elasticity   d) contractility   e) the need for ATP
- Thin and thick filaments of skeletal muscle are organized into functional units called \_\_\_\_\_.  
a) myofibrils   b) myofilaments   c) sarcomeres   d) T-tubules   e) motor units
- What are the three type of skeletal muscle?  
a) slow, intermediate, and fast twitch   b) smooth, striated, and cardiac  
c) endomysium, perimysium, and epimysium   d) sarcolemma, sarcoplasm, and sarcoplasmic reticulum
- What is the cell membrane of a muscle fiber called?  
a) myofibril   b) sarcoplasm   c) myofilament   d) sarcolemma   e) motor end plate
- The correct order for the largest to the smallest unit of organization in skeletal muscle tissue is:  
a) muscle fascicle, myofilament, muscle fiber, myofibril  
b) myoilament, myofibril, muscle fiber, muscle fascicle  
c) muscle fascicle, muscle fiber, myofibril, myofilament  
d) sarcomere, sarcoplasm, sarcolemma  
e) muscle fiber, muscle fascicle, myofilament, myofibril
- The \_\_\_\_\_ leaves the sarcoplasmic reticulum, and then binds to \_\_\_\_\_ in the sarcomere.  
a)  $\text{Ca}^{2+}$ , troponin   b)  $\text{Na}^{+}$ , tropomyosin   c)  $\text{K}^{+}$ , myosin   d)  $\text{Ca}^{2+}$ , tropomyosin   e)  $\text{Na}^{+}$ , troponin
- The **H-band**  
a) is actin and all the tropomyosin   b) disappears during relaxation of muscle  
c) contains myosin only, and no actin   d) contains actin only, and no myosin   e) b and c
- The \_\_\_\_\_ pulls the \_\_\_\_\_ off of the myosin binding sites on actin.  
a)  $\text{Ca}^{2+}$ , troponin   b) troponin, myosin   c) tropomyosin, troponin  
d) myosin, troponin   e) troponin, tropomyosin
- Which of the following statements about **myosin** of a skeletal muscle are true?  
1. the Z discs are attached to it   2. it has an ATP binding site on its head   3. it represents the I band  
4. it is attached to the M-line   5. troponin is attached to it   6. it has an actin binding site on its head  
a) 2, 4, 6   b) 1, 5, 3   c) 2, 4   d) 6, 2, 1, 5   e) 3, 2
- Fast-twitch muscle fibers have only one of the following features:  
a) high mitochondrial content   b) have a large diameter   c) have a small diameter   d) lots of myoglobin