

Unit 5 Guide – The Muscular System

Muscles to know (label) for the test:

Epicranium, frontal belly	Rectus abdominus	Rectus femoris
Orbicularis oculi	Sartorius	Fibularis longus
Zygomaticus	Gastrocnemius	Tibialis anterior
Orbicularis oris	Temporalis	Epicranium, occipital belly
Sternohyoid	Masseter	Trapezius
Pectoralis major	Deltoid	Latissimus dorsi
Intercostals	Triceps brachii	Gluteus maximus
	Biceps brachii	

Reading Assignment:

Chapter 9 – The Muscular System (pages 280 – 309)

Vocabulary:

Please define the following terms and use them to study for the Unit Quiz. Be prepared to turn in a list of your definitions the day of the quiz. You may use flashcards, list form, Quizlet, or whatever is most practical and useful for you.

Muscle fiber	Epimysium	Neuromuscular junction
Skeletal muscle	Insertion	Synaptic cleft
Smooth muscle	Origin	Acetylcholine
Cardiac muscle	Sarcolemma	Depolarization
Fascicle	Sarcoplasm	Aerobic respiration
Myofibril	Myoglobin	Anaerobic respiration
Sarcomere	Sarcoplasmic reticulum	Glycolysis
Myofilament	T tubule	Lactic acid
Actin filament	Sliding filament theory	
Myosin filament	of contraction	
Endomysium	Action Potential	
Perimysium		

Study Questions:

Honors Physiology

*Answer the following questions throughout the unit. Be ready to turn in your work the day of the quiz. Use in class notes, the textbook, and other resources to guide you in writing your **own** original response to the question. Think critically!*

1. Compare and contrast the basic types of muscle tissue.
2. Describe the gross and microscopic structure of a muscle, from organ (muscle) to macromolecule (myofilaments). Hint: use page 282.
3. Compare the three connective tissue sheaths found in muscle.
4. Explain the sliding filament theory of contraction.
5. Using figure 9.7 on page 290 (look at the picture and caption), explain how an action potential from a motor neuron causes acetylcholine to depolarize the muscle fiber.
6. Using figure 9.10 on page 292 (picture and caption), summarize in your own words the six events that cause a muscle contraction.
7. Give the equation for cellular respiration.
8. Describe three ways ATP is regenerated during skeletal muscle contraction.
9. Define muscle fatigue, and list its possible causes.
10. Compare slow and fast oxidative fibers.