

MUSCULAR SYSTEM



Read Chapter 11, pages 201-211.

A. Muscle Basics

1. Muscle Attachment

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Tendon -

tendonitis -

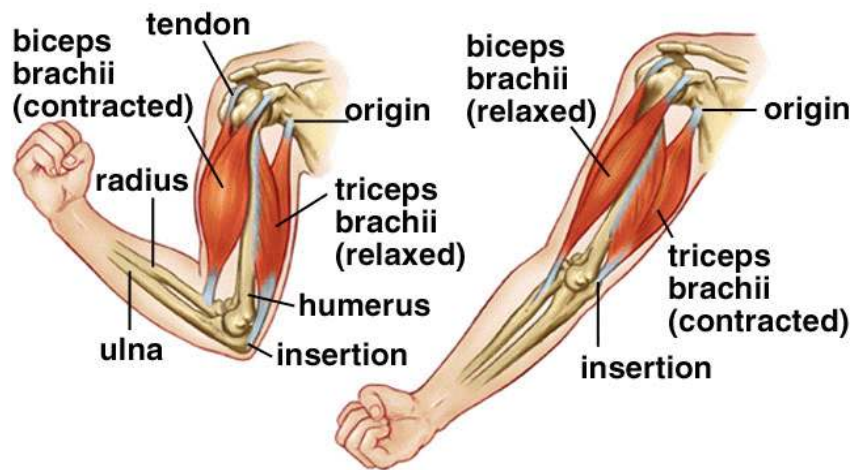
Origin -

Insertion -

Lever action of muscles -

Antagonistic muscle pairs -

Three Functions of Muscle -



2) Muscle Anatomy -

Fascia -

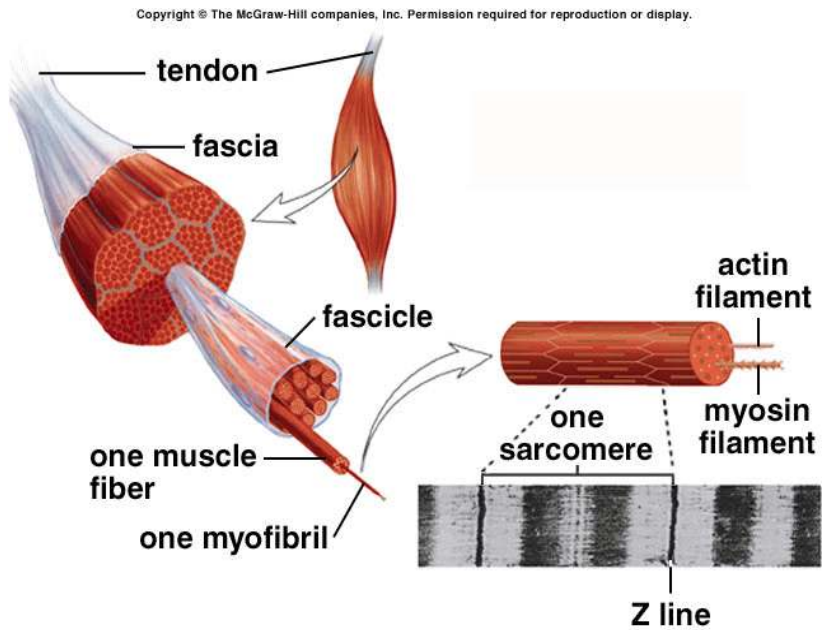
Fascicle -

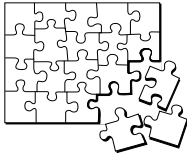
Muscle fiber -

Myofibril -

Sarcomere -

3. Biochemical Composition of Muscle -





4. What's in a (muscle) NAME?

Name of Muscle	Characteristic that Derives Muscle Name
Gluteus maximus	
Deltoid	
Flexor digitorum Extensor digitorum	
Frontalis	

Q: How does a muscle contract?



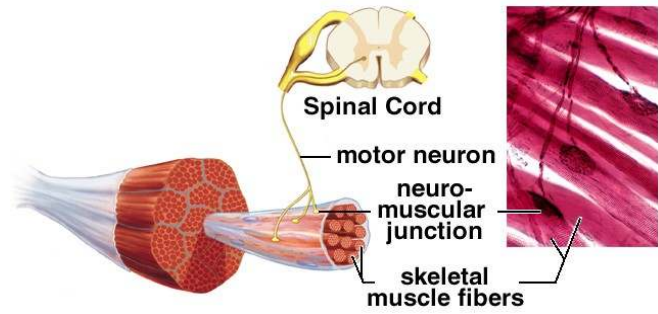
Answer: _____

B. Muscle Function and Physiology

1. The Three Phases of a Muscle Contraction-

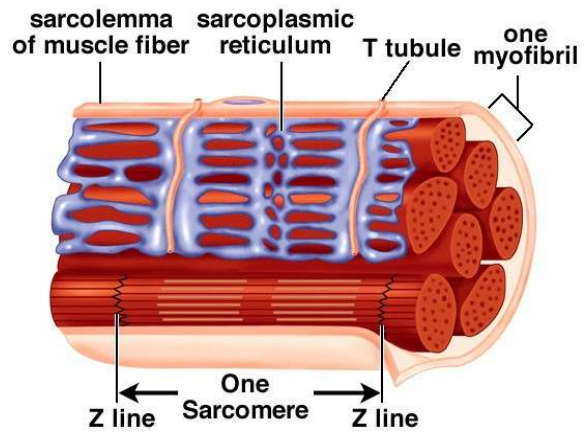
Excitation -

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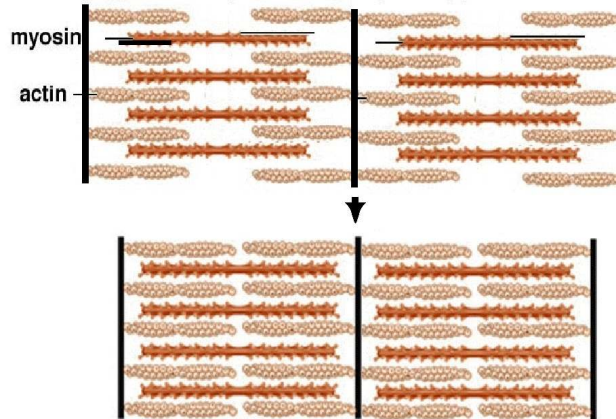
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Calcium Release -



Sliding Filaments Shorten Muscle Length -

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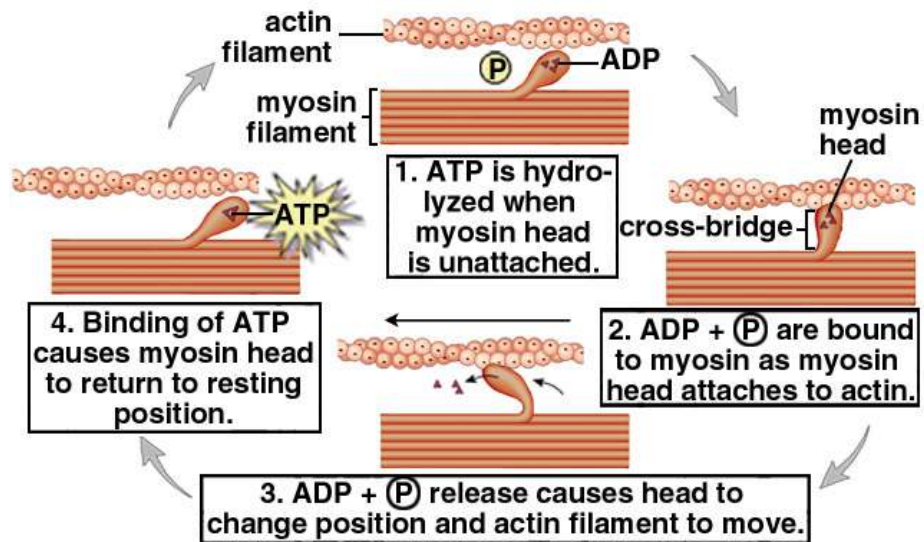


2. The **Mystery** of the Sliding

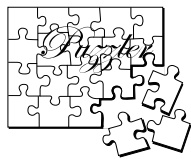
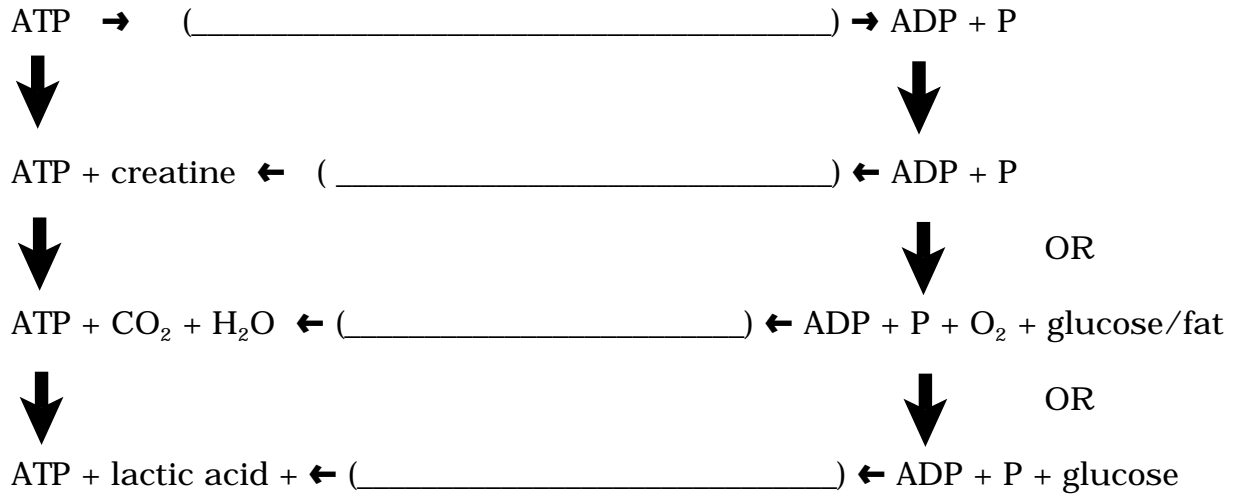
Filaments: What Makes Them Slide?

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Role of Calcium and Myosin in Muscle Contraction



3. Metabolism During Muscle Contraction -



1. Mickey Montour lifts weights regularly and his muscles have hypertrophied. (Circle the answers to each of the following)

Hypertrophied muscles are: (larger / smaller)

Hypertrophy is caused by: (increased number of muscle fibers / increased glycogen / increased number of myofibrils / increased number of mitochondria)

2. As Mickey works out, his body temperature: increases / decreases

Why?

How does he cool his body?

3. As Mickey attempts the last replication of sit-ups and, no matter how much he tries, he can not complete the last sit-up.

What is this condition called?

The above condition is caused by (increased / decreased) energy reserves in the muscle and (increased/decreased) lactic acid in the muscle.

4. What is oxygen debt?

5. During rigor mortis the muscles of the body are immovable. Why?



COMPLETE ON YOUR OWN:

6. Use the muscle diagrams on the next two pages to answer the following questions.

Name the muscle that is the antagonist to the tibialis anterior. _____

Which muscle is used to pucker the lips? _____

When you raise your arm in class, you use the _____ muscle.

Which muscle do you use to cross your legs? _____

The muscle group that is antagonistic to the hamstring group is the

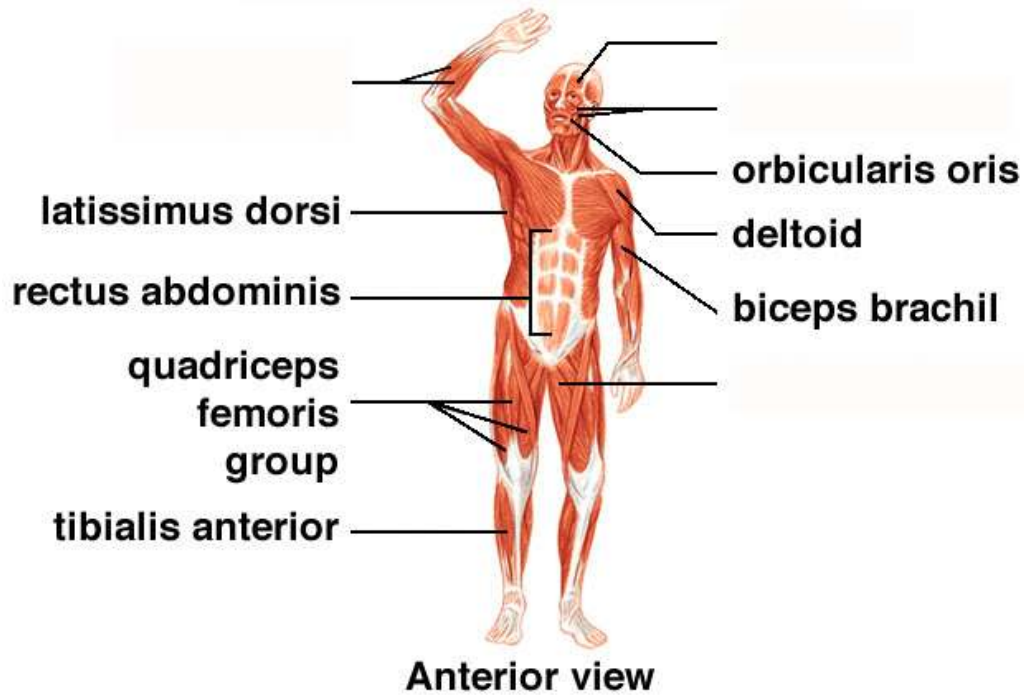
The largest muscle of the buttocks is the _____.

The largest back muscle is the _____.

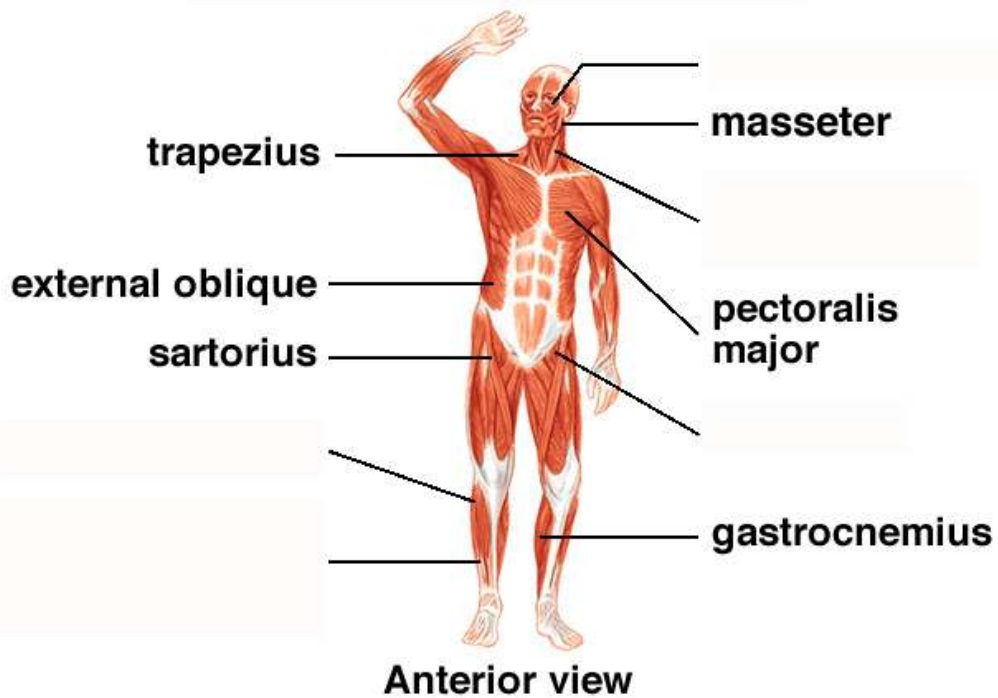
The muscle responsible for those "washboard abs" is the _____.

If you do a sit-up and touch your left knee with your right elbow you are exercising the _____.

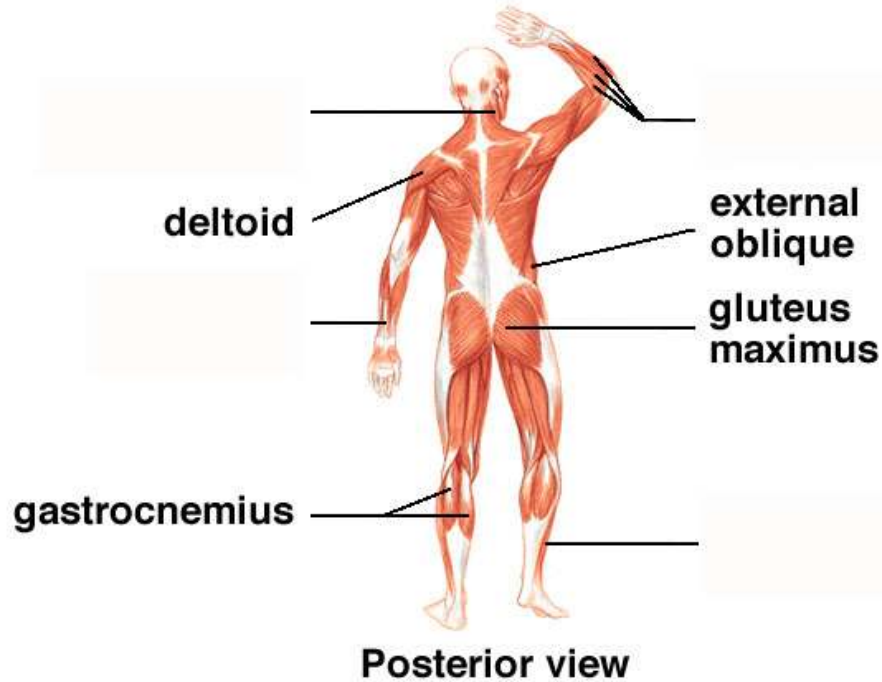
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