

# Muscular System Tour

Name \_\_\_\_\_ Hour \_\_\_\_\_

## Muscular System

There are more than \_\_\_\_\_ muscles in the Human Body!!!

Muscles are:

Needed for \_\_\_\_\_

Needed for \_\_\_\_\_

Needed for \_\_\_\_\_

Needed for \_\_\_\_\_

Needed for \_\_\_\_\_

Answer these questions by reading the following pages

## Skeletal Muscle

✚ Move your bones.

✚ Voluntary (\_\_\_\_\_)

✚ Over \_\_\_\_\_

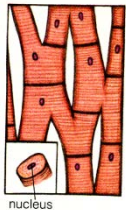
✚ Long \_\_\_\_\_

✚ Stripes \_\_\_\_\_

Did you see cardiac muscle under the microscope?

## 3 Types of Muscle

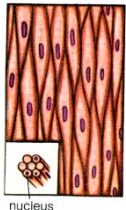
Identify the three types of muscle from the diagram:



nucleus

\_\_\_\_\_

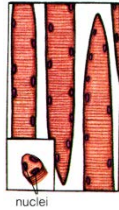
Muscle



nucleus

\_\_\_\_\_

Muscle



nuclei

\_\_\_\_\_

Muscle

## Cardiac Muscle

✚ The muscle of the heart.

✚ Involuntary (\_\_\_\_\_)

✚ Works \_\_\_\_\_

✚ Strongest \_\_\_\_\_

✚ Only \_\_\_\_\_

✚ Some \_\_\_\_\_

Did you see cardiac muscle under the microscope?

## Smooth Muscle

✚ The muscle of \_\_\_\_\_

✚ Involuntary (\_\_\_\_\_)

✚ Contract \_\_\_\_\_

✚ Can remain \_\_\_\_\_

✚ Usually \_\_\_\_\_

✚ No stripes (striations)

## Anatomy of a Muscle

Identify:

Bone

Tendon

Myofibril

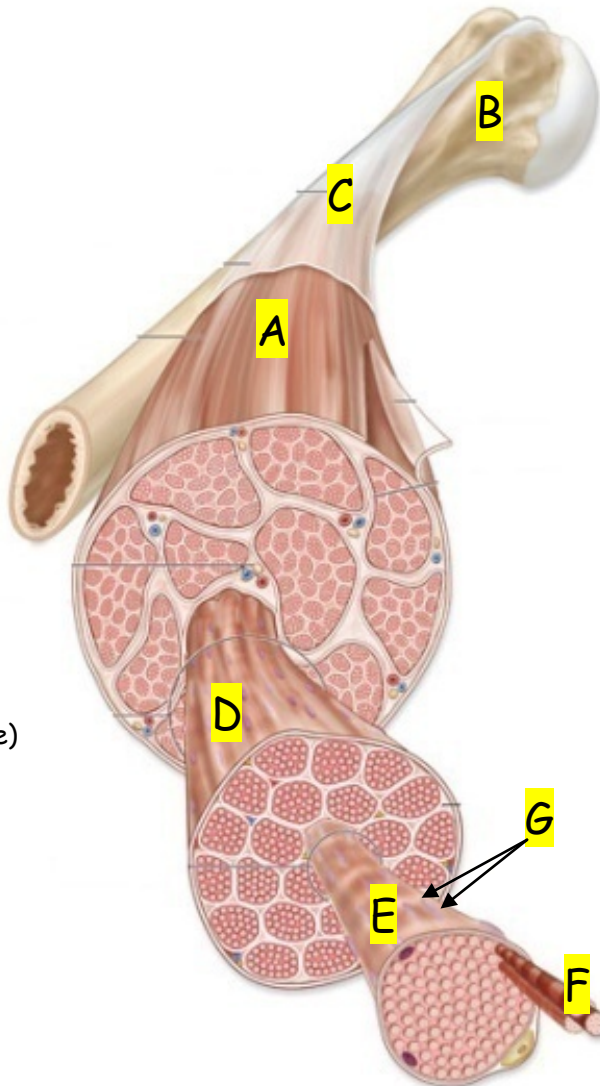
Cell Nuclei

Fascicle

Body of Muscle

Muscle Fiber

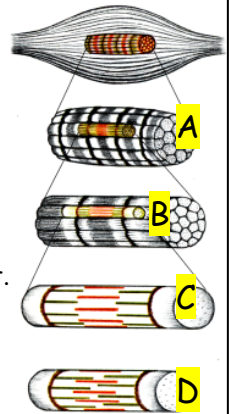
Which of these (above)  
is the muscle cell?



## How a Muscle Works

- A skeletal muscle works by \_\_\_\_\_.
- The muscle can shorten as much as \_\_\_\_\_.
- Each muscle cell is made up of smaller \_\_\_\_\_.
- The \_\_\_\_\_ are in contact with a nerve ending.
- The nerve releases a chemical called a \_\_\_\_\_.
- The \_\_\_\_\_ stimulates the entire muscle to contract.

Identify: Fascicle      Muscle Cell  
Myofibril Relaxed      Myofibril Contracted

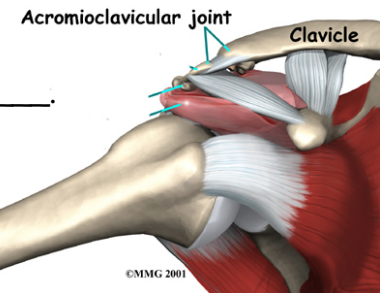
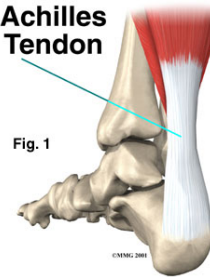


## Muscle to Tendon to Bone

Tendons attach \_\_\_\_\_ to \_\_\_\_\_.

**Achilles Tendon**

Fig. 1

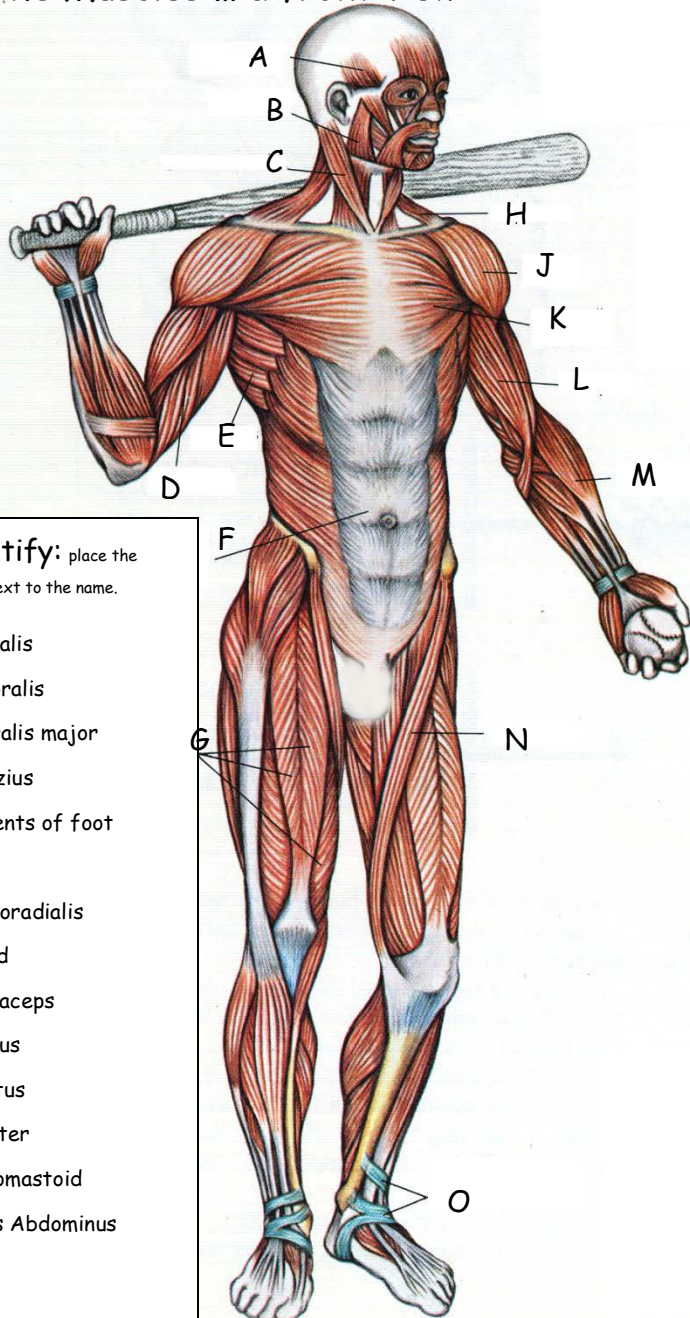


## Opposites Contract ... and relax

- Muscles work in \_\_\_\_\_.
- While one muscle in the pair contracts the other must \_\_\_\_\_.



## The Muscles ... a front view



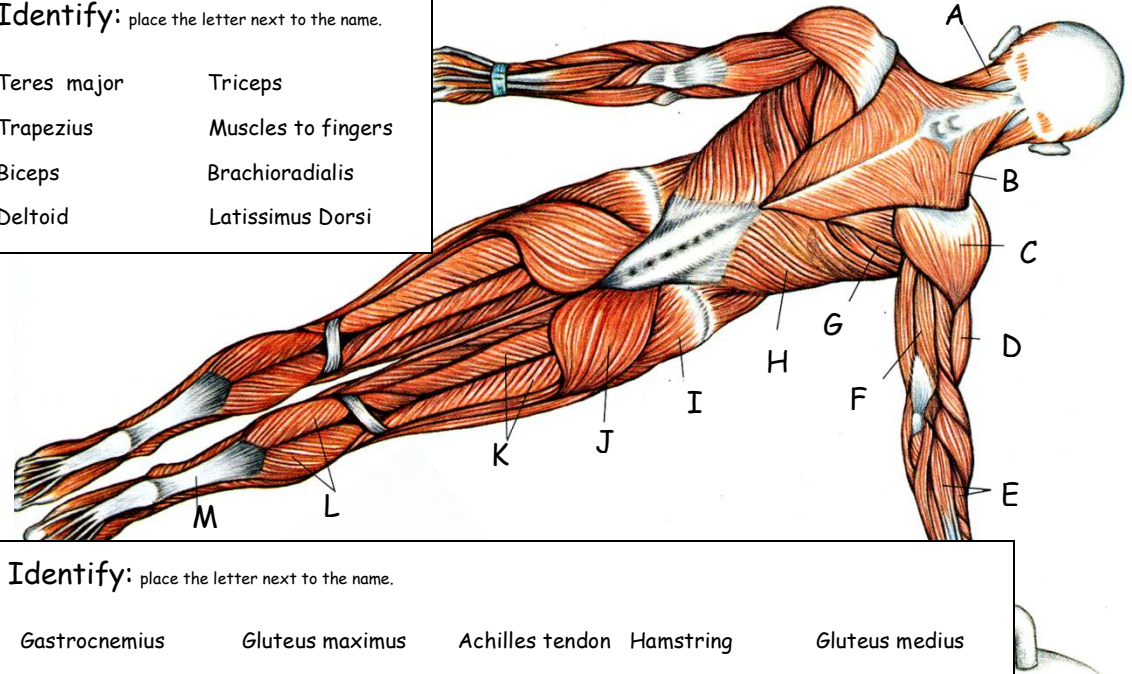
Identify: place the letter next to the name.

Brachialis  
Temporalis  
Pectoralis major  
Trapezius  
Ligaments of foot  
Biceps  
Brachioradialis  
Deltoid  
Quadriceps  
Sartorius  
Serratus  
Masseter  
Sternomastoid  
Rectus Abdominus

## The Muscles ... a back view

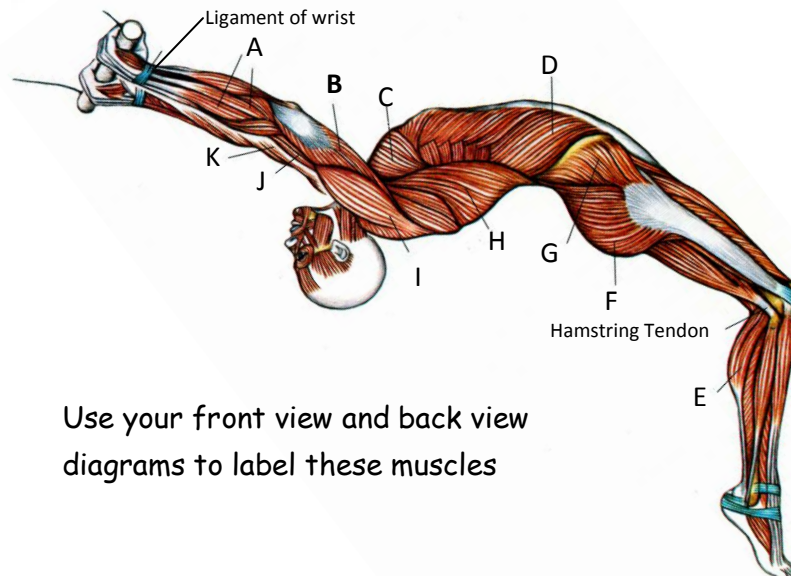
Identify: place the letter next to the name.

Teres major	Triceps
Trapezius	Muscles to fingers
Biceps	Brachioradialis
Deltoid	Latissimus Dorsi



Identify: place the letter next to the name.

Gastrocnemius	Gluteus maximus	Achilles tendon	Hamstring	Gluteus medius
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Use your front view and back view diagrams to label these muscles

Label: place the letter next to the name.

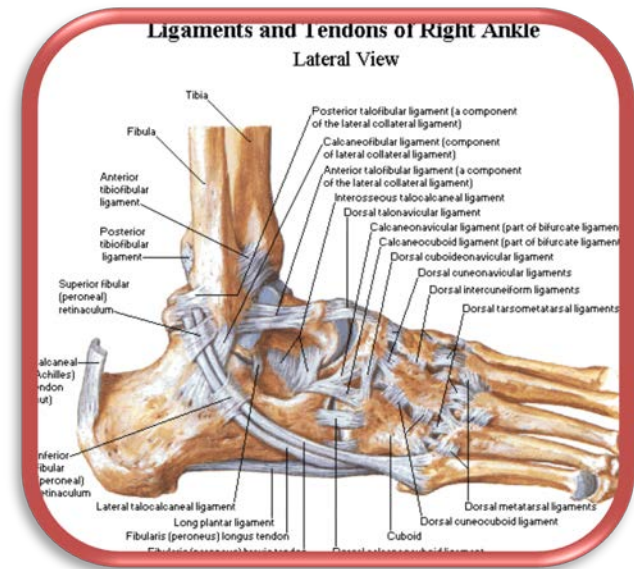
Gluteus maximus  
Latissimus dorsi  
Pectoralis major  
Gastrocnemius  
Muscles to fingers  
Triceps  
Brachioradialis  
Deltoid  
Biceps  
Exterior oblique  
Gluteus medius



Ligaments hold bones together

How many ligaments are shown in the *labeled* diagram? \_\_\_\_\_

Hint: you will need to count the *ligaments* in the diagram (not bone or tendon)



Describe the feeling of having your muscles artificially stimulated?

