

Muscular System Tour

Name _____ Hour _____

Muscular System

There are more than _____ muscles in the Human Body!!!

Muscles are:

Needed for _____

Answer these questions by reading the following pages

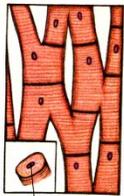
Skeletal Muscle

- ✚ Move your bones.
- ✚ Voluntary (_____)
- ✚ Over _____
- ✚ Long _____
- ✚ Stripes _____

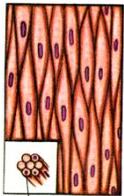
Did you see cardiac muscle under the microscope?

3 Types of Muscle

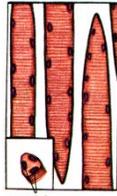
Identify the three types of muscle from the diagram:



nucleus



nucleus



nuclei

Muscle

Muscle

Muscle

Cardiac Muscle

- ✚ The muscle of the heart.
- ✚ Involuntary (_____)
- ✚ Works _____
- ✚ Strongest _____
- ✚ Only _____
- ✚ Some _____

Did you see cardiac muscle under the microscope?

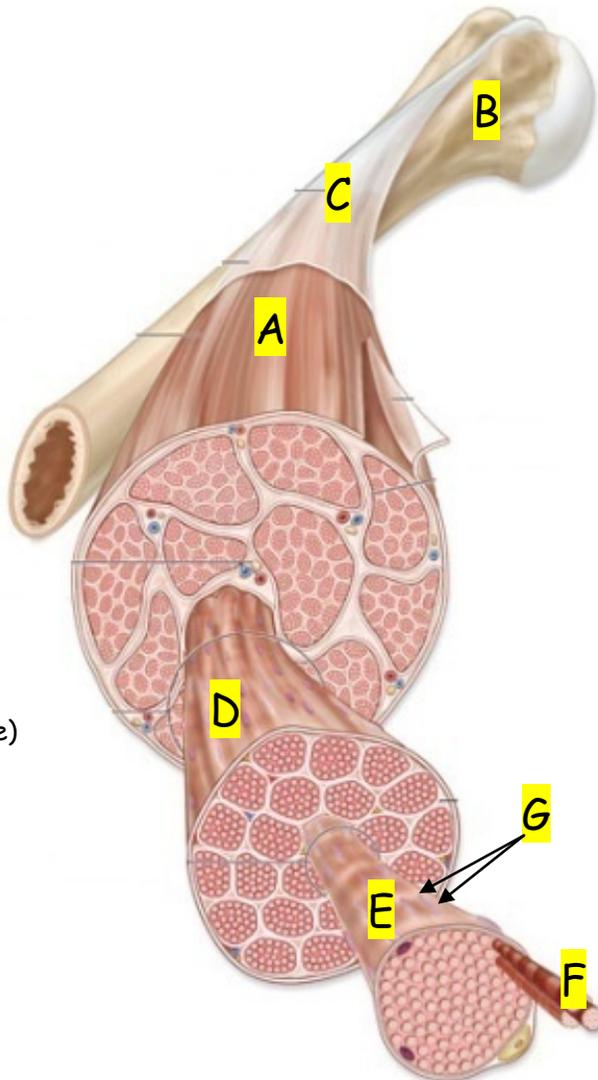
Smooth Muscle

- ✚ 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

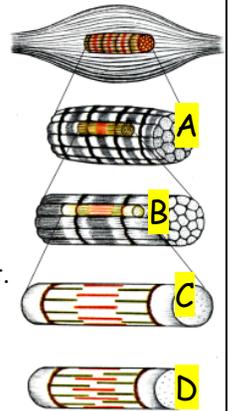


Which of these (above) is the muscle cell?

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 _____.

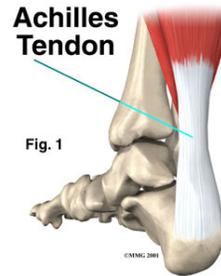
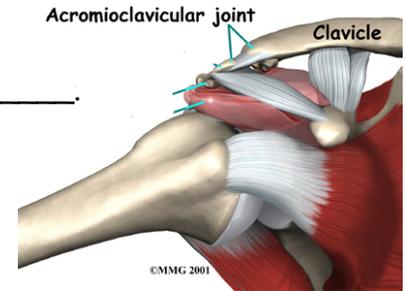


Fig. 1

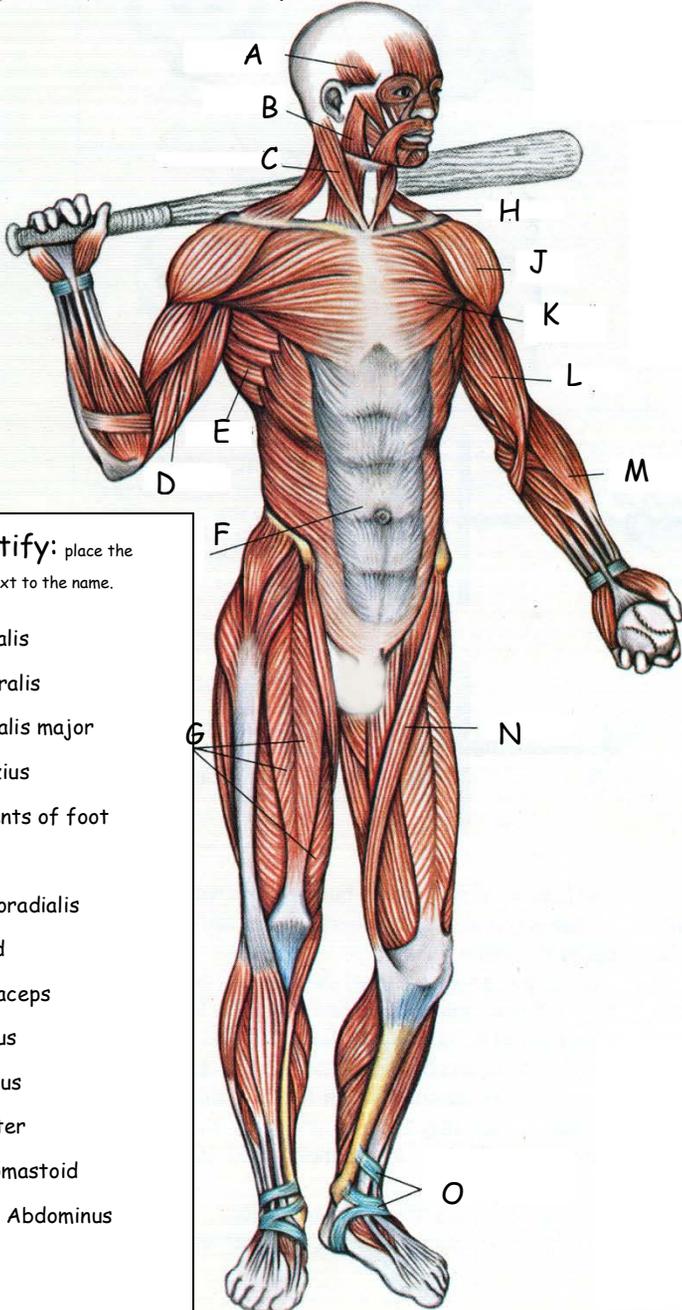


Opposites Contract ... and relax

- ✚ Muscles work in _____.
- ✚ While one muscle in the pair contracts the other must _____.



The Muscles ... a front view



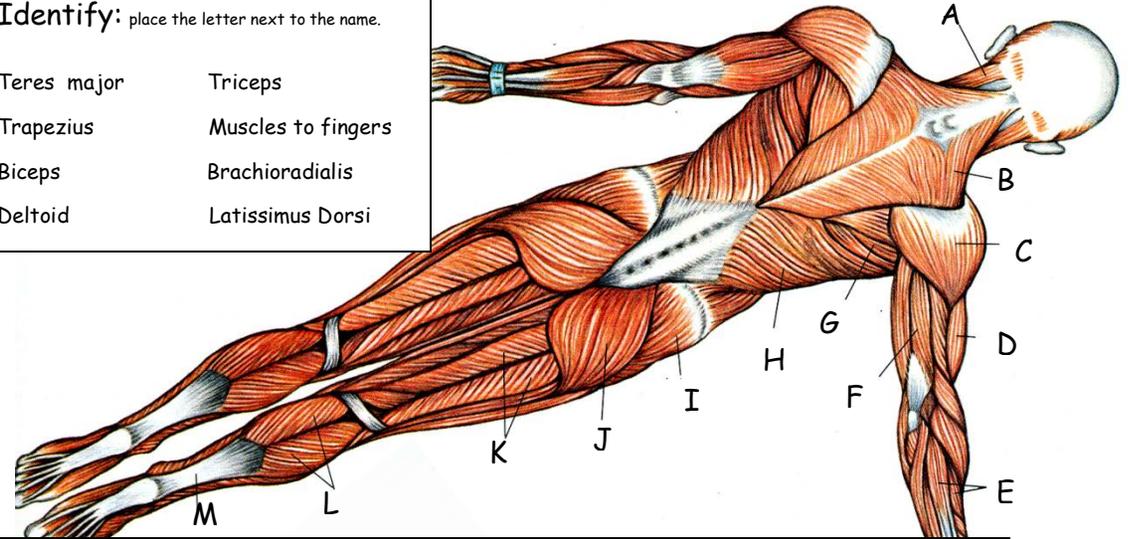
Identify: place the letter next to the name.

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

The Muscles ... a back view

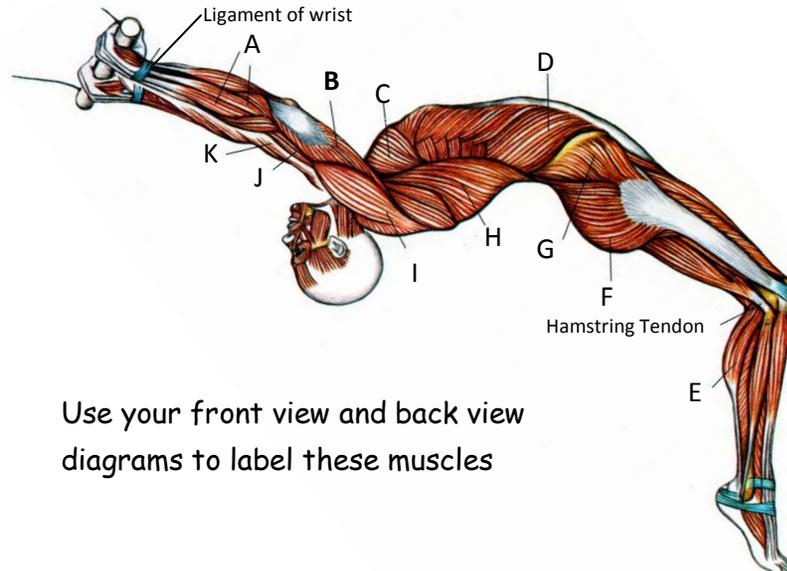
Identify: place the letter next to the name.

- | | |
|-------------|--------------------|
| 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 |
|---------------|-----------------|-----------------|-----------|----------------|



Use your front view and back view diagrams to label these muscles

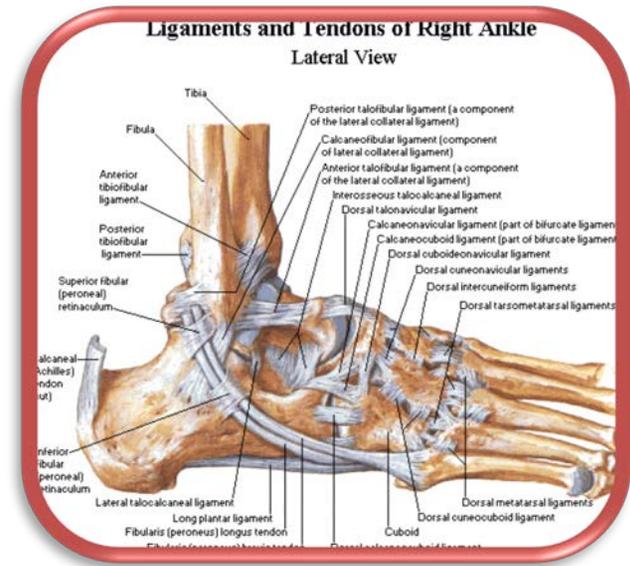
Label: place the letter next to the name.

- 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?

