

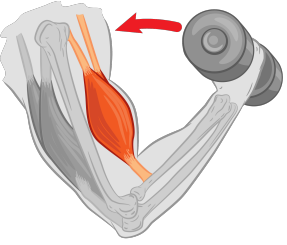
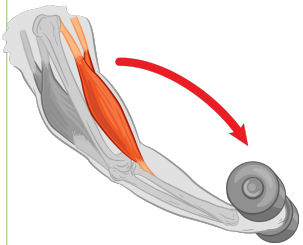

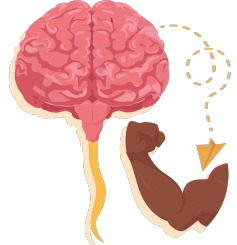
## CONCEPT: OVERVIEW OF THE MUSCULAR SYSTEM

### Properties of Muscles

◆ **Muscular System:** Consists of muscles and their associated tendons.

▸ **Muscle:** Specialized tissue for \_\_\_\_\_. ▸ **Tendon:** Band of \_\_\_\_\_ tissue, attaches muscle to bone.

◆ Muscles produce movement through:

1. Contractility	2. Extensibility	3. Elasticity	4. Excitability
			
◆ Muscle become _____ & thicker.	◆ Muscle become _____ & thinner.	◆ Return to original _____ after force is removed.	◆ Receive & respond to _____.

◆ In addition to movement, muscles generate heat and help body maintain its \_\_\_\_\_.

### **EXAMPLE**

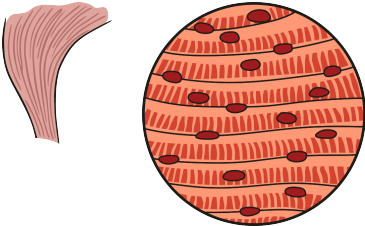
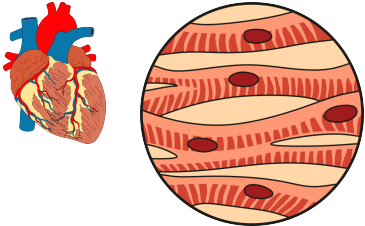
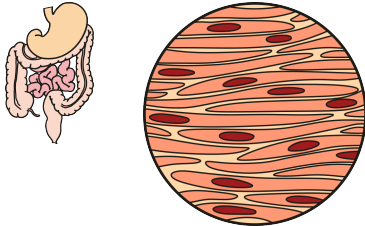
The primary function of muscles is to produce movement. Which one of the following properties of muscle is the most directly related to this function?

- a) Contractility
- b) Extensibility
- c) Elasticity
- d) Excitability

## CONCEPT: OVERVIEW OF THE MUSCULAR SYSTEM

### Types of Muscles

◆ **Recall:** \_\_\_\_ types of muscle tissue in the human

	Skeletal	Cardiac	Smooth
			
<b>Location</b>	Connected to bones.	Heart	Hollow organs & blood vessels.
<b>Control</b>	Voluntary	Involuntary	Involuntary
<b>Striated</b>	_____	_____	_____
<b>Contraction Speed</b>	Rapid	Rapid	_____

◆ **Striation:** Striped appearance of muscles caused by highly organized repetition of contractile units.

### **EXAMPLE**

Jamie told his friends that he can control his heart rate just like he can control the movement of his hands. Does this sound like a reasonable claim? If not, what would be the explanation?

- a) Yes, it's a reasonable claim.
- b) No, heart muscles do not contract as fast as skeletal muscles.
- c) No, heart muscles are not under voluntary control.
- d) Yes, but only for a limited number of contractions.

## CONCEPT: OVERVIEW OF THE MUSCULAR SYSTEM

### Major Skeletal Muscles: Anterior View

#### Arms:

- Deltoid
- Biceps brachii

#### Chest & Abdomen:

- Pectoralis major
- Rectus abdominis

#### Thighs:

- Rectus femoris
- Sartorius

#### Lower Legs:

- Tibialis anterior

Deltoid

\_\_\_\_\_ brachii

Pectoralis \_\_\_\_\_

Rectus abdominis

Rectus \_\_\_\_\_

Sartorius

**SarToRius**

Stretchy Thin \_\_\_\_\_.

Tibialis anterior

## EXAMPLE

Match each of these descriptions with the correct muscle name.

1. Proximal lateral side of arm.	_____
2. Proximal anterior side of arm.	_____
3. Superior anterior side of torso.	_____
4. Anterior side of the lower leg.	_____

- a) Tibialis anterior
- b) Biceps brachii
- c) Deltoid
- d) Pectoralis major

## CONCEPT: OVERVIEW OF THE MUSCULAR SYSTEM

### Major Skeletal Muscles: Posterior View

#### Arms:

- Triceps brachii

#### Back:

- Trapezius
- Latissimus dorsi (lats)

#### Hips:

- Gluteus maximus

#### Thighs:

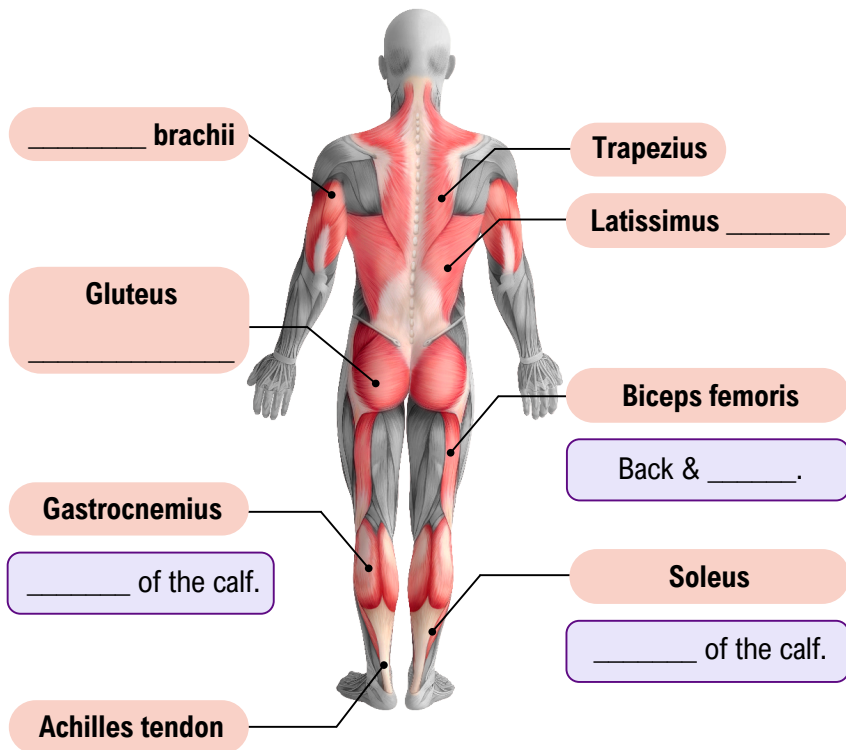
- Biceps femoris

#### Lower Legs:

- Gastrocnemius
- Soleus

#### Ankles:

- Achilles tendon



## EXAMPLE

Match each of these descriptions with the correct muscle/tendon name.

1. Superior posterior side of body.	_____
2. Proximal posterior side of the arm.	_____
3. Inferior posterior side of the leg.	_____
4. Superior posterior side of the lower limbs.	_____

- a) Achilles tendon
- b) Triceps brachii
- c) Gluteus maximus
- d) Trapezius

## PRACTICE

Which of the following pairs has muscles which are on the same side of the body?

- a) Rectus femoris & biceps femoris.
- b) Rectus femoris & pectoralis major.
- c) Biceps brachii & triceps brachii.
- d) Tibialis anterior & gastrocnemius.