

Human Anatomy & Physiology

Muscle Identification Lab

Name _____

Objectives:

- To learn the criteria used to name many muscles
- To identify the origins and insertions of common muscles
- To explain skeletal muscle movements in terms of prime movers, antagonists, and synergists

A. Muscles act in antagonistic pairs. Most movements are a result of the coordinated action of several muscles or groups of muscles. While one group contracts to cause a particular motion, the opposing muscle group relaxes. In the table below, describe the terms and provide an example for a particular movement. You will be assigned the specific movement.

Movement: _____ (Type your movement here)

	Definition	Example
Prime Mover		
Antagonist		
Synergist		

Criteria for Naming Muscles

B. Muscle Location: The temporalis muscle is named for its proximity to the temporal bone. Where would the following muscles be located? Be specific!

1. Tibialis anterior: _____
2. Rectus femoris: _____
3. Levator scapulae: _____

C. Muscle Size: The term “maximus” means largest, “minimus” means smallest, “longus” refers to being long, and “brevis” refers to a short muscle. Give an example of a muscle for each of these terms.

1. Maximus: _____
2. Minimus: _____
3. Longus: _____
4. Brevis: _____

D. Number of muscle divisions, or insertions: Some muscles are named for the number of origins they possess. Use of the prefixes “bi”, “tri”, and “quad” indicate two, three, and four heads of origin, respectively. Give an example of each. Be specific (give the muscle’s **full** name).

1. "Bi": _____
2. "Tri": _____
3. "Quad": _____

E. Origin and Insertion: Some muscles are named after their origin(s) and insertion(s). Several examples are listed in the table below. Use a text or other resource to fill in the missing information.

Muscle	Origin(s)	Insertion(s)
Sternocleidomastoid		
Stylohyoid		
Brachioradialis		

F. Muscle Shape: Some common shapes include triangular (delta), rectangular (rectus), trapezoid, and circular (orb). Give an example for each shape below.

1. Triangular _____
2. Trapezoid _____
3. Circular _____

G. Muscle Action: The principle action of a muscle is sometimes used in naming the muscle. Evaluate the names of muscles listed below and describe the **specific** movement.

1. Supinator _____
2. Pronator teres _____
3. Depressor labii inferioris _____
4. Adductor longus _____
5. Extensor carpi ulnaris _____
6. Flexor digitorum _____
7. _____

H. Direction of Fibers: Some muscle names are based on the direction which the fibers run. It would include: rectus (vertical direction), transversus (horizontal direction) and oblique (at an angle). Give an example of each type.

Rectus: _____

Transversus: _____

Oblique: _____

Follow-up Questions

1. What two movements of the head does the sternocleidomastoid muscle produce?

2. The prime flexor of the femur (hip) is the _____ muscle.

3. The prime flexor of the lower leg (knee) is the _____ muscle.

4. What are three muscles commonly used as injection sites?

5. The “kissing muscle” is called the _____.

6. The “winking muscle” is called the _____.

7. The extension of the lower arm is a result of the contraction of the _____.

8. What muscle acts as the prime abductor of the humerus? _____

9. What muscle acts as the prime adductor of the humerus? _____

10. What is the primary source of energy in muscle contraction? _____

11. What two movements are produced by the contraction of the latissimus dorsi?

12. What are the origin and insertion of the latissimus dorsi muscle?

Origin: _____ Insertion: _____

13. What muscle acts as the antagonist to the sternocleidomastoid? _____

14. The prime mover for chewing is the _____ muscle.

15. Two muscles used in doing sit-ups are: _____

16. What muscle is used primarily in dorsiflexion? _____

17. What muscle is used primarily in plantar flexion? _____

18. Name a chief flexor and extensor of the wrist.

Flexor: _____

Extensor: _____

19. Name three muscles of facial expression and give their location and action:

Muscle	Location	Action

20. List the criterion or criteria that were used in naming the following muscles. An example is given.

Muscle	Criterion/Criteria
Quadriceps femoris	No. of origins (quadriceps), location (femoris)
Levator labii superioris	
Internal intercostals	
Adductor brevis	
Rectus abdominis	
Biceps brachii	
Supinator	
Orbicularis oculi	
Rhomboideus major	
Palmaris longus	
Sternohyoid	