

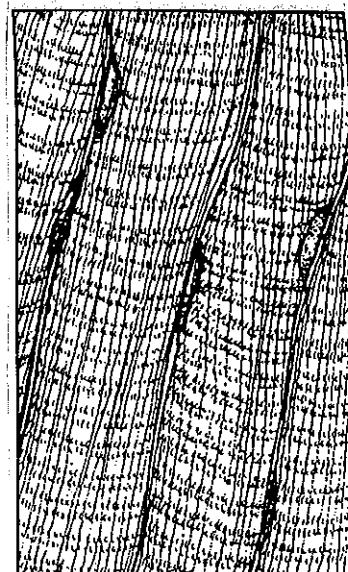
# The Muscular System

## OVERVIEW OF MUSCLE TISSUES

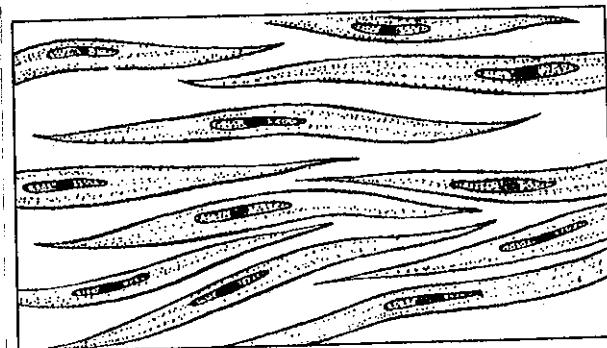
### Key Choices

A. Cardiac      B. Smooth      C. Skeletal

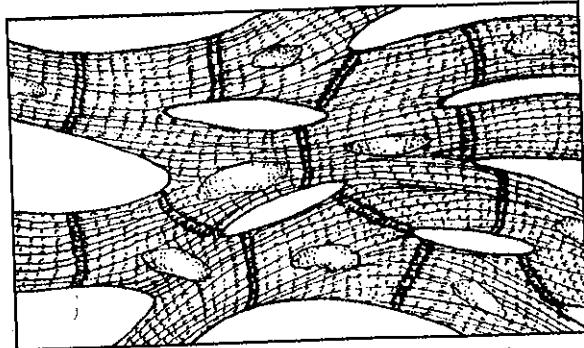
- \_\_\_\_\_ 1. Involuntary
- \_\_\_\_\_ 2. Banded appearance
- \_\_\_\_\_ 3. Longitudinally and circularly arranged layers
- \_\_\_\_\_ 4. Moves bones and the facial skin
- \_\_\_\_\_ 5. Referred to as the muscular system
- \_\_\_\_\_ 6. Voluntary



7. \_\_\_\_\_



8. \_\_\_\_\_

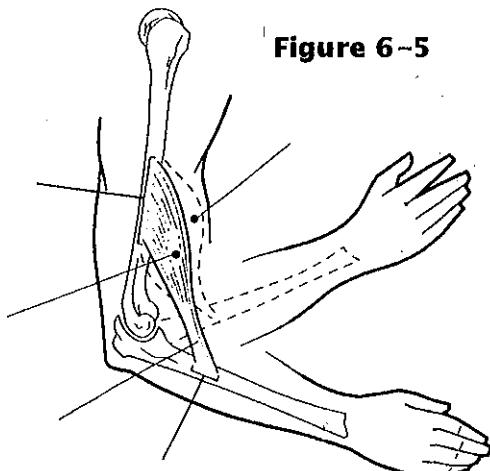


9. \_\_\_\_\_

## MUSCLE MOVEMENTS, TYPES, AND NAMES

Relative to general terminology concerning muscle activity, first label the following structures on Figure 6-5: insertion, origin, tendon, resting muscle, and contracting muscle. Next, identify the two structures named below by choosing different colors for the coding circles and the corresponding structures in the figure.

Figure 6-5



Movable bone

Immovable bone

Complete the following statements. Insert your answers in the answer blanks.

- \_\_\_\_\_ 1. Standing on your toes as in ballet is (1) of the foot. Walking on your heels is (2).
- \_\_\_\_\_ 2.
- \_\_\_\_\_ 3. Winding up for a pitch (as in baseball) can properly be called (3). To keep your seat when riding a horse, the tendency is to (4) your thighs.
- \_\_\_\_\_ 4.
- \_\_\_\_\_ 5.
- \_\_\_\_\_ 6.
- \_\_\_\_\_ 7.
- \_\_\_\_\_ 8. In running, the action at the hip joint is (5) in reference to the leg moving forward and (6) in reference to the leg in the posterior position. When kicking a football, the action at the knee is (7). In climbing stairs, the hip and knee of the forward leg are both (8). You have just touched your chin to your chest; this is (9) of the neck.
- \_\_\_\_\_ 9.
- \_\_\_\_\_ 10.
- \_\_\_\_\_ 11.
- \_\_\_\_\_ 12.
- \_\_\_\_\_ 13.
- \_\_\_\_\_ 14.

Circle the term that does not belong in each of the following groupings.

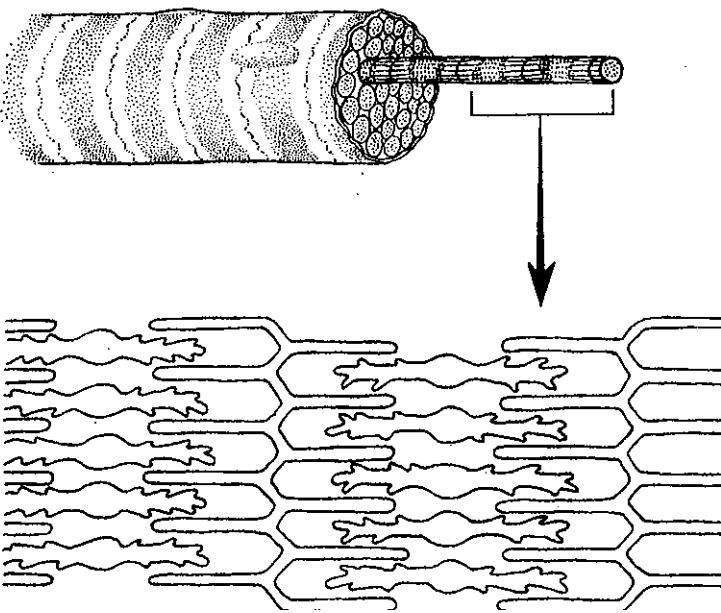
- |                     |                  |                    |                      |
|---------------------|------------------|--------------------|----------------------|
| 1. Vastus lateralis | Vastus medialis  | Knee extension     | Biceps femoris       |
| 2. Latissimus dorsi | Pectoralis major | Shoulder adduction | Antagonists          |
| 3. Buccinator       | Frontalis        | Masseter           | Mastication          |
| 4. Vastus medialis  | Rectus femoris   | Iliacus            | Origin on coxal bone |

Figure 6-3 is a diagrammatic representation of a small portion of a relaxed muscle cell (bracket indicates the portion enlarged). First, select different colors for the structures listed below. Use them to color the coding circles and corresponding structures on Figure 6-3. Then bracket and label an A band and a Z band. When you have finished, draw a contracted sarcomere in the space beneath the figure and label the same structures, as well as the light and dark bands.

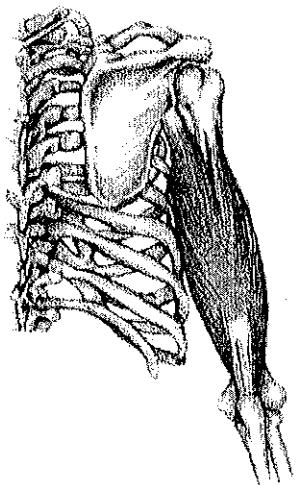
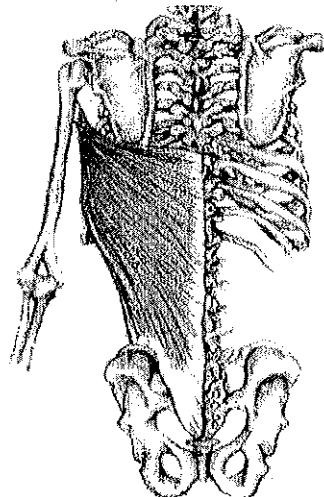
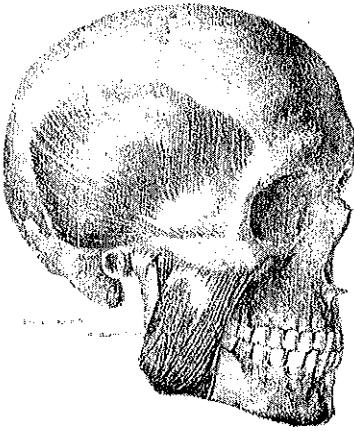
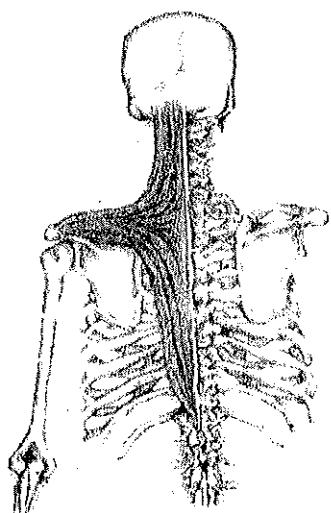
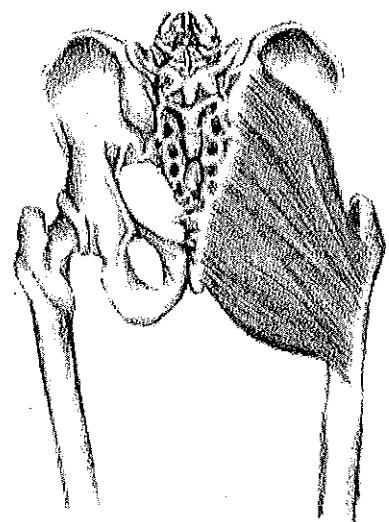
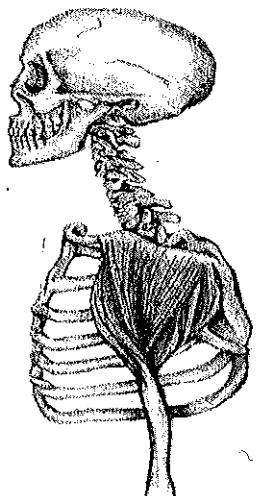
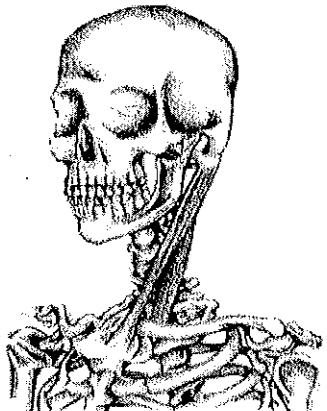
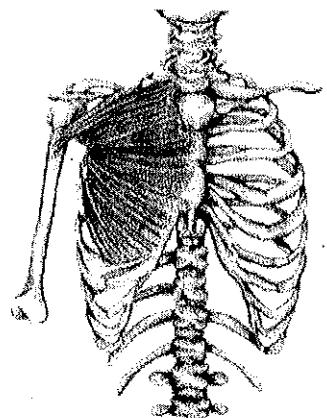
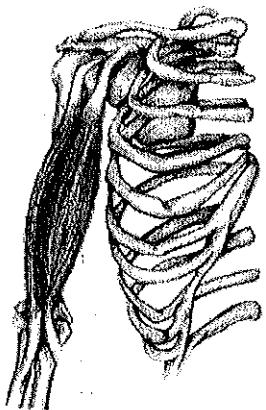
Myosin

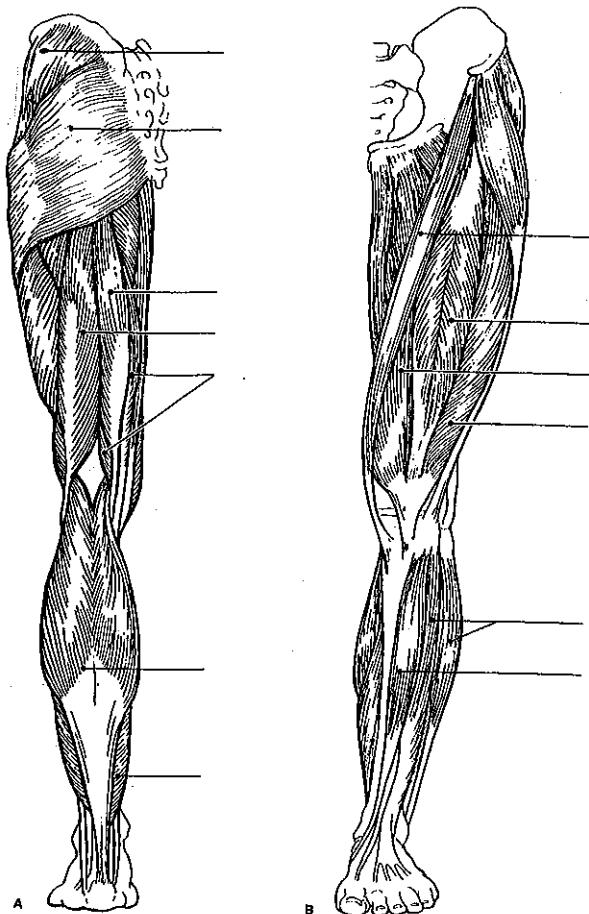
Actin filaments

Z disc



O·I·A





A

B

- A. Adductors
- B. Biceps femoris
- C. Gastrocnemius
- D. Gluteus maximus
- E. Gluteus medius
- F. Hamstrings
- G. Iliopsoas
- H. Peroneus muscles
- I. Quadriceps
- J. Rectus femoris
- K. Sartorius
- L. Semimembranosus
- M. Semitendinosus
- N. Tibialis anterior
- O. Vastus intermedius
- P. Vastus lateralis
- Q. Vastus medialis

- A. Buccinator
- B. Frontalis
- C. Masseter
- D. Orbicularis oculi
- E. Orbicularis oris
- F. Sternocleidomastoid
- G. Temporalis
- H. Trapezius
- I. Zygomaticus

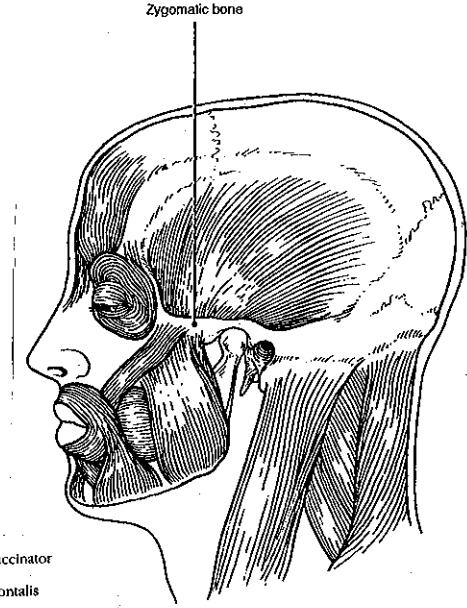
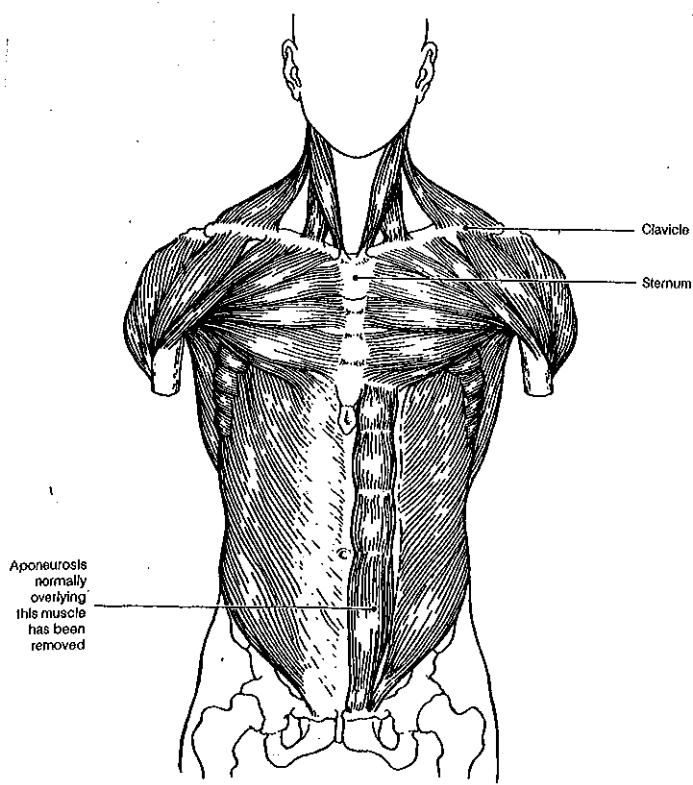


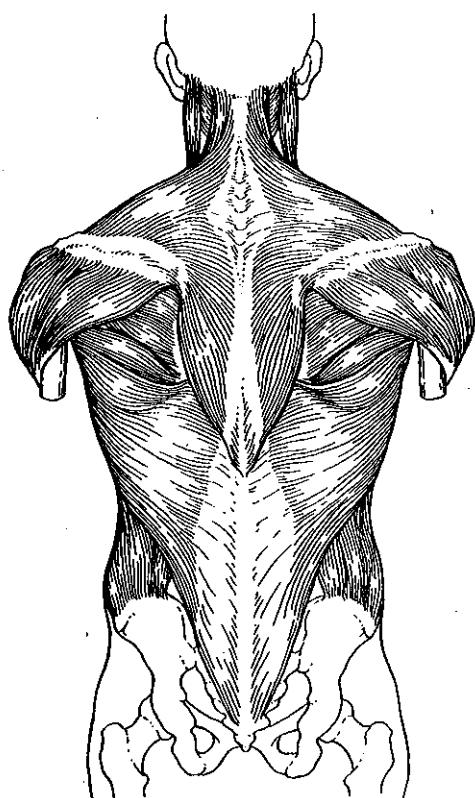
Figure 6-6



Aponeurosis  
normally  
overlying  
this muscle  
has been  
removed

Figure 6-7

- A. Deltoid
- B. Diaphragm
- C. External intercostal
- D. External oblique
- E. Internal intercostal
- F. Internal oblique
- G. Latissimus dorsi
- H. Pectoralis major
- I. Rectus abdominis
- J. Sternocleidomastoid
- K. Transversus abdominis



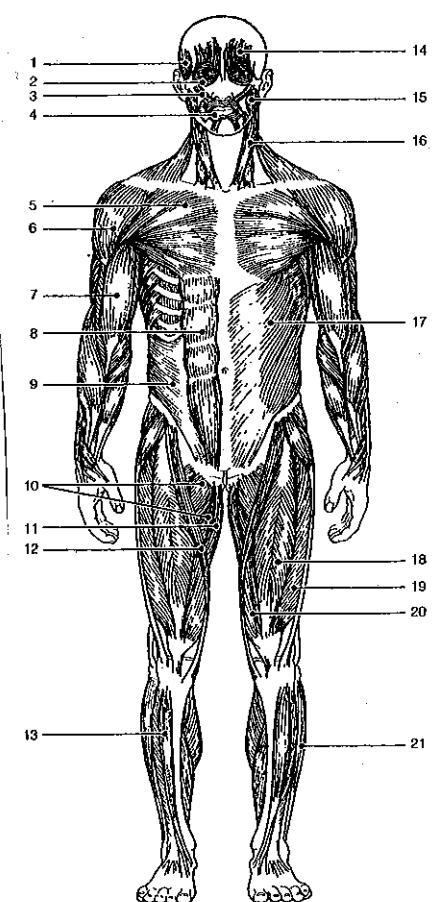
A. Deltoid

- B. Erector spinae
- C. External oblique
- D. Gluteus maximus
- E. Latissimus dorsi
- F. Trapezius



- A. Biceps brachii
- B. Deltoid
- C. Extensor carpi radialis
- D. Extensor digitorum
- E. Flexor carpi ulnaris
- F. Flexor digitorum superficialis
- G. Triceps brachii

- 1. Orbicularis oris
- 2. Pectoralis major
- 3. External oblique
- 4. Sternocleidomastoid
- 5. Biceps brachii
- 6. Deltoid
- 7. Vastus lateralis
- 8. Frontalis
- 9. Rectus femoris
- 10. Sartorius
- 11. Gracilis
- 12. Adductor group
- 13. Fibularis longus
- 14. Temporalis
- 15. Orbicularis oculi
- 16. Zygomaticus
- 17. Masseter
- 18. Vastus medialis
- 19. Tibialis anterior
- 20. Transversus abdominis
- 21. Rectus abdominis



- 1. Adductor muscle
- 2. Gluteus maximus
- 3. Gastrocnemius
- 4. Latissimus dorsi
- 5. Deltoid
- 6. Semitendinosus
- 7. Soleus
- 8. Biceps femoris
- 9. Triceps brachii
- 10. External oblique
- 11. Gluteus medius
- 12. Trapezius

