

# THE JOINTS

## PART A

Complete the following statements:

1. A \_\_\_\_\_ of the skull is an example of an immovable fibrous joint.
2. The joint between the first rib and the sternum is \_\_\_\_\_.
3. The joint at the distal tibia and fibula is \_\_\_\_\_.
4. Intervertebral discs are composed of \_\_\_\_\_.
5. \_\_\_\_\_ are the most common type of joint in the human body.
6. \_\_\_\_\_ acts as a joint lubricant in synovial joints.
7. The discs of fibrocartilage between the articulating surfaces of the knee are called \_\_\_\_\_.
8. The fluid-filled sacs sometimes associated with synovial joints are called \_\_\_\_\_.
9. The symphysis pubis is an example of a(n) \_\_\_\_\_ joint.
10. Articular cartilage is composed of \_\_\_\_\_ tissue.

## PART B

Match the types of synovial joints in column A with the examples in column B. Place the letter of your choice in the space provided.

### Column A

- a. Ball-and-socket
- b. Condylloid
- c. Gliding
- d. Hinge
- e. Pivot
- f. Saddle

### Column B

- \_\_\_\_\_ 1. Hip joint
- \_\_\_\_\_ 2. Metacarpal-phalanx
- \_\_\_\_\_ 3. Proximal radius-ulna
- \_\_\_\_\_ 4. Humerus-ulna of the elbow joint
- \_\_\_\_\_ 5. Phalanx-phalanx
- \_\_\_\_\_ 6. Shoulder joint
- \_\_\_\_\_ 7. Tarsal-tarsal
- \_\_\_\_\_ 8. Carpal-metacarpal of the thumb
- \_\_\_\_\_ 9. Carpal-carpal

# SKELETAL MUSCLE STRUCTURE

## PART A

Match the terms in column A with the definitions in column B. Place the letter of your choice in the space provided.

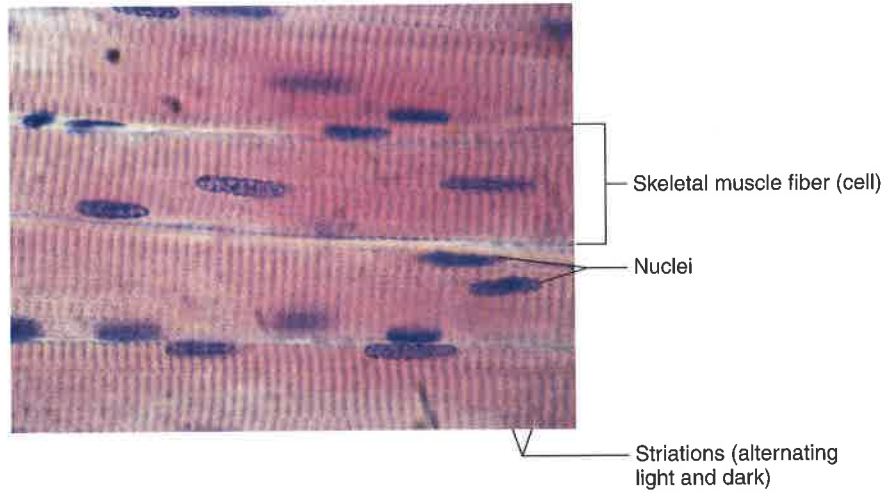
Column A	Column B
a. Aponeurosis	_____ 1. Membranous channel extending inward from muscle fiber membrane
b. Cisterna	_____ 2. Cytoplasm of a muscle fiber
c. Endomysium	_____ 3. Network of connective tissue that extends throughout the muscular system
d. Epimysium	_____ 4. Layer of connective tissue that separates a muscle into small bundles called fascicles
e. Fascia	_____ 5. Enlarged portion of sarcoplasmic reticulum on either side of a transverse tubule
f. Fascicle	_____ 6. Broad sheet of connective tissue that attaches coverings of adjacent muscles
g. Myosin	_____ 7. Cell membrane of a muscle fiber
h. Perimysium	_____ 8. Layer of connective tissue that surrounds a skeletal muscle
i. Sarcolemma	_____ 9. Unit of alternating light and dark striations between Z lines
j. Sarcomere	_____ 10. Layer of connective tissue that surrounds an individual muscle fiber
k. Sarcoplasm	_____ 11. Cellular organelle in muscle fiber corresponding to the endoplasmic reticulum
l. Sarcoplasmic reticulum	_____ 12. Cordlike part that attaches a muscle to a bone
m. Tendon	_____ 13. Protein found within thick myofibril
n. Transverse tubule	_____ 14. A small bundle of muscle fibers

## PART B

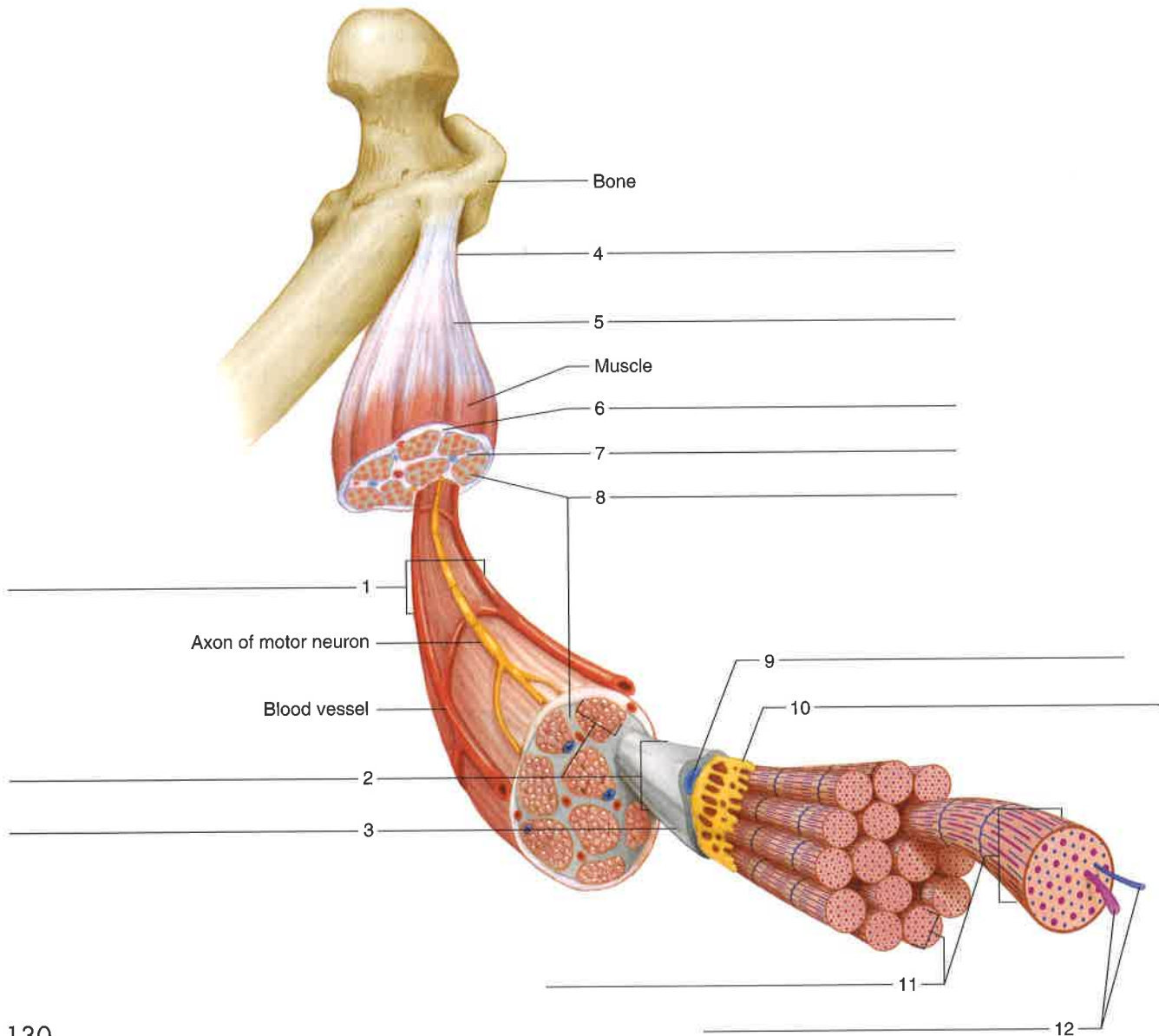
Provide the labels for the electron micrograph in figure 18.4.

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_

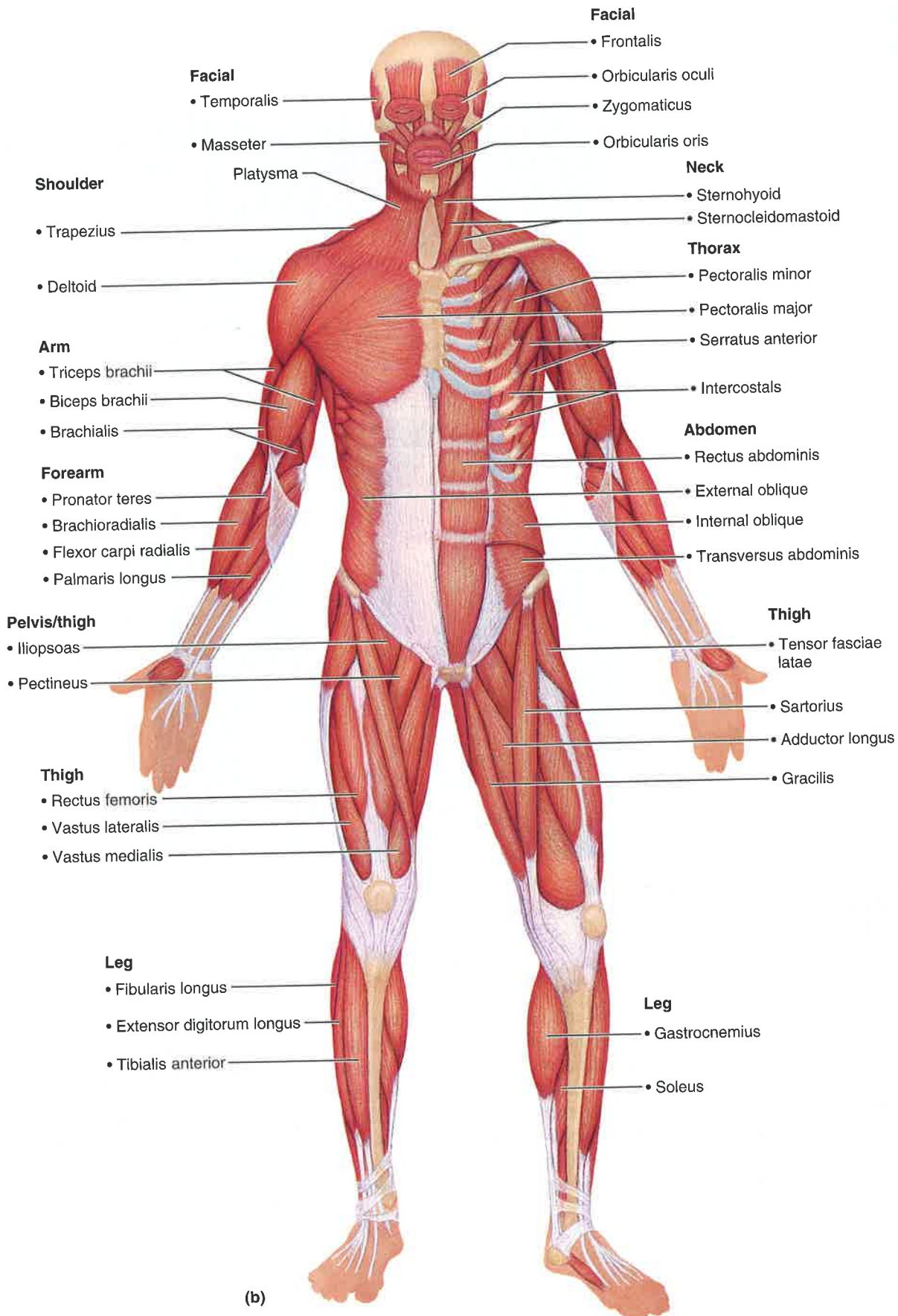
**Figure 18.1** Structures found in skeletal muscle fibers (cells) (250× micrograph enlarged to 700×).



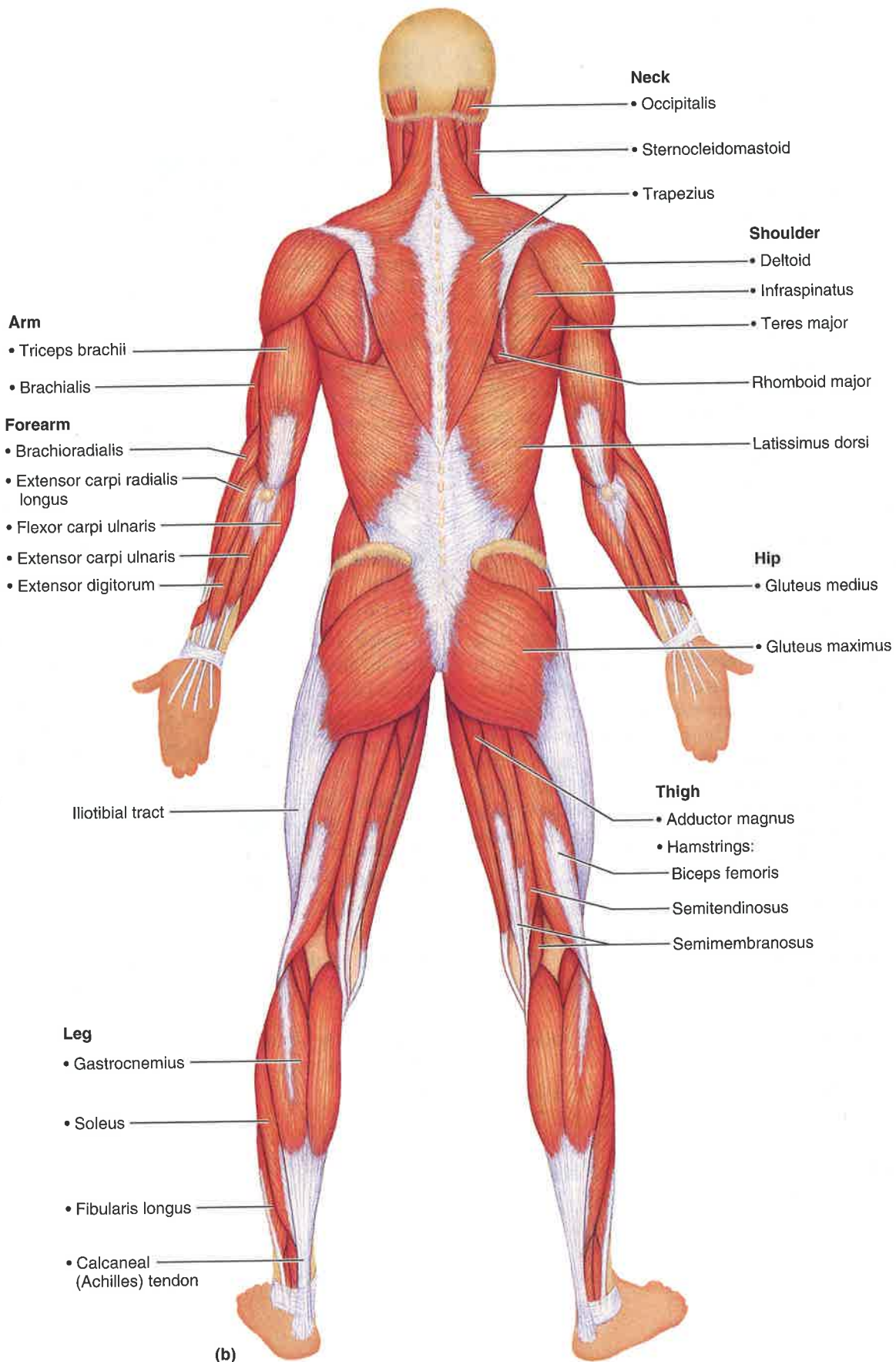
**Figure 18.2** Label the structures of a skeletal muscle.







*Brachioradialis and biceps brachii would be used to do curls. The external obliques and rectus abdominis muscle would be working during crunches.*



*The trapezius. The trapezius and rhomboids.*