

MUSCLES OF THE CHEST, SHOULDER, AND UPPER LIMB

PART A

Match the muscles in column A with the actions in column B. Place the letter of your choice in the space provided.

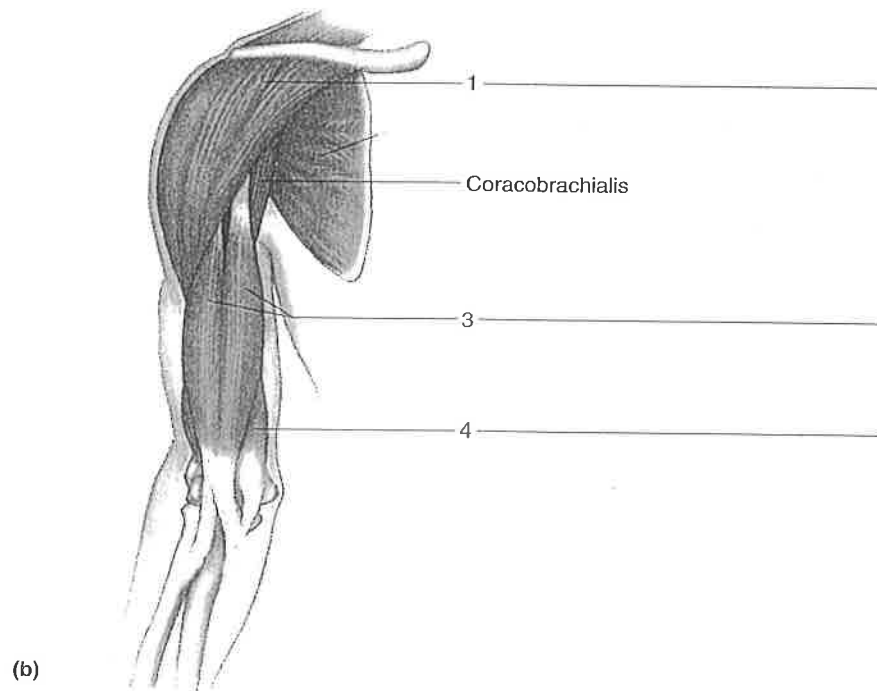
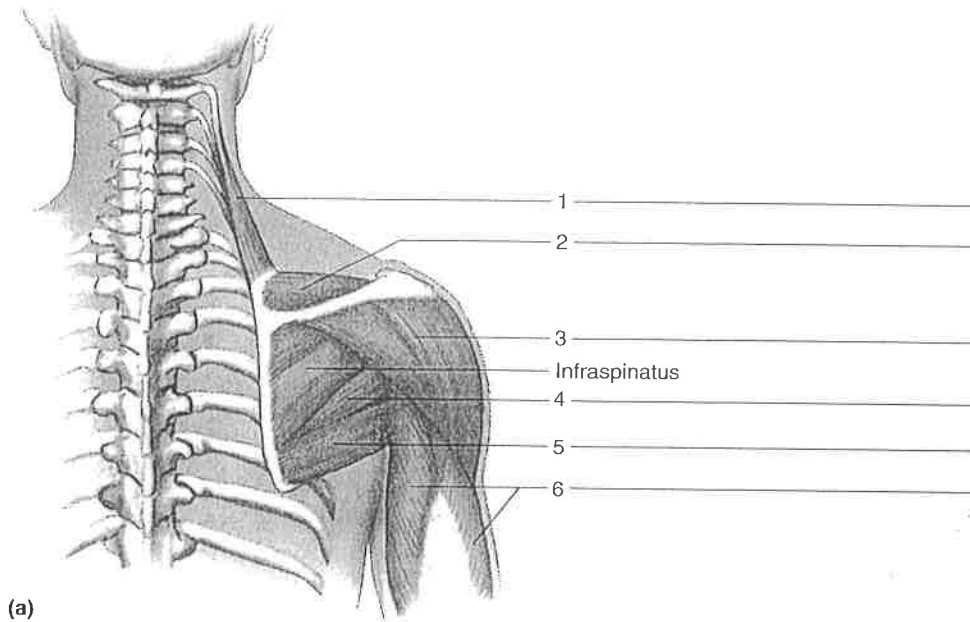
Column A

- a. Brachialis
- b. Coracobrachialis
- c. Deltoid
- d. Extensor carpi ulnaris
- e. Flexor carpi ulnaris
- f. Infraspinatus
- g. Pectoralis major
- h. Pectoralis minor
- i. Rhomboideus major
- j. Serratus anterior
- k. Teres major
- l. Triceps brachii

Column B

- _____ 1. Abducts arm
- _____ 2. Pulls arm forward and across chest
- _____ 3. Flexes and adducts hand at the wrist
- _____ 4. Raises and adducts scapula
- _____ 5. Raises ribs in forceful inhalation or pulls scapula forward and downward
- _____ 6. Used to thrust shoulder anteriorly, as when pushing something
- _____ 7. Flexes the forearm at the elbow
- _____ 8. Flexes and adducts arm at the shoulder along with pectoralis major
- _____ 9. Extends the forearm at the elbow
- _____ 10. Extends, adducts, and rotates arm medially
- _____ 11. Extends and adducts hand at the wrist
- _____ 12. Rotates arm laterally

Figure 21.3 Label (a) the muscles of the posterior shoulder and arm and (b) the muscles of the anterior shoulder and arm, with the rib cage removed.



4. Demonstrate the actions of these muscles in your own body.
5. Locate the origins and insertions of these muscles in the human skeleton.
6. Complete Parts A, B, and C of Laboratory Report 21.

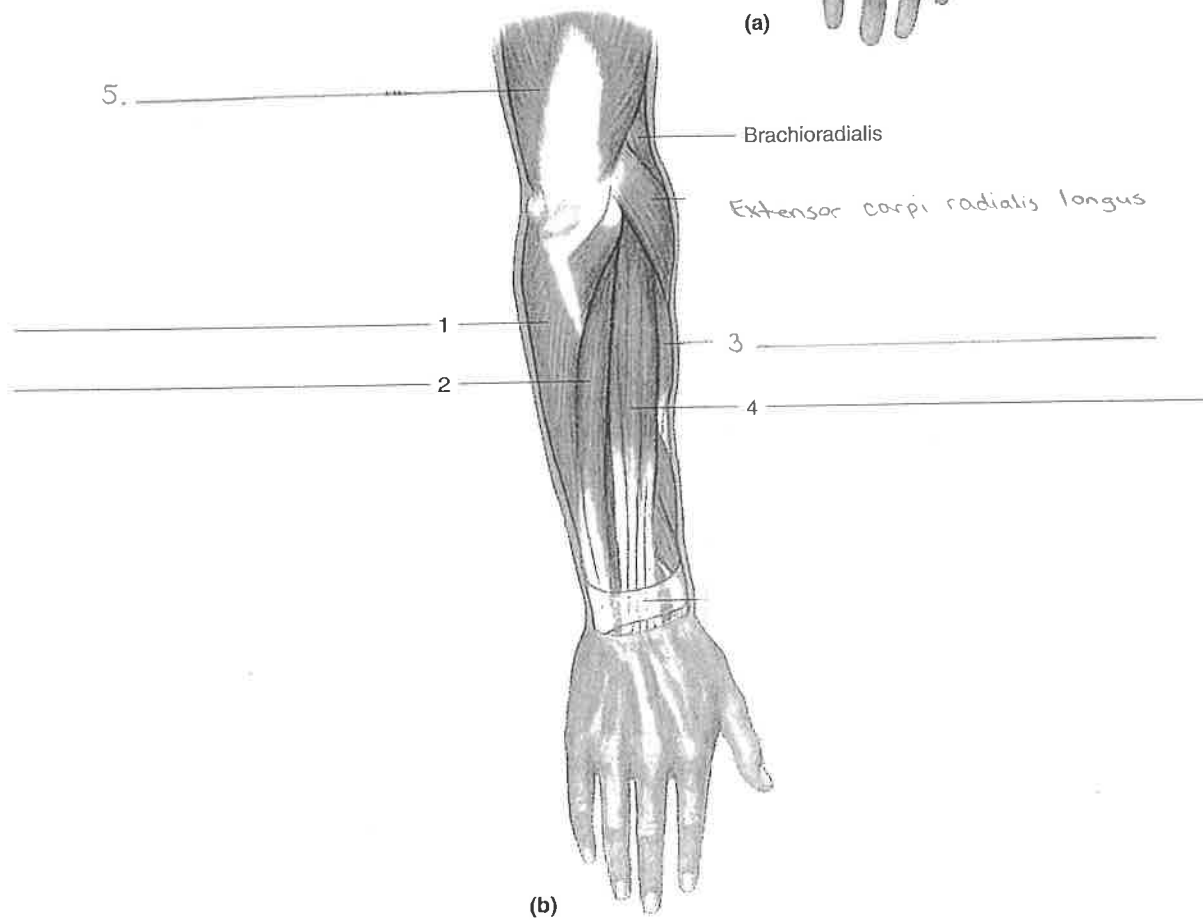
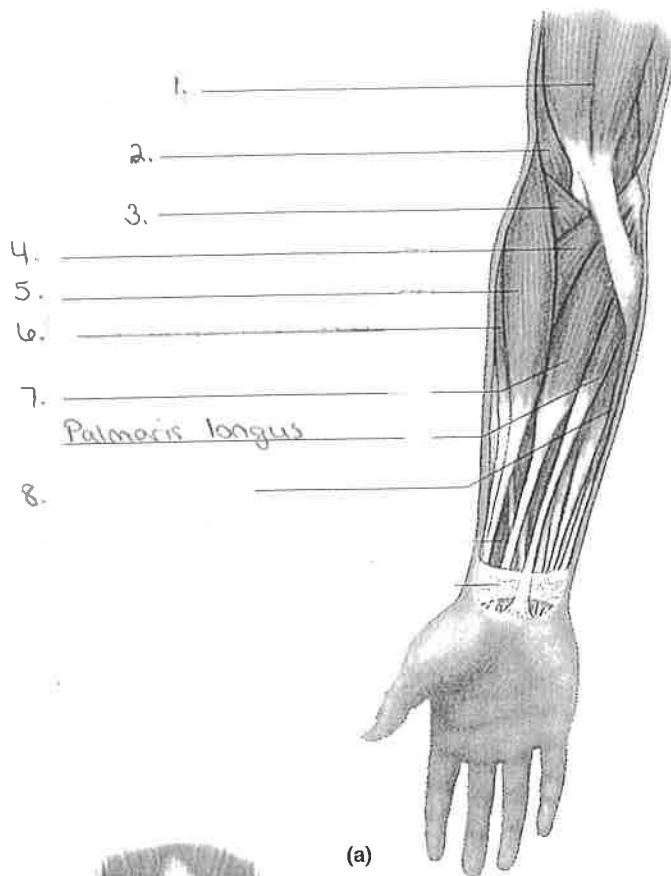
Web Quest

Determine the origin, insertion, action, nerve innervation, and blood supply of all the major muscles.

Identify muscles and detailed explanations from an interactive site.

Find information about these topics at www.mhhe.com/shieress9

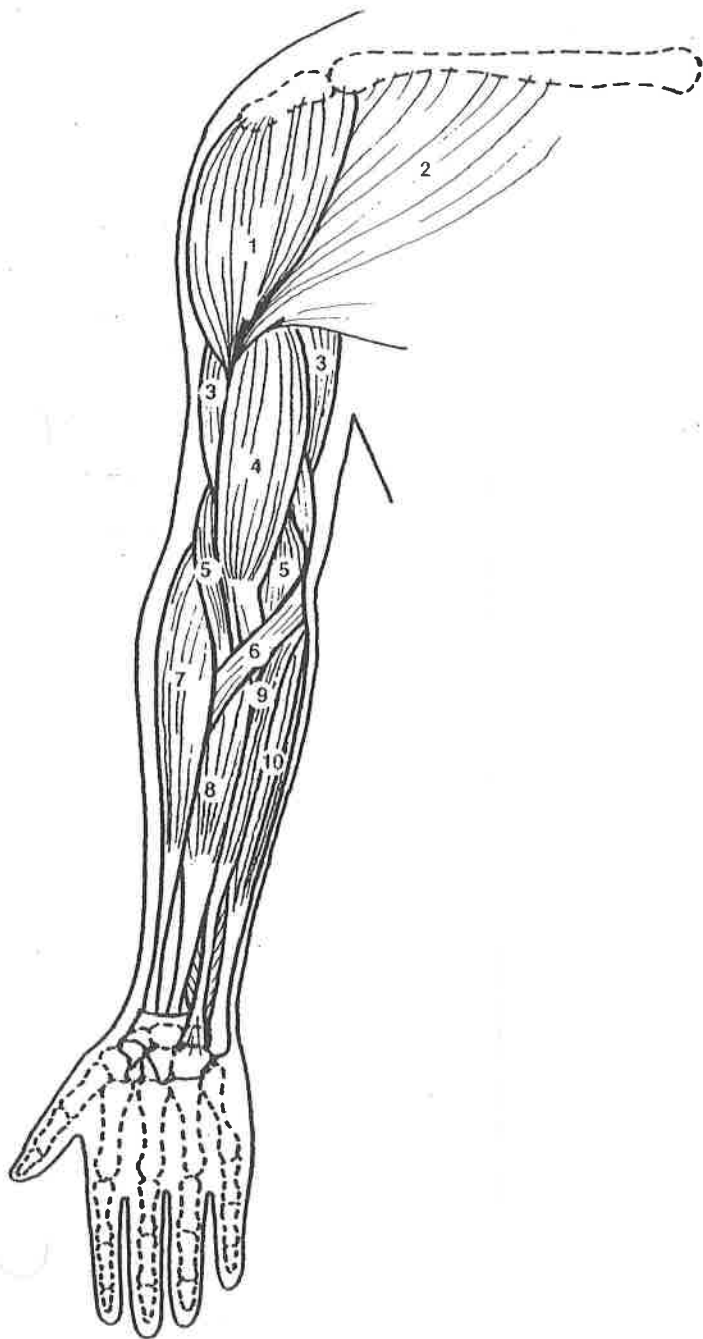
Figure 21.4 Label (a) the muscles of the anterior forearm and (b) the muscles of the posterior forearm.



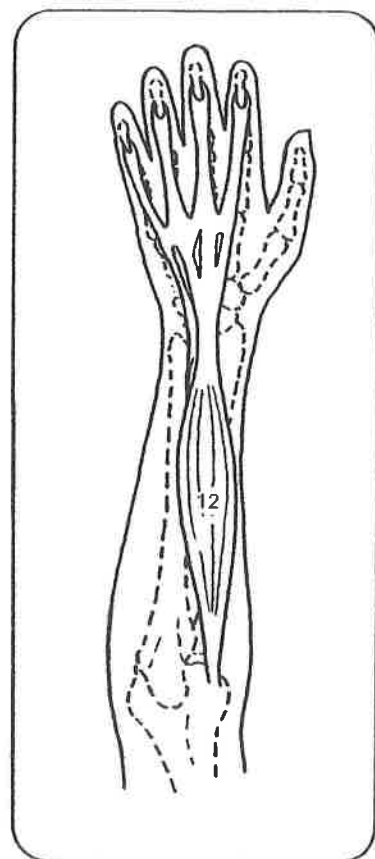
MUSCLES OF THE UPPER LIMBS

A complex group of strong opposing muscles move the arm. These muscles, which arise from the scapula, clavicle, sternum, ribs, lower vertebrae, and hips, form the only attachment between the arm and shoulder and the axial skeleton and hold the humerus in its socket. By contracting and relaxing in combination, the shoulder muscles are able to rotate, extend, and flex the arm at the shoulder. The *brachialis*, *biceps brachii* (which has two heads or origins), and *triceps brachii* (three heads), all muscles of the upper arm, flex the elbow joint and move the forearm. The two rotating actions, *supination* (as

when you turn a key) and *pronation* (as in turning the palm down) are generated by muscles that arise in the humerus and wrap around the radius and ulna like a window shade around its roller. The forearm and lower humerus are the origin for the primary muscles of the wrist, hand, and fingers. The fingers are connected by long tendons, which you can see in the back of your hand, that run from the forearm muscles. Muscles on the underside of the forearm bend the fingers; muscles on the upper side extend them. The hand has small muscles that spread the fingers and perform the complex and very important appposable thumb action, which man alone among primates is capable of.



- | | | |
|--------------------------|-------|--------------|
| 1. DELTOID | _____ | Orange |
| 2. PECTORALIS MAJOR | _____ | Light Blue |
| 3. TRICEPS | _____ | Pink |
| 4. BICEPS | _____ | Green |
| 5. BRACHIALIS | _____ | Light Brown |
| 6. PRONATOR TERES | _____ | Gray |
| 7. BRACHIORADIALIS | _____ | Light Purple |
| 8. FLEXOR CARPI RADIALIS | _____ | Yellow |
| 9. PALMARIS LONGUS | _____ | Turquoise |
| 10. FLEXOR CARPI ULNARIS | _____ | Red |
| 12. EXTENSOR DIGITORUM | _____ | Light Orange |



Label and Color the following:

Flexor carpi radialis

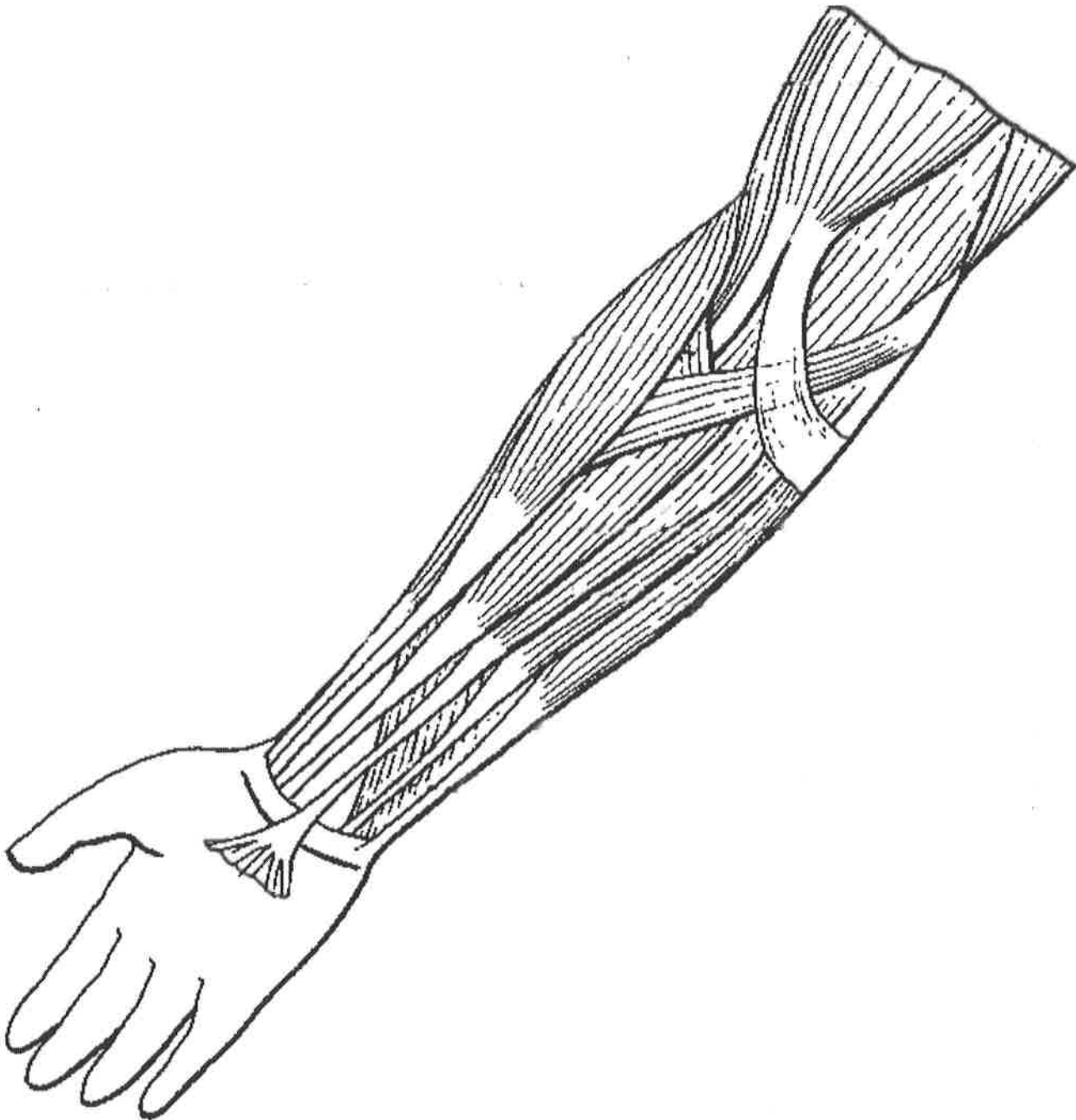
Biceps brachii

Brachialis

Flexor carpi ulnaris

Brachioradialis

Pronator teres



Label and Color the following:

Extensor carpi radialis
 Extensor carpi ulnaris

Extensor digitorum
 Flexor carpi ulnaris

Triceps brachii

