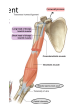
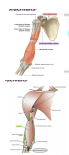
Table 3.6 Arm Muscles

MUSCLE	ORIGIN	INSERTION	NERVE SUPPLY	NERVE ROOTS[a]	ACTION
Anterior Compartment					
Biceps brachii					
Long head	Supraglenoid tubercle of scapula	Tuberosity of radius and bicipital aponeurosis into deep fascia of forearm	Musculocutaneous nerve	C5, **6**	Supinator of forearm and flexor of elbow joint; weak flexor of shoulder joint
Short head	Coracoid process of scapula				
Coracobrachialis	Coracoid process of scapula	Medial aspect of shaft of humerus	Musculocutaneous nerve	C5, **6**, 7	Flexes arm and also weak adductor
Brachialis	Front of lower half of humerus	Coronoid process of ulna	Musculocutaneous nerve	C5, **6**	Flexor of elbow joint
Posterior Compartment					
Triceps					
Long head	Infraglenoid tubercle of scapula				
Lateral head	Upper half of posterior surface of shaft of humerus	Olecranon process of ulna	Radial nerve	C6, 7, **8**	Extensor of elbow joint
Medial head	Lower half of posterior surface of shaft of humerus				





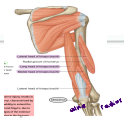
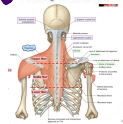


Table 3.4 Back Superficial Muscles

MUSCLE	ORIGIN	INSERTION	NERVE SUPPLY	NERVE ROOTS[a]	ACTION
Trapezius 	Occipital bone, ligamentum nuchae, spine of seventh cervical vertebra, spines of all thoracic vertebrae	Upper fibers into lateral third of clavicle; middle and lower fibers into acromion and spine of scapula	Spinal part of accessory nerve (motor) and C3 and 4 (sensory)	XI **cranial nerve** (spinal part)	Upper fibers elevate the scapula; middle fibers pull scapula medially; lower fibers pull medial border of scapula downward
Latissimus dorsi 	Iliac crest, lumbar fascia, spines of lower six thoracic vertebrae, lower three or four ribs, and inferior angle of scapula	Floor of bicipital groove of humerus	Thoracodorsal nerve	C6, **7**, 8,	Extends, adducts, and medially rotates the arm
Levator scapulae 	Transverse processes of first four cervical vertebrae	Medial border of scapula	C3 and 4 and dorsal scapular nerve	C3, 4, 5	Raises medial border of scapula
Rhomboid minor 	Ligamentum nuchae and spines of seventh cervical and first thoracic vertebrae	Medial border of scapula	Dorsal scapular nerve	**C4**, 5	Raises medial border of scapula upward and medially
Rhomboid major	Second to fifth thoracic spines	Medial border of scapula	Dorsal scapular nerve	**C4**, 5	Raises medial border of scapula upward and medially

Scapular region muscles:

	MUSCLE	ORIGIN	INSERTION	NERVE SUPPLY	NERVE ROOTS[a]	ACTION
	Deltoid	Lateral third of clavicle, acromion, spine of scapula	Middle of lateral surface of shaft of humerus	Axillary nerve	**C5**, 6	Abducts arm; anterior fibers flex and medially rotate arm; posterior fibers extend and laterally rotate arm
	Supraspinatus	Supraspinous fossa of scapula	Greater tuberosity of humerus; capsule of shoulder joint	Suprascapular nerve	C4, **5**, 6	Abducts arm and stabilizes shoulder joint
	Infraspinatus	Infraspinous fossa of scapula	Greater tuberosity of humerus; capsule of shoulder joint	Suprascapular nerve	C4, **5**, 6	Laterally rotates arm and stabilizes shoulder joint
	Teres major	Lower third of lateral border of scapula	Medial lip of bicipital groove of humerus	Lower subscapular nerve	**C6**, 7	Medially rotates and adducts arm and stabilizes shoulder joint
	Teres minor	Upper two thirds of lateral border of scapula	Greater tuberosity of humerus; capsule of shoulder joint	Axillary nerve	C4, **5**, 6	Laterally rotates arm and stabilizes shoulder joint
	Subscapularis	Subscapular fossa	Lesser tuberosity of humerus	Upper and lower subscapular nerves	C5, **6**, 7	Medially rotates arm and stabilizes shoulder joint

Osseofascial Compartment

	MUSCLE	ORIGIN	INSERTION	NERVE SUPPLY	NERVE ROOTS[a]	ACTION
	**Pronator Teres**					
	Humeral head	Medial epicondyle of humerus	Lateral aspect of shaft of radius	Median nerve	C6, **7**	Pronation and flexion of forearm
	Ulnar head	Medial border of coronoid process of ulna				
	Flexor carpi radialis	Medial epicondyle of humerus	Bases of second and third metacarpal bones	Median nerve	C6, **7**	Flexes and abducts hand at wrist joint
	Palmaris longus	Medial epicondyle of humerus	Flexor retinaculum and palmar aponeurosis	Median nerve	C7, 8	Flexes hand
	Flexor Carpi Ulnaris					
	Humeral head	Medial epicondyle of humerus	Pisiform bone, hook of the hamate, base at fifth metacarpal bone	Ulnar nerve	C8; T1	Flexes and adducts hand at wrist joint
	Ulnar head	Medial aspect of olecranon process and posterior border of ulna				
	Flexor Digitorum Superficialis					
	Humeroulnar head	Medial epicondyle of humerus, medial border of coronoid process of ulna	Middle phalanx of medial four fingers	Median nerve	C7, **8**; T1	Flexes middle phalanx of fingers and assists in flexing proximal phalanx and hand
	Radial head	Oblique line on anterior surface of shaft of radius				
	Flexor pollicis longus	Anterior surface of shaft of radius	Distal phalanx of thumb	Anterior interosseous branch of median nerve	**C8**; T1	Flexes distal phalanx of thumb
	Flexor digitorum profundus	Anteromedial surface of shaft of ulna	Distal phalanges of medial four fingers	Ulnar (medial half) and median (lateral half) nerves	**C8**; T1	Flexes distal phalanx of fingers; then assists in flexion of middle and proximal phalanges and wrist
	Pronator quadratus	Anterior surface of shaft of the ulna	Anterior surface of shaft of radius	Anterior interosseous branch of median nerve	**C8**; T1	Pronates forearm

[a]The predominant nerve root supply is indicated by boldface type.

Contents of the Anterior Fascial Compartment of the Forearm

The anterior compartment is divided into three muscle groups:

1. **Superficial Group (Flexors)**
   1. Pronator teres
   2. Flexor carpi radialis
   3. Flexor carpi ulnaris
   4. Palmaris longus
2. **Middle (Intermediate) Group**
   1. Flexor digitorum superficialis
3. **Deep Group**
   1. Flexor pollicis longus (pollicis = thumb): flexes the thumb.
   2. Flexor digitorum profundus (profundus = deep): flexes 4 digits
   3. Pronator quadratus

Rules
Muscles called **radialis** perform abduction + flexion
Muscles called **ulnaris** perform adduction + flexion
Each Tendon passes in front of a joint flexes it
Nerves passing a joint innervate it

Lateral forearm

MUSCLE	ORIGIN	INSERTION	NERVE SUPPLY	NERVE ROOTS[a]	ACTION
Brachioradialis	Lateral supracondylar ridge of humerus	Base of styloid process of radius	Radial nerve	C5, **6**, 7	Flexes forearm at elbow joint; rotates forearm to the midprone position
Extensor carpi radialis longus	Lateral supracondylar ridge of humerus	Posterior surface of base of second metacarpal bone	Radial nerve	C6, 7	Extends and abducts hand at wrist joint

[a]The predominant nerve root supply is indicated by boldface type.

Table 3.9 Muscles of Posterior Forearm Osseofascial Compartment

MUSCLE	ORIGIN	INSERTION	NERVE SUPPLY	NERVE ROOTS[a]	ACTION
Extensor carpi radialis brevis	Lateral epicondyle of humerus	Posterior surface of base of third metacarpal bone	Deep branch of radial nerve	**C7**, 8	Extends and abducts hand at wrist joint
Extensor digitorum	Lateral epicondyle of humerus	Middle and distal phalanges of medial four fingers	Deep branch of radial nerve	**C7**, 8	Extends fingers and hand (see text for details)
Extensor digiti minimi	Lateral epicondyle of humerus	Extensor expansion of little finger	Deep branch of radial nerve	**C7**, 8	Extends metacarpal phalangeal joint of little finger
Extensor carpi ulnaris	Lateral epicondyle of humerus	Base of fifth metacarpal bone	Deep branch of radial nerve	C7, **8**	Extends and adducts hand at wrist joint
Anconeus	Lateral epicondyle of humerus	Lateral surface of olecranon process of ulna	Radial nerve	C7, 8; T1	Extends elbow joint
Supinator	Lateral epicondyle of humerus, anular ligament of proximal radioulnar joint, and ulna	Neck and shaft of radius	Deep branch of radial nerve	C5, 6	Supination of forearm
Abductor pollicis longus	Posterior surface of shafts of radius and ulna	Base of first metacarpal bone	Deep branch of radial nerve	C7, **8**	Abducts and extends thumb
Extensor pollicis brevis	Posterior surface of shaft of radius	Base of proximal phalanx of thumb	Deep branch of radial nerve	C7, **8**	Extends metacarpophalangeal joints of thumb
Extensor pollicis longus	Posterior surface of shaft of ulna	Base of distal phalanx of thumb	Deep branch of radial nerve	C7, **8**	Extends distal phalanx of thumb
Extensor indicis	Posterior surface of shaft of ulna	Extensor expansion of index finger	Deep branch of radial nerve	C7, **8**	Extends metacarpophalangeal joint of index finger

[a]The predominant nerve root supply is indicated by boldface type.

Contents of the Posterior Fascial Compartment of the Forearm

- The superficial group (slides 11 to 15):
(1) extensor carpi radialis brevis,
(2) extensor digitorum,
(3) extensor digiti minimi,
(4) extensor carpi ulnaris,
(5) anconeus.

- The deep group includes (slides 16 to 20):
(1) the supinator,
(2) abductor pollicis longus,
(3) extensor pollicis brevis,
(4) extensor pollicis longus,
(5) extensor indicis.

These muscles possess a common tendon of