

Muscles of Anterior Thoracic Wall

Muscles	Origin	Insertion	Innervations	Action
Pectoralis Major	Medial ½ of clavicle 2 nd t 6 th ribs Costal Margin of Sternum Aponeurosis of external oblique	Humerus Lateral lip of intertubercular sulcus	Lateral and median pectoral nerves	Adducts and rotates arm medially <i>Sternal Part:</i> Help extend humerus <i>Clavicular Part:</i> Help flex humerus
Pectoralis Minor	Coracoid process of scapula	Ribs 2 to 5	Medial Pectoral Nerve	Protracts Scapula, Elevates ribs
Serratus Anterior	Fleshy slips from upper 9 ribs	Medial border of scapula	Long Thoracic Nerve	Protracts and Rotates Scapula Holds Scapula close to thoracic wall

Muscles of Acromial Region

Muscles	Origin	Insertion	Innervations	Action
Deltoid	Lateral 1/3 rd of clavicle The acromion Spine of Scapula	Deltoid tubercle on lateral surface of Humerus	Axillary nerve	Abduction of Humerus

Muscles of Anterior Scapular Region

Muscles	Origin	Insertion	Innervations	Action
Subscapularis	Subscapular fossa of scapula	Lesser tubercle of humerus	Upper and lower subscapular nerve	Medial rotation of humerus

Posterior Scapular Region

Muscles	Origin	Insertion	Innervations	Action
Supraspinatus	Supraspinous fossa of scapula	Highest facet of the greater tubercle of the humerus	Suprascapular nerve	Initiate abduction of arm Lateral rotation of Humerus
Infraspinatus	Infraspinous fossa of scapula	Medial part of greater tubercle of humerus	Suprascapular nerve	Lateral rotation of humerus
Teres Major	Lower lateral border and inferior angle of scapula	Crest of lesser tubercle and medial lip of intertubercular sulcus of humerus	Lower scapular nerve	Adduct and medially rotates the humerus, assist in extension of arm
Teres Minor	Upper part of lateral border of scapula	Lower part of Greater tubercle of humerus	Axillary Nerve	Rotates humerus laterally, weakly adducts humerus

MUSCLES OF ARM

Anterior Humeral Region

Muscles	Origin	Insertion	Innervations	Action
Coracobrachialis	Coracoid process of scapula	Middle of medial surface of humerus	Musculocutaneous Nerve	Flexes and adducts the arm
Brachialis	Distal half of anterior surface of humerus	Tuberosity of ulna, and the anterior surface of coronoid process	Musculocutaneous nerve and a small branch of radial nerve	Powerful flexor of forearm
Biceps Brachii	<i>Long Head:</i> Supraglenoid tubercle of scapula <i>Short Head:</i> Coracoid process of scapula	Tuberosity of radius and bicipital aponeurosis	Musculocutaneous nerve	Flexes and supinates forearm. Long head also assist in flexing humerus

Posterior Humeral Region

Muscles	Origin	Insertion	Innervations	Action
Triceps Brachii	<i>Long Head:</i> Infraglenoid tubercle of scapula <i>Lateral Head:</i> Posterior surface and lateral border of humerus <i>Medial Head:</i> Posterior surface and medial border of humerus	Posterior part of olecranon process of ulna and the deep fascia of the dorsal forearm	Radial Nerve	Extension of the forearm at the elbow joint. The long head also extends the humerus at shoulder joint.

MUSCLES OF THE FOREARM

Anterior Group, Superficial Layer

Muscles	Origin	Insertion	Innervations	Action
Pronator Teres	<i>Humeral Head:</i> Medial Epicondyle of Humerus <i>Ulnar Head:</i> Coronoid process of ulna	Midway along the lateral surface of radius	Median Nerve	Pronates and flexes the forearm
Palmaris Longus	Medial Epicondyl of Humerus	Anterior flexor retinaculum and the palmar aponeurosis	Median Nerve	Flexes the hand at the wrist and tenses the palmar aponeurosis
Flexor Digitorum Superficialis	<i>Humero-ulnar Head:</i> Medial epicondyl of humerus coronoid process of ulna <i>Radial Head:</i> Anterior surface of radius below radial tuberosity	By four long tendons onto the sides of the middle phalanx of the four medial fingers	Median Nerve	Flexes the middle and proximal phalanges of the four medial fingers, also flexes wrist
Flexor Carpi Radialis	Medial Epicondyl of Humerus	Base of 2 nd metacarpal bone	Median Nerve	Flexes the hand at the wrist joint, Abducts the hand

Flexor Carpi Ulnaris	<u>Humeral Head</u> : Medial Epicondyl of humerus, <u>Ulnar Head</u> : Medial margin of olecranon and upper posterior border of ulna	Pisiform bone and by the ligaments to the hamate and 5 th metacarpal bone	Ulnar nerve	Flexes the hand at the wrist, adducts the hand
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Anterior Group, Deep Layer

Muscles	Origin	Insertion	Innervations	Action
Flexor Digitorum Profundus	Upper 1/4 th of anterior and medial aspect of ulna and ulnar half of interosseous membrane	Anterior surface of the base of distal phalanx of the four medial fingers	Ulnar nerve	Flexes the distal phalanx of the 4 medial fingers, also flexes the hand at the wrist
Flexor Pollicis Longus	<u>Radial Head</u> : Anterior surface of radius and adjacent part of interosseous membrane <u>Humeral Head</u> : Medial Epicondyl of humerus or coronoid process of ulna	Base of distal phalanx of thumb	Median Nerve	Flexes the distal phalanx and help in flexing the proximal phalanx of the thumb
Pronator Quadratus	Distal 1/4 of anterior surface of Ulna	Distal 1/4 of anterior surface of radius	Median Nerve	Pronates the hand

Posterior Group, Superficial Layer

Muscles	Origin	Insertion	Innervation	Action
Brachioradialis	Upper 2/3 rd of lateral supracondylar ridge of humerus	Lateral aspect of the base of styloid process of radius	Radial Nerve	Flexes the forearm when forearm is pronated
Extensor Carpi Radialis Longus	Lower 1/3 rd of supracondylar ridge of humerus	Dorsal surface of the base of 2 nd metacarpal bone	Radial Nerve	Extends the hand, abducts the hand at wrist
Extensor Carpi Radialis Brevis	Lateral Epicondyl of Humerus	Dorsal surface of the base of 3 rd metacarpal bone	Radial Nerve	Extends the hand, abducts the hand at wrist
Extensor Digitorum	Lateral Epicondyl of Humerus	Dorsum of the middle and distal phalanges of the 4 fingers	Posterior interosseous branch of Radial nerve	Extends the fingers and the hand
Extensor Digiti Minimi	Lateral Epicondyl of Humerus	Dorsal digital expansion of the little finger	Posterior interosseous branch of Radial nerve	Extends the little finger and the hand
Extensor Carpi Ulnaris	Lateral Epicondyl of Humerus	Medial side of the base of 5 th metacarpal bone	Posterior interosseous branch of Radial nerve	Extends and adducts the hand
Anconeus	Lateral Epicondyl of Humerus	Lateral side of olecranon and shaft of ulna	Radial Nerve	Help to extend the forearm at the elbow joint

Posterior Group, Deep Layer

Muscles	Origin	Insertion	Innervation	Action
Extensor Pollicis Longus	Posterior shaft of ulna and interosseous membrane	Base of distal phalanx of thumb	Posterior interosseous branch of Radial nerve	Extends the thumb
Extensor Pollicis Brevis	Posterior surface of radius and interosseous membrane	Base of proximal phalanx of thumb	Posterior interosseous branch of Radial nerve	Extends the proximal phalanx and metacarpal bone of thumb
Abductor pollicis Longus	Posterior surface of both radius and ulna and interosseous membrane	Radial Side of Base of 1 st metacarpal bone and on trapezoid bone	Posterior interosseous branch of Radial nerve	Abduct the thumb
Extensor Indicis	Posterior surface of ulna and interosseous membrane	Into the extensor hood of index finger	Posterior interosseous branch of Radial nerve	Extends the index finger
Supinator	Lateral epicondyl of Humerus, Radial collateral ligament, Supinator crest of ulna	Lateral surface of proximal 1/3 rd of radius	Posterior interosseous branch of Radial nerve	Rotates the radius to supinate the hand and forearm

MUSCLES OF THE HAND

Thenar(Thumb) Muscles of Hand

Muscles	Origin	Insertion	Innervation	Action
Abductor Pollicis Brevis	Flexor retinaculum and tubercle of trapezium	Base of proximal phalanx of thumb	Median Nerve	Abducts thumb
Opponens Pollicis	Flexor retinaculum and tubercle of scaphoid and trapezium bones	Whole length of lateral border of metacarpal bone of thumb	Median Nerve	Opposes the thumb to other fingers
Flexor Pollicis Brevis	<u>Superficial Head:</u> Flexor retinaculum and tubercle of trapezium <u>Deep Head:</u> Trapezoid and capitate bone	Radial Side of base of the proximal phalanx of thumb	<u>Superficial Head:</u> Median Nerve, <u>Deep Head:</u> Deep branch of ulnar nerve	Flexes proximal phalanx of thumb, flexes metacarpal bone and rotates it medially
Adductor Pollicis	<u>Oblique Head:</u> Capitate bone and bases of 2 nd and 3 rd metacarpal bones <u>Transverse Head:</u> Palmar surface of 3 rd metacarpal bone	Ulnar side of base of proximal phalanx of thumb	Ulnar nerve	Adducts the thumb

Hypothenar (Little Finger) Muscles of Hand

Muscles	Origin	Insertion	Innervation	Action
Palmaris Brevis	Palmar aponeurosis and the flexor retinaculum	Into the dermis on the ulnar side of hand	Ulnar nerve, Superficial branch	Helps tense the skin over hypothenar muscles
Abductor Digiti Minimi	Pisiform bone and tendon of Flexor Carpi Ulnaris	Base of proximal phalanx and dorsal aponeurosis of little finger	Ulnar nerve, Deep branch	Abducts the little finger
Flexor Digiti Minimi	Hamate bone and flexor retinaculum	Base of proximal phalanx of little finger	Ulnar nerve, Deep branch	Flexes little finger at metacarpophalangeal joint
Opponens Digiti Minimi	Hamate bone and flexor retinaculum	Ulnar side of 5 th metacarpal bone	Ulnar nerve, Deep branch	Brings little finger into opposition with thumb

Intermediate Group (Lumbrical) Muscles

Muscles	Origin	Insertion	Innervation	Action
Lumbrical Muscles (Four)	Four tendons of flexor digitorum profundus muscle	Radial side of dorsal digital expansion, 2 nd , 3 rd , 4 th , and 5 th digits	Median Nerve: Radial two lumbricals (1 st , 2 nd) Ulnar Nerve: Ulnar two lumbricals (3 rd , 4 th)	Flex metacarpophalangeal joints, extend interphalangeal joints
Dorsal Interossei (Four)	Each arise by two heads from adjacent sides of metacarpal bones	Base of Proximal Phalanges and the dorsal expansion of 2 nd , 3 rd and 4 th fingers	Ulnar nerve, deep palmar branch	Abduct fingers, flex metacarpophalangeal joint, extend at interphalangeal joints
	Each arises by one head from 2 nd , 4 th and 5 th metacarpal bones	Dorsal digital expansions of the 2 nd , 4 th and 5 th fingers	Ulnar nerve, deep palmar branch	Adduct fingers, flex metacarpophalangeal joint, extend at interphalangeal joints