

Muscle Name	Origin	Insertion	Action	Innervation
Muscles of Upper Extremity				
Pectoralis Major	Medial half of clavicle, front of sternum, costal cartilage	Crest of greater tubercle (Lateral lip of bicipital groove)	Horizontally adduct, medially rotate at shoulder	Medical and lateral pectoral
Pectoralis Minor	Ribs 2-5	Coracoid process	Protract, depress, medially rotate scapula and elevate ribs	Medial pectoral
Serratus Anterior	Ribs 1-8	Ventral surfaces of the superior and inferior angles and vertebral (medial) border of scapula	Protract and laterally rotate the scapula	Long Thoracic
Trapezius	Occipital bone, spines of C7 and T1-12, and ligamentum nuchae	Lateral 1/3 of clavicle, acromion, and spine of scapula	Laterally rotate scapula; upper portions can elevate scapula, lower portion can depress scapula	Cranial nerve 11, spinal accessory nerve
Rhomboids	Spines of C7 and T1-5	Vertebral (medial) border of scapula	Retract and medially rotate the scapula	Dorsal Scapular
Levator Scapulae	Transverse Processes of C1-4	Upper part of medial border of scapula	Elevate scapula, medial rotation of scapula	3 rd and 4 th cervical spinal nerves
Latissimus Dorsi	Thoracolumbar fascia, iliac crest, inferior angle of scapula and lower ribs	Intertubercular groove of humerus	Extend and adduct at shoulder, medially rotate at shoulder, and horizontally abduct away from midline	Middle subscapular (Thoracodorsal)

Deltoid	Lateral 1/3 clavicle, acromion, and spine of scapula	Deltoid tuberosity of humerus	Abduct at shoulder; anterior fibers flex the shoulder, posterior fibers extend the shoulder	Axillary
Teres Major	Inferior angle of scapula	Crest of lesser tubercle of humerus	Medially rotates shoulder, and adducts at shoulder	Lower subscapular
Coracobrachialis	Coracoid process of scapula	Humerus	Flex shoulder joint	Musculocutaneous
Subscapularis	Subscapular fossa of scapula	Lesser tubercle of humerus	Medially rotate shoulder, adduct at shoulder	Upper subscapular
Supraspinatus	Supraspinatus fossa of scapula	Greater tubercle of humerus	Abduct at shoulder	Suprascapular
Infraspinatus	Infraspinatus fossa of scapula	Greater tubercle of humerus	Lateral rotation at shoulder	Suprascapular
Teres Minor	Lateral border of scapula	Greater tubercle of humerus	Lateral rotation at shoulder	Axillary
Long Head of Biceps	Supraglenoid tubercle of scapula	Tuberosity of radius and to ulna by the bicipital aponeurosis	Flex elbow, supinate forearm, and flex shoulder	Musculocutaneous
Short head of biceps	Coracoid process of scapula	Tuberosity of radius and to ulna by the bicipital aponeurosis	Flex elbow, supinate forearm, and flex shoulder	Musculocutaneous
Brachialis	Humerus	Coronoid process of ulna and ulnar tuberosity	Flex elbow	Musculocutaneous
Lateral Head of Triceps	Humerus	Olecranon of ulna	Extend elbow	Radial
Long Head of Triceps	Infraglenoid tubercle of scapula	Olecranon of ulna	Extend elbow	Radial

Medial Head of Triceps	Humerus	Olecranon of ulna	Extend elbow	Radial
Brachioradialis	Lateral supracondylar line	Distal radius	Flexes at elbow	Radial
Anconeus	Lateral epicondyle	Olecranon of ulna	Extend elbow	Radial
Muscles of the Hand				
Extensor Carpi Radialis Longus and Brevis	Lateral epicondyle	Base of 2 nd metacarpal (long), base of 2 nd and 3 rd metacarpals (brevis)	Extend wrist, abduct, radially deviate wrist	Radial
Extensor Digitorum	Lateral epicondyle	Middle and distal phalanges of fingers (digits 2-5)	Extends joints from wrist to DIP joints of digits 2-5	Radial
Extensor Digiti Minimi	Lateral epicondyle	Joins tendons of extensor digitorum	Extends wrist and all joints in digits	Radial
Extensor Carpi Ulnaris	Lateral epicondyle and ulna	Base of 5 th metatarsal	Extends wrist and adducts (ulnar deviation)	Radial
Abductor Pollicis Longus	Radius and ulna	Base of 1 st metacarpal	Abduct and extend at CMC joint	Radial
Extensor Pollicis Brevis	Radius	Proximal phalanx of thumb	Extend CMC and MCP joints of the thumb	Radial
Extensor Pollicis Longus	Ulna	Distal phalanx of thumb	Extends CMC, MCP and IP joints of thumb	Radial
Extensor Indicis	Ulna	Joins tendons of extensor digitorum	Extends all joints of index finger	Radial
Supinator	Lateral epicondyle and ulna	Wraps around lateral surface of radius	Supinates at forearm	Radial

Pronator Teres	Medial supracondylar ridge of medial epicondyle of humerus and coronoid of ulna	Lateral surface of radius	Pronate forearm	Median
Flexor Carpi Radialis	Medial epicondyle	2 nd and 3 rd metacarpals	Flex/Radial deviation of wrist	Median
Palmaris Longus	Medial epicondyle	Palmar fascia	Flex wrist, tenses palmar fascia	Median
Flexor Carpi Ulnaris	Medial epicondyle	Pisiform	Flex wrist and adduct wrist	Ulnar
Flexor Digitorum Superficialis	Medial epicondyle of humerus and radius	Middle phalanges of digits 2-5	Flexes all joints from wrist to PIP of digits 2-5	Median
Flexor Pollicis Longus	Radius and interosseous membrane	Distal phalanx of thumb	Flex wrist and all 3 joints of thumb	Median
Flexor Digitorum Profundus	Ulna and interosseous membrane	Distal phalanges of digits 2-5	Flex wrist, flex all joints to DIP in digits 2-5	Media to radial side of muscle; ulnar to ulnar side of muscle
Pronator Quadratus	Distal ulna	Distal radius	Pronates forearm	Median
Abductor Pollicis Brevis	Navicular and trapezium	Base of proximal phalanx	Abduct at CMC and MCP joints of thumb	Median
Flexor Pollicis Brevis	Trapezium (superficial), trapezoid; capitate (deep)	Radial side of proximal phalanx (superficial and deep)	Flex CMC and MCP of thumb	Median; deep head by ulnar nerve
Opponens Pollicis	Trapezium	1 st metacarpal	Flex and medially rotate at CMC joint	Median
Adductor Pollicis	Capitate, 2 nd and 3 rd metacarpals (oblique), 3 rd metacarpal (transverse)	Proximal phalanx (oblique and transverse)	Adduct and flex at CMC and MCP joints	Ulnar

Abductor Digiti Minimi			Abduct MCP for digit 5	
Flexor Digiti Minimi Brevis			Flex MCP for digit 5	
Opponens Digiti Minimi			Flex CMC for digit 5	
Lumbricals of the hand	Tendons of flexor digitorum profundus	Radial side of extensor expansion of extensor digitorum	Flex MCP of digits 2-5, extend IP joints of digits 2-5	Lateral two, median; medial two, ulnar
Dorsal interossei of hand (4)			Abduct at MCP joint for digit 2-4	Ulnar
Palmar interossei (3)			Adduct MCP joints of digits 2,4, and 5	Ulnar
Thorax				
External Intercostals	Lower border of a rib	Upper border of rib below	Elevate ribs during inspiration	Intercostal nerves
Internal Intercostals	Inner surface of a rib	Upper border of rib below	Draw ribs downward during forced expiration	Intercostal nerves
Transversus Thoracis	Inner surface of body; xiphoid process	Costal cartilages of ribs 2-6	Draw ribs downward	Intercostal nerves
Quadratus Lumborum	Iliac crest	12 th rib, transverse process of lumbar vertebrae	Lateral flexion of lumbar vertebrae	Branches of ventral rami of L1-4
Psoas Major	Upper 4 lumbar transverse processes; last thoracic; upper 4 lumbar discs; adjacent vertebrae	Lesser trochanter of femur	Flexes hip joint	Branches of ventral rami L2-4

Psoas Minor	Bodies of T12 and L1	Iliopsoas fascia and pectinal line of ilium	Flexor of lumbar spine	Ventral ramus of L1
Iliacus	Iliac fossa	Lesser trochanter of femur	Flexor of hip joint	Femoral nerve
Rectus Abdominis	Pubic crest	Costal cartilages 5-7	Flex vertebral column and increase interabdominal pressure	Lower 5-6 intercostal and subcostal (12 th thoracic nerve)
External Oblique	Lower 8 ribs	Iliac crest, linea alba	Compress abdomen; both sides flex vertebral column, one side (unilateral contraction) will rotate vertebral column to opposite side	Lower 5 intercostal, iliohypogastric and ilioinguinal
Internal Oblique	Lumbar fascia, iliac crest and lateral half of inguinal ligament	Cartilage of lower 4 ribs, linea alba	Compress abdomen; both sides flex vertebral column, one side (unilateral cont.) will rotate vertebral column to same side	Lower 5 intercostal, iliohypogastric and ilioinguinal
Transversus Abdominis (Deepest)	Iliac crest, lateral 1/3 of inguinal ligament, cartilage of lower 6 ribs	Linea alba	Compress abdomen	Lower 5 intercostal, iliohypogastric and ilioinguinal
True Back Muscles				
	Superficial/Deep	Origin	Insertion	Action
Splenius Capitis	Superficial			Contract one side, rotate head to same side; contract both sides to extend head/neck

Splenius Cervicis	Superficial			Contract one side, rotate head to same side; contract both sides to extend head/neck
Spinalis (thoracis, cervicis, capitis)	Superficial	Spinous process	Spinous process	Extension, lateral flexion of vertebral column
Longissimus (thoracis, cervicis, capitis)	Superficial	Transverse process	Transverse process	Extension, lateral flexion of vertebral column
Iliocostalis (lumborum, thoracis, cervicis)	Superficial	Rib	Rib	Extension, lateral flexion of vertebral column
Semispinalis	Deep	Transverse process	Transverse process and occipital bone	Extend vertebral column and head
Multifidus	Deep	Transverse process	Spinous process	Rotate vertebral column to opposite side
Rotatores	Deep	Transverse process	Spinous process	Rotate vertebral column to opposite side
Intertransversarii	Deep			Extend vertebral column

Interspinalis	Deep			Extend veterbral column
Muscles of thigh				
Rectus Femoris -Anterior	Anterior inferior iliac spine	Patella and tibial tuberosity through patellar ligament	Extends knee and flexes hip	Femoral
Vastus Lateralis -Anterior	Lateral lip of linea aspera	Patella	Extends knee	Femoral
Vastus Medialis -Anterior	Medial lip of linea aspera	Patella	Extends knee	Femoral
Vastus Intermedius -Anterior	Shaft of femur	Tendon of rectus femoris and vastus muscles	Extends knee	Femoral
Sartorius -Anterior	Anterior superior iliac spine	Medial surface of tibia	Flexes hip and knee joint	Femoral
Pectineus -Medial	Pectinal line of pubis	Pectinal line and linea aspera	Flex, adduct and medially rotate hip	Femoral
Adductor Longus -Medial	Body of pubis	Medial lip of linea aspera	Flex, adduct and medially rotate hip	Obturator
Adductor Brevis -Medial	Body and inferior ramus of pubis	Pectineal line and linea aspera	Flex, adduct and medially rotate hip	Obturator
Adductor Magnus - Medial	Ischiopubic ramus and ischial tuberosity	Linea aspera and adductor tubercle on medial epicondyle of femur	Upper: Adduct, flex, medially rotate Lower: Adduct, extend, laterally rotate	Upper: Obturator Lower: Tibial sciatic

Gracilis -Medial	Body of pubis	Medial surface of tibia	Adduct hip, flexes knee	Obturator
Gluteus Maximus -Gluteal	Ilium and sacrum	Iliotibial tract and gluteal tuberosity of femur	Extend and laterally rotate hip	Inferior gluteal
Gluteus Medius And Gluteus Minimus -Gluteal	Ilium	Greater trochanter	Abduct hip Anterior: Flex and medially rotate Posterior: Extend and laterally rotate	Superior gluteal
Tensor Fasciae Latae -Gluteal	Iliac crest and anterior superior iliac spine	Iliotibial tract	Flex, abduct, medially rotate hip	Superior gluteal
Piriformis Superior Gemellus Obturator Internus Inferior Gemellus Quadratus Femoris Obturator Externus	Pelvis	Greater trochanter and posterior part of femur	Lateral rotators of hip	Nerve to "muscle name"
Biceps Femoris - Posterior	Long head: ischial tuberosity Short head: Linea aspera	Fibular head	Flex knee, extend hip	Long head: Tibial sciatic Short head: Peroneal sciatic
Semimembranosus -Posterior	Ischial tuberosity	Medial condyle of tibia	Flex knee, extend hip	Tibial sciatic
Semitendinosus -Posterior	Ischial tuberosity	Medial surface of tibia	Flex knee, extend hip	Tibial sciatic

Muscles of the Leg				
Tibialis Anterior -Anterior	Lateral condyle and surface of tibia	Medial cuneiform and 1 st metatarsal	Dorsi flex and invert	Deep peroneal
Extensor Digitorum Longus -Anterior	Lateral condyle of tibia and surface of fibula	Middle and distal phalanges of toes 2-5	Dorsi flex and evert, extend joints of toes 2-5	Deep peroneal
Extensor Hallucis Longus -Anterior	Anterior surface of fibula	Distal phalanx of great toe	Dorsi flex, invert, extend joints of big toe	Deep peroneal
Peroneus Tertius -Anterior (Lower fibers of ext. dig. longus)	Anterior surface of fibula	Base of 5 th metatarsal	Dorsi flex and evert	Deep peroneal
Peroneus Longus - Lateral	Head and lateral surface of fibula	1 st metatarsal and medial cuneiform	Plantar flex and evert	Superficial peroneal
Peroneus Brevis -Lateral	Lateral surface of fibula	Tuberosity of 5 th metatarsal	Plantar flex and evert	Superficial peroneal
Gastrocnemius -Posterior, superficial -Part of Triceps Surae	Medial and lateral condyles and posterior surface of femur	Unites with tendon of soleus and forms the tendocalcaneus (Achilles tendon) to posterior surface of calcaneus	Plantar flex (powerful) and invert Can help flex knee	Tibial
Soleus -Posterior, superficial	Head and posterior surface of fibula and soleal line of tibia	Posterior surface of calcaneus	Plantar flex and invert	Tibial

Plantaris -Posterior, superficial	Posterior surface of femur	Joins Achilles tendon to posterior calcaneus	Planter flex (not much)	Tibial
Popliteus -Posterior, deep	Lateral condyle of femur	Tibia	Flex knee, medially rotate tibia; laterally rotate femur	Tibial
Flexor Digitorum Longus -Posterior, deep	Posterior surface of tibia	Distal phalanges of toes 2-5	Flexes all joints of toes 2-5, plantar flex and invert	Tibial
Flexor Hallucis Longus -Posterior, deep	Posterior surface of fibula	Distal phalanx of great toe	Flex joints of big toe, plantar flex and invert	Tibial
Tibialis Posterior -Posterior, deep	Fibula, tibia and interosseous membrane	Tuberosity of navicular and all tarsals except talus	Plantar flex and invert	Tibial
Muscles of Foot				
Extensor Digitorum Brevis or Extensor Hallucis Brevis & Extensor Digitorum Brevis	Only layer on dorsal side; O: Ant. End of upper surface of calcaneus	I: Tendons of extensor digitorum longus to toes 2,3,4 and to proximal phalanx of great toe	Extends MTP joints, tendons going into 2, 3, 4 can help extensor digitorum longus extend all joints of toes 2,3, and 4	Deep peroneal
Abductor Hallucis	1 st Layer		Abduct MTP of big toe	Medial plantar
Flexor Digitorum Brevis	1 st Layer		Flex MTP and PIP of 2-5	Medial plantar
Abductor Digiti Minimi	1 st Layer		Abducts MTP of little toe	Lateral plantar
Quadratus Plantae	2 nd Layer		Assists Flexor Dig. Longus	Lateral plantar

Lumbricals (4)	2 nd Layer	Flex MTP and extends IP of toes 2-5	Toe 2: Medial plantar Toe 3-5: Lateral plantar
Tendons of Flex. Dig. Longus and Flex. Hallucis Longus	2 nd Layer	-	-
Flexor Hallucis Brevis	3 rd Layer	Flexes MTP of big toe	Medial plantar
Adductor Hallucis	3 rd Layer	Adduct MTP of big toe	Lateral plantar
Flexor Digiti Minimi Brevis	3 rd Layer	Flex MTP of little toe	Lateral plantar
Dorsal Interossei (4)	4 th Layer	Abduct MTP of toes 2-5	Lateral plantar
Plantar Interossei (3)	4 th Layer	Adduct MTP of toes 3, 4, and 5	Lateral plantar
Tendons of Peroneus Long. & Post. Tibialis	4 th Layer	-	-