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Hosford Muscle Tables

This document details information about the skeletal muscles of the human body. Included are each muscle's origin, insertion, action, blood supply and innervation. Many health professionals will also find this document helpful, but it is especially suited to Physical Therapy.

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Welcome to the Human Skeletal Muscle Tables!

This document details information about the skeletal muscles of the human body. Included are each muscle's origin, insertion, action, blood supply and innervation. The student should be reminded that there is great variability in blood supply and innervation within a population of individuals.

Hints for Anatomy Study:

1. Visualize as you memorize. A picture can really be worth a thousand words! Save brain cells, sweat and tears by referring to a good anatomy atlas as you study.
2. Review regularly. Spatially organize and order anatomical parts in relation to each other, as if you were to construct a three dimensional image in your mind.
3. Utilize a study group. Organize a group of fellow students to regularly study, review and quiz over the anatomy material. Information presented from a variety of perspectives is often much easier to learn.

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Document Background:

This document began as a personal study tool while I was taking Gross Anatomy, in the Doctor of Physical Therapy program at Slippery Rock University of Pennsylvania.

References:

- Daniels & Worthingham, *Muscle Testing, 6th Ed.*
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Happy studies, and I wish you the best of success.

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Superficial Back Musculature

Muscle	Origin	Insertion	Action	Blood	Nerve
Trapezius	1. external occipital protuberance 2. medial 1/3 of the superior nuchal line 3. ligamentum nuchae (surrounding the cervical spinous processes) 4. spinous processes of C1-T12	1. posterior, lateral 1/3 of the clavicle 2. medial margin of the acromion 3. superior spine of the scapula	1. elevates scapula and 2. upwardly rotates the scapula (upper portion) (note: the glenoid fossa is the reference for scapular rotation) 3. retracts scapula (all) 4. downwardly rotates the scapula (lower portion)	transverse cervical artery	1. motor: spinal accessory (XI cranial) 2. sensory: ventral rami of C3 & C4 (possibly C2)
Latissimus dorsi	1. spinous process of T7-L5 2. supraspinous ligament 3. upper 2-3 sacral segments 4. iliac crest 5. lower 3 or 4 ribs 6. inferior angle of the scapula	floor of the bicipital groove of the humerus a portion of the crest of the lesser tubercle (the bicipital groove is also known as the intertubercular groove)	1. extends the arm (from a flexed position) 2. internally (medially) rotates the arm 3. adducts the arm 4. downwardly rotates the scapula	thoracodorsal artery	thoracodorsal nerve, C6,7,8
Serratus posterior superior	spinous processes and supraspinous ligaments of C7-T2	posterior aspect of ribs 2-5	control movements of the ribs and assists with forced inspiration	posterior intercostal arteries 1-4	anterior primary rami T2-5)
Serratus posterior inferior	spinous processes and supraspinous ligaments of T11-L2	posterior aspect of ribs 9-12	control movements of the ribs and assists with forced expiration	lowest posterior intercostal, subcostal, first two lumbar arteries.	anterior primary rami (T9-12)

Shoulder Girdle Musculature

Muscle	Origin	Insertion	Action	Blood	Nerve
Levator scapulae	posterior tubercles of the transverse processes of the upper 3 or 4 cervical vertebrae	superior angle of scapula at and above the scapular spine	<ol style="list-style-type: none"> 1. elevates the scapula 2. extends and/or laterally flexes the neck 3. assists to downwardly rotate the scapula 	transverse cervical artery	<ol style="list-style-type: none"> 1. nerves off cervical plexus, C3,4 2. dorsal scapular nerve, C5
Rhomboid minor	<ol style="list-style-type: none"> 1. spinous process of C7 & T1 2. lower part of the ligamentum nuchae 3. supraspinous ligament 	medial margin of the scapula at the root of the spine	<ol style="list-style-type: none"> 1. retracts & stabilizes the scapula 2. assists to downwardly rotate the scapula 3. assists to adduct the arm 	deep branch of transverse cervical artery or dorsal scapular artery	dorsal scapular nerve, C5
Rhomboid major	<ol style="list-style-type: none"> 1. spinous processes of T2-T5 2. supraspinous ligament 	medial scapula from the scapular spine to the inferior angle	<ol style="list-style-type: none"> 1. retracts & stabilizes the scapula 2. assists to downwardly standing rotate the scapula 3. assists to adduct the arm 	deep branch of transverse cervical artery or dorsal scapular artery	dorsal scapular nerve, C5
Serratus anterior	outer surfaces and superior borders of the upper 8 or 9 ribs	costal aspect of medial margin of the scapula	<ol style="list-style-type: none"> 1. protracts the scapula 2. stabilizes the scapula (preventing winging of the scapula) 3. assists to upwardly rotate the scapula 	<ol style="list-style-type: none"> 1. lateral thoracic artery supplies the upper part 2. thoracodorsal artery supplies the lower part 	long thoracic nerve, C5,6,7
Deltoid	<ol style="list-style-type: none"> 1. anterior portion: anterior border of the lateral 1/3 of the clavicle 2. middle portion: lateral boarder of the acromion process of the scapula 3. posterior portion: scapular spine 	deltoid tuberosity, on the lateral surface of the shaft of the humerus	<ol style="list-style-type: none"> 1. anterior portion: flexes and internally rotates the arm 2. middle portion: abducts the arm 3. posterior portion: extends and externally (laterally) rotates the arm 	<ol style="list-style-type: none"> 1. posterior humeral circumflex artery 2. deltoid branch of thoracoacromial artery 	axillary nerve, <ol style="list-style-type: none"> 1. anterior portion, C5 2. middle & posterior portions, C5,6
Supraspinatus	1. supraspinous fossa of the scapula	<ol style="list-style-type: none"> 1. uppermost of three facets of the greater tubercle of humerus 2. capsule of the shoulder joint 	<ol style="list-style-type: none"> 1. abducts the arm (almost solely for first 20°) 2. stabilizes glenohumeral joint 	suprascapular artery (poorly supplied)	suprascapular nerve, C5,6
Infraspinatus	1. infraspinous fossa of the scapula	<ol style="list-style-type: none"> 1. middle facet of greater tubercle of humerus 2. capsule of the shoulder joint 	<ol style="list-style-type: none"> 1. externally rotates the arm 2. stabilizes the glenohumeral joint 	<ol style="list-style-type: none"> 1. suprascapular artery 2. scapular circumflex artery 	suprascapular nerve, C5,6
Teres minor	middle half of the scapula's lateral margin	<ol style="list-style-type: none"> 1. lowest of three facets of the greater tubercle of humerus 2. capsule of the shoulder joint 	<ol style="list-style-type: none"> 1. externally rotates the arm 2. stabilizes the glenohumeral joint 	scapular circumflex artery	axillary nerve, C5,6
Teres major	lower third of the posterior surface of the lateral margin of the scapula	medial lip of the bicipital groove of the humerus (just medial to the insertion of latissimus dorsi)	<ol style="list-style-type: none"> 1. internally rotates the arm 2. extends the arm (from a flexed position) 3. adducts the arm 	thoracodorsal artery	lower subscapular nerve, C5,6
Subscapularis	subscapular fossa on the anterior surface of the scapula	<ol style="list-style-type: none"> 1. lesser tubercle of humerus 2. lower part of the capsule of the shoulder joint 	<ol style="list-style-type: none"> 1. internally rotates the arm 2. stabilizes the glenohumeral joint 	branches of subscapular artery	upper & lower subscapular nerves, C5,6

Pectoral Musculature

Muscle	Origin	Insertion	Action	Blood	Nerve
Subclavius	first rib about the junction of bone and cartilage	lower surface of clavicle	assists to stabilize the clavicle	clavicular branch of thoracoacromial artery	nerve to the subclavius, C5,6
Pectoralis major	1. medial 1/3 of clavicle 2. anterior aspect of the sternum 3. upper 6 costal cartilages 4. aponeurosis of the external oblique	lateral lip of bicipital groove to the crest of the greater tubercle (clavicular fibers insert more distally; sternal fibers more proximally)	1. adducts the arm 2. internally rotates the arm 3. flexes the arm (from an extended position) 4. depresses the arm & shoulder	1. pectoralis branch of thoracoacromial artery 2. lateral thoracic artery (lesser supply)	1. lateral pectoral nerve, C5,6,7 to clavicular portion 2. medial pectoral nerve, C8,T1 to sternal portion
Pectoralis minor	outer surface of ribs 3-5 (may be variable)	medial aspect of coracoid process of the scapula	1. depresses the scapula 2. downwardly rotates the scapula 2. assists to protract the scapula from a retracted position 3. stabilizes the scapula	lateral thoracic artery	medial pectoral nerve, C8,T1

Brachium Musculature

Flexors:

Muscle	Origin	Insertion	Action	Blood	Nerve
Coracobrachialis	coracoid process of the scapula	medial shaft of the humerus at about its middle	1. flexes the humerus 2. assists to adduct the humerus	muscular branches of the brachial artery	musculocutaneous nerve, C5,6,(C7)
Biceps brachii	1. long head- supraglenoid tubercle and glenohumeral labrum 2. short head- tip of the coracoid process of the scapula	1. radial tuberosity 2. bicipital aponeurosis	1. flexes the forearm at the elbow (when supinated) 2. supinates forearm from neutral 3. stabilizes anterior aspect of shoulder 4. flexes shoulder (weak if at all)	muscular branches of brachial artery	musculocutaneous nerve, C5,6
Brachialis	1. lower 1/2 of anterior humerus 2. both intermuscular septa	1. ulnar tuberosity 2. coronoid process of ulna slightly	elbow flexion (major mover)	1. muscular branches of brachial artery 2. radial recurrent artery	

Extensors:

Triceps brachii	1. long head: infraglenoid tubercle of the scapula 2. lateral head: upper half of the posterior surface of the shaft of the humerus, and the upper part of the lateral intermuscular septum 3. medial head: posterior shaft of humerus, distal to radial groove and both the medial and lateral intermuscular septum (deep to the long & lateral heads)	1. posterior surface of the olecranon process of the ulna 2. deep fascia of the antebrachium	1. long head: extends the forearm at the elbow, adducts the arm, may extend the shoulder from a flexed position 2. lateral head: extends the forearm at the elbow 3. medial head: extends the forearm at the elbow	1. muscular branches of the brachial artery 2. superior ulnar collateral artery 3. profunda brachii artery	radial nerve, C7,8
Anconeus	posterior surface of the lateral epicondyle of the humerus	lateral surface of olecranon extending to the lateral part of ulnar body	1. extends the forearm at the elbow 2. supports the elbow when in full extension	middle collateral artery from the profunda brachii artery	

Antebrachial Flexor Musculature

Muscle	Origin	Insertion	Action	Blood	Nerve
Pronator teres	<ol style="list-style-type: none"> humeral head: <ol style="list-style-type: none"> upper portion of medial epicondyle via the CFT (common flexor tendon) medial brachial intermuscular septum ulnar head: coronoid process of ulna antebrachial fascia 	lateral aspect of radius at the middle of the shaft (pronator tuberosity)	<ol style="list-style-type: none"> pronates forearm (during rapid or forced pronation) weakly flexes the elbow 	<ol style="list-style-type: none"> muscular branches of ulnar artery muscular branches of radial artery 	median nerve, C6,7
Flexor carpi radialis	<ol style="list-style-type: none"> medial epicondyle of the humerus via the CFT antebrachial fascia 	base of the 2nd and sometimes 3rd metacarpals	<ol style="list-style-type: none"> flexes the hand at the wrist radially deviates the wrist may assist to pronate the forearm 	muscular branches of radial artery	
Palmaris longus	<ol style="list-style-type: none"> medial epicondyle via the CFT antebrachial fascia 	<ol style="list-style-type: none"> central portion of the flexor retinaculum superficial portion of the palmar aponeurosis 	flexes the hand at the wrist	muscular branches of ulnar artery	
Flexor carpi ulnaris	<ol style="list-style-type: none"> humeral head: medial epicondyle via the CFT ulnar head: <ol style="list-style-type: none"> medial aspect of olecranon proximal 3/5 of dorsal ulnar shaft antebrachial fascia 	<ol style="list-style-type: none"> pisiform & hamate bones (via the pisohamate ligament) base of the 5th metacarpal (via the pisometacarpal ligament) 	<ol style="list-style-type: none"> flexes the hand at the wrist ulnarly deviates the wrist stabilizes wrist to permit powerful thumb motion 	muscular branches of ulnar artery	ulnar nerve, C8,T1
Flexor digitorum superficialis	<ol style="list-style-type: none"> humeral-ulnar head: <ol style="list-style-type: none"> medial epicondyle via the CFT medial boarder of base of coronoid process of ulna medial (ulnar) collateral ligament antebrachial fascia radial head: oblique line of radius along its anterior surface 	both sides of the base of each middle phalanx of the 4 fingers	<ol style="list-style-type: none"> flexes the proximal and middle phalanges flexes the wrist if fingers are extended 	<ol style="list-style-type: none"> muscular branches of ulnar artery muscular branches of radial artery 	median nerve, C7,8,T1
Flexor digitorum profundus	<ol style="list-style-type: none"> anterior & medial surface of proximal 3/4 ulna adjacent interosseous membrane 	distal phalanx of medial 4 digits (through the FDS tunnel)	<ol style="list-style-type: none"> flexes the distal IP joints and in so doing flexes the proximal and middle IP joints flexes the wrist if fingers are extended 	<ol style="list-style-type: none"> muscular branches of the ulnar artery muscular branches of the radial artery anterior interosseous artery (from ulnar artery) 	<ol style="list-style-type: none"> medial portion: ulnar nerve, C8,T1 lateral portion: anterior interosseous branch of median nerve, C8,T1
Flexor pollicis longus	<ol style="list-style-type: none"> middle anterior surface of the radius interosseous membrane (may also originate from lateral boarder of coronoid process or medial epicondyle) 	palmar aspect of base of the distal phalanx of thumb (deep to flexor retinaculum)	<ol style="list-style-type: none"> flexes the distal phalanx of the thumb (IP joint) flexes the other joints to the wrist (McP, CMc and weakly at the wrist) 	<ol style="list-style-type: none"> muscular branches of radial artery anterior interosseous artery 	anterior interosseous branch of median nerve, C8,T1
Pronator quadratus	distal 1/4 anteromedial surface of ulna	distal 1/4 anterolateral surface of radius	pronates the forearm and hand	<ol style="list-style-type: none"> anterior interosseous artery muscular branches of the radial artery 	

Antebrachial Extensor Musculature

Muscle	Origin	Insertion	Action	Blood	Nerve
Brachioradialis	1. upper lateral supracondylar ridge of humerus (between the triceps and brachialis muscles) 2. lateral intermuscular septum of humerus	1. superior aspect of styloid process of radius 2. lateral side of the distal 1/2 to 1/3 of the radius 3. antebrachial fascia	1. flexes the forearm at the elbow 2. pronates the forearm when supinated 3. supinates the forearm when pronated	radial recurrent artery	radial nerve, C5,6 (or deep branch of radial nerve)
Extensor carpi radialis longus	1. lower lateral supracondylar ridge (below the brachioradialis) 2. lateral intermuscular septum of humerus	base of 2nd metacarpal	1. extends the hand at the wrist 2. radially deviates the hand at the wrist 3. weakly flexes the forearm at the elbow 4. weakly supinates the forearm		
Extensor carpi radialis brevis	1. lateral epicondyle via the CET (common extensor tendon) 2. radial collateral ligament 3. antebrachial fascia	base of 3rd metacarpal	1. extends the hand at the wrist 2. radially deviates the hand at the wrist		deep branch of radial nerve, C6,7
Extensor digitorum	1. lateral epicondyle via the CET 2. antebrachial fascia	1. base of middle phalanx of each of the four fingers (central band) 2. base of distal phalanx of each of the four fingers (2 lateral bands)	1. extends the four medial digits 2. extends the wrist (if fingers flexed) 3. abducts the digits (spreads the digits as it extends them)	posterior interosseous artery	posterior interosseous nerve of radial nerve, C6,7,8
Extensor digiti minimi	1. lateral epicondyl via the CET 2. antebrachial fascia 3. ulnar aspect of extensor digitorum	1. base of middle phalanx of the 5th digit (central band) 2. base of distal phalanx of the 5th digit (2 lateral bands)	1. extends the 5th digit 2. abducts the 5th digit		
Extensor carpi ulnaris	1. 1st head: lateral epicondyle via CET 2. 2nd head: posterior body of ulna 3. antebrachial fascia	medial side of base of the 5th metacarpal	1. extends the hand at the wrist 2. ulnarly deviates the hand at the wrist		
Supinator	1. lateral epicondyle of humerus 2. supinator crest of ulna 3. radial collateral ligament 4. annular ligament 5. antebrachial fascia	proximal portion of anterolateral surface of the radius	supinates the forearm	radial recurrent artery	deep branch of radial nerve, C6
Abductor pollicis longus	1. posterior surfaces of ulna and radius 2. interosseous membrane 3. antebrachial fascia	lateral aspect of base of 1st metacarpal	1. abducts the 1st metacarpal 2. assists to extend & rotate the thumb 3. radially deviates the hand at the wrist 4. flexes the hand at the wrist	posterior interosseous artery	posterior interosseous nerve of radial nerve, C6,7,(C8)
Extensor pollicis brevis	1. posterior surfaces of radius (below abductor pollicis longus) 2. interosseous membrane 3. antebrachial fascia	base of proximal phalanx of thumb (often a slip inserts into extensor pollicis longus tendon)	1. extends the proximal phalanx and 1st metacarpal of the thumb 2. radially deviates the hand at the wrist		
Extensor pollicis longus	1. posterior surface of ulna 2. interosseous membrane 3. antebrachial fascia	distal phalanx of thumb	1. extends distal phalanx of thumb 2. extends proximal phalanx of thumb 3. assists to extend the hand at the wrist (if fingers flexed)		posterior interosseous nerve of radial nerve, C6,7,8
Extensor indicis	1. posterior surface of ulna (distal to extensor pollicis longus) 2. interosseous membrane 3. antebrachial fascia	base of middle and distal phalanx of the index finger	1. extends the 2nd digit (McP & IP joints) 2. adducts the 2nd digit 3. assists to extend the hand at the wrist 4. stabilizes MCP joint for flexion of IP solely		

Hand & Wrist Musculature

Muscle	Origin	Insertion	Action	Blood	Nerve
Abductor pollicis brevis	1. distal border of flexor retinaculum 2. trapezium (may be variable)	1. lateral aspect of base of proximal phalanx of the thumb 2. may also send a slip to the tendon of extensor pollicis longus	1. abducts thumb (at the McP joint) 2. participates to flex the thumb (at the McP joint) 3. if attached to extensor pollicis longus, it might assist to extend the thumb	superficial palmar branches of radial artery	recurrent branch of median nerve, C8,T1
Flexor pollicis brevis	1. superficial head a) distal border of flexor retinaculum b) trapezium 2. deep head a) floor of carpal tunnel b) indirectly to scaphoid & trapezium	1. base of proximal phalanx of thumb 2. can also attach to the lateral sesamoid bone at the McP joint	powerfully flexes the thumb (at the McP joint)		1. superficial head: recurrent branch of median nerve, C8,T1 2. deep head: deep branch of ulnar nerve, C8,T1
Opponens pollicis	1. distal border of flexor retinaculum 2. trapezium	lateral aspect of the 1st metacarpal	opposes the thumb to the fingers		recurrent branch of median nerve, C8,T1
Adductor pollicis	1. transverse head: 3rd metacarpal 2. oblique head: a) base of 1st, 2nd and 3rd metacarpals b) floor of carpal tunnel	1. medial aspect of the base of proximal phalanx 2. medial sesamoid at McP	1. adducts the thumb 2. may assist to flex the thumb (at the McP joint)		deep branch of ulnar nerve, C8,T1
Palmaris brevis	medial margin of palmar aponeurosis	1. skin of ulnar border of palm 2. may insert on the pisiform	tenses the skin on the ulnar side of the palm, which is used in a grip action	superficial palmar branches of ulnar artery	superficial branch of ulnar nerve, C8,T1
Abductor digiti minimi	pisiform & tendon of flexor carpi ulnaris	1. medial aspect of the base of proximal phalanx of the 5th digit 2. may send a slip to the ulnar side of the dorsal expansion	1. abducts the 5th digit (requires pisiform stabilized by FCU) 2. assists to flex the 5th digit (at McP) 3. may assist in extension of 5th digit (at IP due to slips to extensor digitorum)	deep palmar branches of ulnar artery	deep branch of ulnar nerve, C8,T1
Flexor digiti minimi brevis	1. distal border of flexor retinaculum 2. hook of the hamate	medial aspect of the base of proximal phalanx	flexes the 5th digit (at the McP joint)		
Opponens digiti minimi	1. distal border of flexor retinaculum 2. hook of the hamate	medial aspect of the 5th metacarpal	1. opposes the 5th digit with the thumb 2. assists to "cup" the palm		
Palmar interossei	from the side of the metacarpal that faces the midline - to adduct them	1. on the base of the proximal phalanx of the digit of origin (same side toward the midline) 2. extensor hood of the same digit(s)	1. adducts the fingers (hint: PAD) 2. flexes the fingers (at the McP while IP joints are extended)	palmar metacarpal artery of deep palmar arch	
Dorsal interossei	between each metacarpal	1. directly distal to the origin on the base of the proximal phalanx closest to the midline (to abduct them.) 2. extensor hood of the same digit(s)	1. abducts the fingers (hint: DAB) 2. flexes the fingers (at the McP while IP joints are extended)		
Lumbricals	tendon of flexor digitorum profundus 1 & 2 have a single head of origin (from radial aspect of tendon) 3 & 4 have two heads of origin (each head from an adjacent tendon)	extensor hood of digits 2-5	1. flexes the fingers (at the McP joints) 2. extend IPs		

Gluteal Musculature

Muscle	Origin	Insertion	Action	Blood	Nerve
Tensor fascia lata	1. anterior aspect of iliac crest 2. anterior superior iliac spine (ASIS)	1. anterior aspect of IT (iliotibial) band, below greater trochanter (IT band inserts on the anterolateral tibia "Gerdy's tubercle", & also sends slips to the lateral patellar retinaculum and the biceps femoris tendon.)	1. flexes the hip 2. rotates & abducts a flexed thigh 3. tenses IT medially band to support femur on the tibia during standing	1. superior gluteal artery 2. lateral femoral circumflex artery	superior gluteal nerve, L4,5,S1
Gluteus maximus	1. outer rim of ilium (medial aspect) 2. dorsal surface of sacrum and coccyx 3. sacrotuberous ligament	1. IT band (primary insertion) 2. gluteal tuberosity of femur	1. powerfully extends the hip 2. laterally rotates the thigh 3. upper fibers aid to abduct the thigh 4. stabilizes a fully extended knee (via fibers of the IT band)	1. inferior gluteal artery (primary) 2. superior gluteal artery	inferior gluteal nerve, L5,S1,2
Gluteus medius	1. outer aspect of ilium (between iliac crest and anterior and posterior gluteal lines) 2. upper fascia (the gluteal aponeurosis)	superior aspect of greater trochanter	1. anterior and lateral fibers abduct and medially rotate the thigh 2. posterior fibers may laterally rotate thigh 3. stabilizes the pelvis and prevents free limb from sagging during gait	superior gluteal artery	superior gluteal nerve, L4,5,S1
Gluteus minimus	outer aspect of ilium (between anterior and inferior gluteal lines)	1. greater trochanter (anterior to medius) 2. articular capsule of hip joint	1. abducts and medially rotates the thigh 2. stabilizes the pelvis and prevents free limb from sagging during gait		
Piriformis	pelvic surface of sacrum (anterior portion)	medial surface of greater trochanter (through greater sciatic foramen)	1. laterally rotates an extended thigh 2. abducts a flexed thigh	1. superior gluteal artery 2. inferior gluteal artery	nerve to piriformis, S1,2
Superior gemellus	ischial spine	medial aspect of greater trochanter via upper tendon of obturator internus	1. laterally rotates the thigh 2. abducts thigh when flexed	inferior gluteal artery	nerve to obturator internus, L5,S1,2
Obturator internus	1. internal aspect margins of obturator foramen 2. obturator membrane	medial aspect of greater trochanter (through lesser sciatic foramen)	1. laterally rotates the thigh 2. abducts thigh when flexed		
Inferior gemellus	ischial tuberosity	medial aspect of greater trochanter via lower tendon of obturator internus	laterally rotates the thigh		nerve to quadratus femoris, L4,5,S1
Quadratus femoris	lateral aspect of ischial tuberosity	quadrate line (along posterior aspect of femur and intertrochanteric crest)	laterally rotates the thigh		

Posterior Thigh Musculature

Muscle	Origin	Insertion	Action	Blood	Nerve
Semitendinosus	ischial tuberosity	1. medial aspect of tibial shaft 2. contributes to the pes anserine	1. extends the thigh at the hip 2. flexes the calf at the knee 3. medially rotates the tibia	1. perforating branches of profunda femoris 2. inferior gluteal artery (to upper)	tibial nerve of sciatic bundle, L5,S1,2
Semi-membranosus	ischial tuberosity	1. posterior medial aspect of medial tibial condyle 2. fibers join to form most of oblique popliteal ligament (& medial meniscus)	1. flexes the calf at the knee 2. extends the thigh at the hip 3. medially rotates tibia 4. pulls medial meniscus posterior during flexion		
Biceps femoris	1. long head: ischial tuberosity 2. short head: lateral lip of linea aspera and the lateral intermuscular septum	1. head of fibula 2. maybe to the lateral tibial condyle	1. flexes the calf at the knee (mainly short head) 2. laterally rotates thigh if flexed at the knee 3. extends thigh at the hip (long head)		1. long head: tibial nerve, L5,S1,2 2. short head: common peroneal nerve, L5,S1
Adductor magnus (posterior fibers)	ischial tuberosity	adductor tubercle of the medial epicondyle of the femur	1. adducts the thigh at the hip 2. extends and laterally rotates the thigh at the hip		tibial nerve of sciatic bundle, L4,5

Adductor (Anteromedial) Thigh Musculature

Muscle	Origin	Insertion	Action	Blood	Nerve
Adductor longus	anterior surface of pubis, just inferior to the pubic tubercle	medial lip of linea aspera on middle half of femur	1. adducts the thigh at the hip 2. flexes the thigh at the hip 3. may laterally rotate the thigh at the hip	muscular branches of femoral artery	obturator nerve, L2,3,4
Adductor brevis	body & inferior ramus of pubis	superior portion of linea aspera	1. powerfully adducts the thigh at the hip 2. assists to flex the thigh at the hip 3. may laterally rotate thigh at the hip		
Adductor magnus (Complete muscle is listed here, posterior fibers were also listed in anterior thigh.)	1. anterior fibers: inferior pubic ramus 2. oblique fibers: ischial ramus 3. posterior fibers: ischial tuberosity	1. proximal 1/3 of linea aspera 2. adductor tubercle	1. adducts the thigh at the hip 2. posterior fibers extend and laterally rotate the thigh at the hip	muscular branches of profunda femoris (The above muscles may receive blood from obturator artery)	1. anterior fibers: obturator nerve, L2,3,4 2. posterior fibers: tibial nerve of sciatic bundle, L4,5
Gracilis	body of pubis & inferior pubic ramus	1. medial surface of proximal tibia, inferior to tibial condyle 2. contributes to the pes anserine	1. adducts the thigh at the hip 2. flexes the calf at the knee 3. medially rotates tibia	obturator artery	obturator nerve, L2,3,4
Obturator externus	1. medial surface of obturator foramen 2. external surface of obturator membrane	trochanteric fossa of femur	1. laterally rotates the thigh at the hip 2. assists to flex the thigh at the hip		

Anterior Thigh Musculature

Muscle	Origin	Insertion	Action	Blood	Nerve
Sartorius	anterior superior iliac spine (ASIS)	1. upper medial surface of body of tibia 2. contributes to pes anserine	1. flexes the thigh and the calf (at both the hip and the knee) 2. laterally rotates the thigh if flexed at the hip	muscular branches of profunda femoris artery saphenous branch of descending genicular artery	femoral nerve, L2,3

Quads:

Rectus femoris	1. anterior head: anterior inferior iliac spine (AIIS) 2. posterior head: ilium just above the acetabulum	common quadriceps tendon into patella, tibial tuberosity via patellar ligament	1. extends the calf at the knee 2. flexes the thigh at the hip	lateral femoral circumflex artery	femoral nerve, (L2),L3,4
Vastus lateralis	1. greater trochanter 2. lateral lip of linea aspera 3. lateral intermuscular septum	common quadriceps tendon into patella, tibial tuberosity via patellar ligament	extends the calf at the knee (may abnormally displace patella)		
Vastus intermedius	anterior lateral aspect of the femoral shaft	common quadriceps tendon into patella, tibial tuberosity via patellar ligament	extends the calf at the knee		
Vastus medialis	1. intertrochanteric line of femur 2. medial aspect of linea aspera	common quadriceps tendon into patella, tibial tuberosity via patellar ligament	extends the calf at the knee	muscular branches of profunda femoris artery saphenous branch of descending genicular artery	
Articularis genus (distinct part of vastus intermedius)	1. distal portion of anterior femoral surface, close to the knee 2. off the deep fibers of the vastus intermedius	synovial membrane of the knee joint	1. pulls the synovial membrane of the knee superior with knee extension 2. prevents impingement of the synovial membrane between patella and the femur	lateral femoral circumflex artery	femoral nerve, L3,4

Deep flexors:

Iliacus	1. inner surface of upper iliac fossa 2. anterior inferior iliac spine 3. anterior capsule of hip joint	1. iliopsoas tendon to the lesser trochanter of the femur 2. medial aspect of the linea aspera	1. powerfully flexes the thigh at the hip 2. external rotation of the femur	1. iliolumbar artery 2. deep circumflex iliac artery	femoral nerve, L2,3,4
Psoas major	1. vertebral bodies of T12-L4 and the intervening intervertebral discs 2. transverse processes of L1-L4	1. iliopsoas tendon to the lesser trochanter of the femur 2. medial aspect of the linea aspera	1. flexes the thigh at the hip 2. external rotation of the femur	1. iliolumbar artery 2. lumbar artery 3. subcostal artery	ventral rami, L1,2,3,4
Pectineus (This muscle could be classified with the medial thigh muscles if supplied by obturator nerve.)	1. pectineal line of the pubis 2. superior pubic ramus	the pectineal line of the femur (just below the lesser trochanter on the posterior aspect of the femur)	1. flexes the thigh at the hip 2. adducts thigh at the hip 3. medially rotates thigh at the hip	muscular branches of medial femoral circumflex artery	A: femoral nerve, L3,4 or B: obturator nerve, L2,3,4 or A & B: femoral L3,4 and accessory obturator L3,4

Posterior Leg Musculature

Superficial:

Muscle	Origin	Insertion	Action	Blood	Nerve
Gastrocnemius	1. medial head: just above medial condyle of femur 2. lateral head: just above lateral condyle of femur	calcaneus via lateral portion of calcaneal tendon (the tendon twists laterally)	1. plantarflexes the foot at the ankle 2. flexes the calf at the knee (when not weight bearing) 3. stabilizes ankle & knee when standing	1. sural branches of popliteal artery 2. muscular branches of peroneal artery 3. posterior tibial artery	tibial nerve, S1,2
Soleus	1. upper fibula 2. soleal line of tibia	calcaneus via medial portion of calcaneal tendon (the tendon twists laterally)	plantarflexes the foot		
Plantaris	above the lateral head of gastrocnemius on femur	calcaneus, medial to calcaneal tendon or blending with the calcaneal tendon	same as a weak gastrocnemius		

Deep:

Popliteus	1. lateral femoral condyle 2. arcuate popliteal ligament 3. lateral meniscus 4. knee joint capsule	posterior tibial surface above the soleal line	1. insertion fixed: laterally rotates femur on tibia & unlocks knee 2. origin fixed: medially rotates tibia on femur & unlocks knee	sural branches of popliteal artery	tibial nerve, L5,S1
Flexor digitorum longus	1. posterior surface of tibia 2. crural fascia	plantar surface of bases of the 2-5th distal phalanges	1. primarily flexes 2nd - 5th toes 2. weakly plantarflexes the foot 3. weakly inverts & adducts the foot		
Tibialis posterior	1. posterior, proximal tibia 2. interosseous membrane 3. medial surface of fibula	1. navicular tuberosity (principle) 2. all 3 cuneiforms (plantar surface) 3. bases of 2nd-4th metatarsals 4. cuboid 5. sustentaculum tali of calcaneus	1. stabilizes the ankle joint 2. inverts & adducts the foot 3. prevents hyperpronation while in gait 4. weakly plantarflexes the foot		
Flexor hallucis longus	1. posterior, inferior 2/3 of fibula 2. interosseous membrane, crural fascia & posterior intermuscular septum	1. plantar surface of distal phalanx of hallux	1. flexes the big toe (hallux) 2. weakly plantarflexes the foot 3. weakly inverts & adducts the foot		tibial nerve, L5,S1,2

Lateral Leg Musculature

Muscle	Origin	Insertion	Action	Blood	Nerve
Peroneus longus	1. head of the fibula 2. proximal 2/3 of lateral fibula 3. adjacent intermuscular septum	1. plantar surface of cuboid 2. base of 1st (& 2nd) metatarsal 3. plantar surface of medial cuneiform	1. everts & abducts the foot 2. weakly plantarflexes of the foot	muscular branches of the peroneal artery	superficial peroneal nerve, L4,5,S1
Peroneus brevis	1. distal 2/3 of lateral fibula 2. posterior and anterior intermuscular septum	tuberosity on lateral aspect of base of 5th metatarsal	1. everts & abducts the foot 2. weakly plantarflexes the foot		

Anterior Leg Musculature

Muscle	Origin	Insertion	Action	Blood	Nerve
Tibialis anterior	1. lateral tibial condyle 2. proximal 2/3 of anterolateral surface of tibia 3. interosseous membrane, anterior intermuscular septum & crural fascia	1. medial & plantar surface of base of 1st metatarsal 2. medial & plantar surface of the cuneiform	1. powerfully dorsiflexes the foot 2. inverts & adducts the	anterior tibial artery (These may receive small branches from posterior tibial & peroneal arteries.)	deep peroneal nerve, L4,5,S1
Extensor hallucis longus	1. medial aspect of the fibula 2. interosseous membrane, crural fascia	dorsal surface of base of proximal and distal phalanx of hallux	1. extends the distal phalanx of big toe 2. weakly dorsiflexes the foot 3. weakly inverts & adducts the foot		
Extensor digitorum longus	1. upper anterior surface of fibula 2. interosseous membrane, crural fascia 3. lateral condyle of the tibia	dorsal surface of the bases of the middle & distal phalanxes of the 2nd-5th rays (via 4 tendons and a fibrous expansion)	1. extends the lateral 4 toes 2. weakly dorsiflexes & everts the foot		
Peroneus tertius	1. distal 1/3 of anterior fibula 2. distal & lateral aspect of extensor digitorum	dorsal surface of base of 5th metatarsal	1. extends the 5th toe 2. weakly dorsiflexes & everts the foot		

Foot Musculature

Muscle	Origin	Insertion	Action	Blood	Nerve
Abductor hallucis	1. medial process of calcaneal tuberosity 2. flexor retinaculum 3. plantar aponeurosis 4. medial intermuscular septum	medial aspect of base of proximal phalanx of hallux	1. flexes the big toe (primary action) 2. may assist to abduct the big toe	medial plantar artery	medial plantar nerve, L5,S1
Flexor digitorum brevis	1. medial process of calcaneal tuberosity 2. plantar aponeurosis	both sides of the bases of the middle phalanx of rays 2-5 (each of the 4 tendons splits forming tunnel for FDL)	flexes toes 2-5		
Abductor digiti minimi	1. lateral & medial processes of the calcaneal tuberosity 2. plantar aponeurosis 3. lateral intermuscular septum	lateral aspect of base of proximal phalanx of 5th ray	1. abducts the 5th toe 2. assists to flex the 5th toe	lateral plantar artery	lateral plantar nerve, S1,2
Abductor ossis metatarsi quinti	from fibers of abductor digiti minimi	into the 5th metatarsal	abducts the 5th toe		
Quadratus plantae	medial head: medial calcaneus lateral head: lateral calcaneus & long plantar ligament	1. lateral margin of tendon of flexor digitorum longus (FDL) 2. may send slips into the distal tendons	1. assists FDL to flex the distal phalanges of 2nd-5th toes 2. corrects FDL from pulling toes medially		
Lumbricals	from tendons of FDL: 1st: medial aspect of tendon to 2nd ray 2nd-4th: two heads between the tendons in which they lie	extensor tendons of EDL on dorsal foot	1. flexes the proximal phalanges (at the MTP joint) 2. extends the middle & distal phalanges (at the IP joints)	1st: medial plantar artery 2nd-4th: lateral plantar artery	1st: medial plantar nerve, L5,S1 2nd-4th: lateral plantar nerve, S1,2
Flexor hallucis brevis	1. medial aspect of the cuboid 2. lateral cuneiform	1. medial aspect of base of proximal phalanx of hallux (with ABD hallucis) 2. lateral aspect of base of proximal phalanx of hallux (with ADD hallucis)	flexes big toe (at the MtP joint)	medial plantar artery	medial plantar nerve, L5,S1
Adductor hallucis	1. oblique head: base of 2nd-4th metatarsals & long plantar ligament 2. transverse head: deep transverse metatarsal ligament & plantar ligaments at MTP joints	lateral aspect of base of proximal phalanx of hallux	1. adducts the big toe (at the MtP joint) 2. flexes the big toe (at MtP joint)	lateral plantar artery	lateral plantar nerve, S1,2
Flexor digiti minimi brevis	1. base of 5th metatarsal 2. digital sheath of peroneus longus	lateral aspect of base of proximal phalanx of 5th ray	flexes the 5th toe (at MtP joint)		
Plantar interossei (3 muscles)	medial aspect of 3rd-5th metatarsals (single head of origin)	medial aspect of base of proximal phalanx of the same ray (of 3rd-5th rays)	1. adducts toes 3-5 (at the MtP joints) 2. flex toes 3-5 (at MtP joints)		
Dorsal interossei (4 muscles)	from both metatarsals between which they lie	base of proximal phalanx closest to the axis of the foot (2nd ray)	1. abducts toes 2-4 (at the MtP joints) 2. flexes toes 2-4 (at the MtP joints)		
Extensor hallucis brevis	1. upper anterolateral calcaneus 2. inferior extensor retinaculum	base of proximal phalanx of hallux	extends the big toe	dorsalis pedis artery	deep peroneal nerve, L4,5
Extensor digitorum brevis	1. upper anterolateral calcaneus 2. inferior extensor retinaculum	middle & distal phalanges of 2nd-4th rays (via EDL)	extends 2nd-4th toes		

Splenius Musculature

Muscle	Origin	Insertion	Action	Blood	Nerve
Splenius capitis	1. lower portion of ligamentum nuchae 2. spinous processes of C3-T3,(4)	1. superior nuchal line 2. mastoid process of temporal bone	1. bilateral contraction: extends the head & neck 2. unilateral contraction: rotates and laterally bends head & neck to the contracted (same) side	muscular branches of the aorta	dorsal rami of spinal nerves
Splenius cervicis	spinous process of T3-T6	posterior tubercles of transverse processes of C2-C4			

Erector Spinae Musculature

Muscle	Origin	Insertion	Action	Blood	Nerve
Iliocostalis lumborum	common tendinous origin: 1. sacrum 2. iliac crest 3. spinous processes of the lower thoracic & most lumbar vertebrae	lower border of angles of ribs (5),6-12	1. bilateral: a. extends the vertebral column b. maintenance of erect posture (hint: "I Like Standing") c. stabilizes the vertebral column during flexion, acting in contrast to abdominal muscles and the action of gravity 2. unilateral: a. laterally bends the vertebral column to the contracted side b. rotates the vertebral column to the contracted side c. opposite muscles contract eccentrically for stabilization	muscular branches of the aorta	dorsal rami of spinal nerves
Iliocostalis thoracis	upper border of ribs 6-12 (medial to I. Lumborum's insertion.)	lower border of angles of ribs 1-6 (sometimes transverse process of C7)			
Iliocostalis cervicis	angles of ribs 1-6	transverse processes of C4-C6			
Longissimus thoracis	common tendinous origin	1. transverse processes of all thoracic vertebrae 2. all ribs between tubercles and angles 3. transverse processes of upper lumbar vertebrae			
Longissimus cervicis	transverse processes of T1-T5,(6)	transverse processes of C2-C6			
Longissimus capitis	1. transverse and articular processes of middle and lower cervical vertebrae 2. transverse processes of upper thoracic vertebrae	posterior aspect of mastoid process of temporal bone			
Spinalis thoracis	common tendinous origin	spinous processes T3,(4)-T8,(9)			
Spinalis cervicis (may be absent)	spinous processes of C6-T2	spinous processes of C2 (and may extend to C3 or C4)			
Spinalis capitis	spinous processes of lower cervical & upper thoracic vertebrae	between superior & inferior nuchal lines of occipital bone			

Transversospinal Musculature

Muscle	Origin	Insertion	Action	Blood	Nerve
Semispinalis thoracis	transverse processes of T6-T12 vertebrae	spinous processes of lower cervical & upper thoracic vertebrae	1. bilaterally: extends vertebral column, especially head and neck 2. controls lateral flexion to side opposite of contraction (eccentric for stability) 3. maintains head posture	muscular branches of the aorta	dorsal rami of spinal nerves
Semispinalis cervicis	transverse processes of T1-T6 vertebrae and can go down to lower thoracic	spinous processes of C2-T5,(T6)			
Semispinalis capitus	1. transverse processes of T1-T6 2. articular processes of C4-C7	between superior & inferior nuchal lines of occipital bone			
Multifidus	cervical region: from articular processes of lower cervical vertebrae thoracic region: from transverse processes of all thoracic vertebrae lumbar region: 1. mamillary processes of all lumbar vertebrae 2. deep surface of tendinous origin of erector spinae 3. lower portion of dorsal sacrum 4. PSIS	vertebral spinous process extending from C2 - L5 (skipping 2-4 vertebrae superiorly)	1. bilaterally: extends vertebral column 2. controls lateral flexion to side opposite of contraction (eccentric for stability) 3. unilaterally: rotates vertebral column to side opposite of contraction		
Long rotators	transverse process of one vertebra	vertebral spinous process (skipping one vertebrae superiorly)	1. rotates to side opposite of contraction 2. bilaterally extends vertebral column		
Short rotators (segmental)	transverse process of one vertebra	base of spinous process of vertebra immediately above			

Segmental (Deep Back) Musculature

Muscle	Origin	Insertion	Action	Blood	Nerve
Interspinalis	spinous processes of each vertebra	to the spinous process of vertebra immediately above	extends vertebral column	muscular branches of the aorta	dorsal rami of spinal nerves
Intertransversi	cervical region: 1. from the anterior tubercle of transverse process 2. from the posterior tubercle of transverse process thoracic region: (poorly developed) lumbar region: 1. lateral aspect of the transverse process 2. mamillary process	cervical region: 1. to the anterior tubercle immediately above 2. to the posterior tubercle immediately above thoracic region: (poorly developed) lumbar region: 1. to lateral aspect of the transverse process immediately above 2. to the accessory process on the vertebra immediately above	laterally flexes each respective pair of vertebrae (eccentric for stability)		

Suboccipital Musculature

Muscle	Origin	Insertion	Action	Blood	Nerve
Obliquus capitis inferior	spinous process of axis (C2)	transverse process of atlas (C1)	rotates the head to the contracted side	muscular branches of vertebral artery	suboccipital nerve, (dorsal rami C1)
Obliquus capitis superior	transverse process of atlas (C1)	between superior and inferior nuchal line of occiput	1. bilaterally extends the head 2. laterally flexes to the contracted side		
Rectus capitis posterior major	spinous process of axis (C2)	inferior nuchal line (lateral to minor)	1. bilaterally extends the head 2. rotates the head to the contracted side		
Rectus capitis posterior minor	posterior tubercle of atlas (C1)	inferior nuchal line (adjacent to midline)	bilaterally extends the head		

Prevertebral Musculature

Muscle	Origin	Insertion	Action	Blood	Nerve
Longus colli	lower anterior vertebral bodies and transverse processes	anterior vertebral bodies and transverse processes several segments above	flexes the head and neck	muscular branches of the aorta	ventral rami C2-C6
Longus capitis	upper anterior vertebral bodies and transverse processes				ventral rami C1-C3
Rectus capitis anterior	anterior base of the transverse process of the atlas	occipital bone anterior to foramen magnum	flexes the head		ventral rami C2,3
Rectus capitis lateralis	transverse process of the atlas	jugular process of the occipital bone	bends the head laterally		

Anterolateral Neck Musculature

Muscle	Attachment 1 (fixed site may vary)	Attachment 2	Action	Blood	Nerve
Anterior scalene	anterior tubercles of transverse processes of C3-C6	1st rib	if transverse process fixed: 1. elevates the ribs for respiration if ribs fixed: 2. rotates to side opposite of contraction 3. laterally flexes to the contracted side 4. bilaterally flexes the neck	inferior thyroid artery (branch of the thyrocervical trunk)	ventral rami C3-C6
Scalenus minimus (may be absent)	anterior tubercles of transverse processes of C6 & 7	1st rib and/or supraplural membrane		ascending cervical artery	variable (cervical and brachial plexus)
Middle scalene	transverse processes of all cervical vertebrae	1st rib (behind anterior scalene)		ventral rami C3-C8	
Posterior scalene	posterior tubercles of transverse processes of C5 & C6	2nd and/or 3rd rib		ventral rami C5-C7	

Superficial Neck Musculature

Muscle	Origin	Insertion	Action	Blood	Nerve
Sternocleidomastoid	two heads: 1. manubrium of sternum 2. medial portion of clavicle	mastoid process of temporal bone	1. rotates to side opposite of contraction 2. laterally flexes to the contracted side 3. bilaterally flexes the neck	1. occipital artery 2. superior thyroid artery	1. motor: spinal accessory (XI cranial) 2. sensory: ventral rami of C2,(C3)
Platysma	subcutaneous skin over delto-pectoral region	invests in the skin widely over the mandible	1. depress mandible and lower lip 2. tenses the skin over the lower neck	superficial vessels of the neck	cervical branch of facial nerve (VII cranial)

Anterior Neck Musculature

Infrahyoid Muscles

Muscle	Origin	Insertion	Action	Blood	Nerve
Sternohyoid	1. posterior aspect of manubrium 2. sternal end of clavicle	body of hyoid	1. depresses hyoid & larynx 2. acts eccentrically with the suprahyoid muscles to provide them a stable base	1. inferior thyroid artery (primary) 2. superior thyroid artery	upper portions: superior root of ansa cervicalis, C2 lower portions: inferior root of ansa cervicalis, C2,3
Omoxyoid	Attachments: 1. superior belly: hyoid bone (lateral to sternohyoid) 2. inferior belly: superior scapular border (medial to suprascapular notch)	both bellies meet at the clavicle & are held to the clavicle by a pulley tendon			
Sternothyroid	posterior aspect of manubrium	oblique line of thyroid cartilage			
Thyrohyoid	oblique line of thyroid cartilage	body of hyoid	1. depresses hyoid 2. may assist in larynx elevation		

Suprahyoid Muscles

Stylohyoid	styloid process of temporal bone	lateral margin of hyoid (near greater horn)	1. pulls the hyoid superiorly & posteriorly during swallowing 2. fixes the hyoid bone for infrahyoid action	facial & occipital artery	facial nerve (VII cranial)
Digastric	Attachments: 1. post belly: mastoid process of temporal bone 2. anterior belly: digastric fossa of internal mandible	both bellies meet and attach at the lateral aspect of body of hyoid by a pulley tendon	1. open mouth by depressing mandible 2. fixes hyoid bone for infrahyoid action	branches of the external carotid	post belly: facial nerve (VII cranial) ant belly: mylohyoid nerve
Mylohyoid	inner surface of mandible off the mylohyoid line	1. body of hyoid 2. along midline at mylohyoid raphe	1. elevates the hyoid bone 2. raises floor of mouth (for swallowing) 3. depresses mandible when hyoid is fixed	lingual artery	mylohyoid nerve (branch of mandibular division, V ₃ cranial)
Geniohyoid	inner surface of the mandible off the mental spines	body of hyoid (paired muscles separated by a septum)	1. elevates the tongue 2. depress the mandible 3. works with mylohyoid	lingual artery	branch from C1 (following hypoglossal nerve)

Epicranial Musculature

Muscle	Origin	Insertion	Action	Blood	Nerve (VII cranial)
Occipitalis (2 bellies)	1. lateral 2/3 of superior nuchal line 2. external occipital protuberance	galea aponeurosis, over the occipital bone	draws back the scalp to raise the eyebrows and wrinkle the brow	occipital artery	posterior auricular branch of facial nerve
Frontalis (2 bellies)	galea aponeurosis, anterior to the vertex	skin above the nose and eyes		ophthalmic artery	temporal branch of facial nerve

Muscles of Facial Expression

Circumorbital:

Muscle	Origin	Insertion	Action	Blood	Nerve (VII cranial)
Orbicularis oculi	orbital portion: nasal process of frontal bone palpebral portion: palpebral ligament lacrima portion: lacrima crest of lacrima bone	circumferentially around orbit meeting in palpebral raphe	powerfully closes the eye	ophthalmic artery	zygomatic branch of facial nerve
Corrugator supercilii	frontal bone just above the nose	skin of the medial portion of the eyebrows	draws the eyebrows downward and medially		

Buccolabial:

Orbicularis oris	1. alveolar border of maxilla 2. lateral to midline of mandible	1. circumferentially around mouth 2. blends with other muscles	1. closes the lips 2. protrudes the lips	facial artery	buccal branch of facial nerve
Levator labii superioris alaeque nasi	frontal process of maxilla	1. upper lip muscles 2. nasal cartilage	1. elevates the upper lip 2. flares the nostrils		
Levator labii superioris	medial 1/2 of infraorbital margin	upper lip muscles	elevates the upper lip		
Zygomaticus minor	zygomatic bone, posterior to maxillary-zygomatic suture	skin of the upper lip	elevates the upper lip		
Zygomaticus major	anterior to zygomatic-temporal suture	modiolus (angle of the mouth)	lifts and draws back the angle(s) of the mouth (as in smiling)		
Risorius (may be absent)	parotid fascia	modiolus	draws the mouth laterally (as in smiling)		
Levator anguli oris	maxilla, inferior to infraorbital foramen	modiolus	lifts the angle(s) of the mouth (as in smiling)		
Buccinator	1. posterior alveolar process of maxilla 2. posterior alveolar process of mandible 3. along the pterygomandibular raphe	modiolus	compresses the cheek(s)		
Depressor anguli oris	1. along the oblique line of mandible 2. lateral aspect of mental tubercle of the mandible	modiolus	lowers the angle(s) of the mouth (as in frowning)		mandibular branch of facial nerve
Depressor labii inferioris	1. mandible, between symphysis and mental foramen 2. along oblique line of the mandible	skin of the lower lip	draws the lower lip downward and laterally		

Muscles of Mastication

Muscle	Origin	Insertion	Action	Blood	Nerve (mandibular division, V ₃ cranial)
Masseter	Superficial: 1. zygomatic process of the maxilla 2. inferior border of zygomatic arch Intermediate: inner surface of zygomatic arch Deep: posterior aspect of inferior border of zygomatic arch	Superficial: 1. angle of mandible 2. lateral surface of mandibular ramus Intermediate: ramus of mandible Deep: 1. superior ramus of mandible 2. coronoid process of mandible	1. closes the lower jaw (clenches the teeth) 2. may deviate mandible to opposite side of contraction	masseteric artery	masseteric nerve
Temporalis	1. temporal fossa (including frontal, parietal and temporal bones) 2. temporal fascia	1. coronoid process of the mandible 2. internal aspect of ramus of mandible down to the alveolar process	1. closes the lower jaw (clenches the teeth) 2. deviates mandible to same side of contraction	deep temporal artery	deep temporal nerve
Medial pterygoid	1. medial surface of lateral pterygoid plate of the sphenoid 2. palatine bone 3. pterygoid fossa	1. inner surface of mandibular ramus 2. angle of the mandible	1. closes the lower jaw (clenches the teeth) 2. can protrude the mandible in combination with the lateral pterygoid	medial pterygoid artery	medial pterygoid nerve
Lateral pterygoid	Superior head: 1. lateral surface of the greater wing of the sphenoid Inferior head: 2. lateral surface of the lateral pterygoid plate	Insert together: 1. neck of the mandibular condyle 2. articular disk of the TMJ	1. deviates mandible to side opposite of contraction (during chewing) 2. opens mouth by protruding mandible (inferior head) 3. closes the mandible (superior head)	lateral pterygoid artery	lateral pterygoid nerve

Extraocular Musculature

Muscle	Origin	Insertion	Action	Blood	Nerve (hint: Lr ₆ , SO ₄ , Ar ₃)
Levator palpebrae superioris	inferior aspect of the lesser wing of sphenoid (adjacent to the common annular tendon)	1. medial and lateral walls of the orbit 2. superior tarsus	elevates the eyelid	branches of ophthalmic artery	oculomotor nerve (III cranial)
Lateral rectus	1. common annular tendon (which comes off the body and lesser wing of sphenoid) 2. margins of the optic canal	posterior to the sclerocorneal junction (each muscle inserting along its own directional axis)	abducts eye		abducens nerve (VI cranial)
Medial rectus			adducts eye		oculomotor nerve (III cranial)
Superior rectus			1. elevates, 2. medially rotates & 3. adducts the eye		
Inferior rectus			1. depress, 2. laterally rotates & 3. adducts the eye		
Superior oblique	body of sphenoid	upper lateral quadrant of the posterior half of the sclera (via the trochlea, as a pulley)	1. depress, 2. medially rotates & 3. abducts the eye		trochlear nerve (IV cranial)
Inferior oblique	orbital surface of maxilla	lower lateral quadrant of the posterior half of the sclera (via the suspensory ligament, as a pulley)	1. elevates 2. laterally rotates & 3. abducts the eye	oculomotor nerve (III cranial)	

Laryngeal Musculature

Phonation Muscles

Muscle (paired bilaterally)	Origin	Insertion	Action	Blood	Nerve
Cricothyroid	arch of cricoid cartilage	lower border and lower medial surface of thyroid cartilage	tenses the vocal folds (bilaterally they tilt the cricoid cartilage on the thyroid cartilage)	inferior and superior laryngeal arteries	external branch of superior laryngeal nerve
Posterior cricoarytenoid	posterior surface of cricoid cartilage at midline	muscular process of the arytenoid cartilage	abducts the vocal folds (pulls the muscular process of the arytenoid cartilage posteriorly and medially)		
Lateral cricoarytenoid	upper border of lateral aspect of the cricoid arch	muscular process of arytenoid cartilage	adducts the vocal folds (pulls the muscular process of the arytenoid cartilage anteriorly and laterally)		
Transversus arytenoid (unpaired muscle)	the muscular process of one arytenoid cartilage	the muscular process of the contralateral arytenoid cartilage	adducts the vocal folds (pulls the two arytenoid cartilages closer together)		
Vocalis	internal, inferior & anteromedial aspect of the thyroid cartilage	the vocal process of the arytenoid cartilage (running along the entire length of vocal ligament)	relaxes the vocal folds (pulls the arytenoid cartilages anteriorly)		
Thyroarytenoid	internal, inferior & anteromedial aspect of the thyroid cartilage (lateral to vocalis)	muscular process and lateral surface of arytenoid cartilage (running alongside and lateral to the vocalis)			

Laryngeal Sphincter Muscles

Oblique arytenoid	muscular process of an arytenoid cartilage	1. muscular process of the contralateral arytenoid cartilage 2. fibers of the aryepiglottic muscle	laryngeal sphincter muscle(s)	inferior and superior laryngeal arteries	inferior laryngeal nerve, branch of vagus nerve (X cranial)
Aryepiglottic	fibers of the oblique arytenoid muscle	lateral border of epiglottis			
Thyroepiglottic	fibers of the thyroarytenoid in aryepiglottic folds	epiglottis			

Intercostal Musculature

Muscle	Attachment A	Attachment B	Action	Blood	Nerve
External intercostals	inferior border of an upper rib (hint: runs like hands in your pockets)	superior border of a rib below (each muscle fiber runs obliquely and inserts toward the costal cartilage)	1. elevates the ribs in inspiration 2. may depress the ribs in forced expiration	intercostal arteries	intercostal nerves
Internal intercostals	superior border of a lower rib (runs opposite of external intercostals)	inferior border of a rib above (each muscle fiber runs obliquely and inserts toward the costal cartilage)	1. depress the ribs in expiration 2. may elevate the ribs in forced inspiration		
Innermost intercostals	superior border of a lower rib (often not well developed)	inferior border of a rib above (each muscle fiber runs obliquely and inserts toward the costal cartilage)	may assist in respiration		
Subcostals	inner surface of each rib near its angle	medially on the 2nd 3rd rib below	depress the ribs in expiration		
Transversus thoracis	inner surface of lower sternum	inner surfaces of costal cartilages of the 2nd - 6th ribs	depress the ribs in expiration		

Abdominal Musculature

Muscle	Attachment A	Attachment B	Action	Blood	Nerve
Diaphragm	1. sternal portion: inner xiphoid process 2. costal portion: inner surface of the lower 6 ribs 3. lumbar portion: upper 2 or 3 lumbar vertebrae via 2 cura	central tendon of the diaphragm	draws the central tendon down, increasing the thoracic cavity volume	1. inferior phrenic arteries (primary) 2. superior phrenic arteries 3. musculophrenic arteries	1. phrenic nerve, C3,4,5 (motor & central sensory) 2. intercostal nerves (peripheral portion sensation)
External oblique	lower borders of the lower 8 ribs (runs like hands in your pockets)	1. outer lip of the iliac crest 2. inguinal ligament 3. anterior layer of the rectus sheath	unilateral: 1. rotates trunk to side opposite of contraction 2. laterally flex trunk to same side of contraction bilateral: 3. flexes the trunk 4. compresses the abdomen	1. lower intercostal 2. subcostal 3. lumbar arteries	1. 7th to 12th intercostal nerves 2. iliohypogastric nerves, T12,L1 3. ilioinguinal nerves, T12,L1
Internal oblique	1. middle lip of the iliac crest 2. lateral 1/3 of the inguinal ligament 3. thoracolumbar fascia	1. linea alba 2. lower borders of the lower 3 or 4 ribs	unilateral: 1. rotates trunk to same side of contraction 2. laterally flex trunk to same side of contraction bilateral: 3. flexes the trunk 4. compresses the abdomen		
Transversus abdominis	1. inner lip of iliac crest 2. lateral 1/3 of the inguinal ligament 3. thoracolumbar fascia 4. cartilage of the lower 6 ribs	linea alba	1. tenses the abdominal wall 2. stabilizes the contralateral external oblique in lateral flexion		
Rectus abdominis	1. cartilages of ribs 5-7 2. xiphoid process	pubic crest between pubic tubercle and pubic symphysis	1. flexes the trunk 2. compresses the abdomen	superior & inferior epigastric arteries	7th to 12th intercostal nerves
Pyramidalis	ventral surface of pubis	linea alba, midway between the umbilicus and pubis	tenses the linea alba		branch of the subcostal nerve, T12

Posterior Abdominal Wall Musculature

Muscle	Origin	Insertion	Action	Blood	Nerve
Iliacus	1. inner surface of upper iliac fossa 2. anterior inferior iliac spine 3. anterior capsule of hip joint	1. iliopsoas tendon to the lesser trochanter of the femur 2. medial aspect of the linea aspera	1. powerful hip flexor 2. external rotation of femur	1. ilio lumbar artery 2. deep circumflex iliac artery	femoral nerve, L2,3,4
Psoas major	1. vertebral bodies of T12-L4 and the intervening intervertebral discs 2. transverse processes of L1-L4	1. iliopsoas tendon to the lesser trochanter of the femur 2. medial aspect of the linea aspera	1. hip flexion 2. external rotation of femur	1. iliolumbar artery 2. lumbar artery 3. subcostal artery	ventral rami, L1,2,3,4
Quadratus lumborum	1. lateral lip of iliac crest 2. iliolumbar ligament	1. posterior, inferior aspect of 12th rib 2. transverse processes of L1-L4	1. depress the 12th rib, expanding thoracic cavity 2. stabilize the 12th rib 3. acts to eccentrically stabilize lateral flexion to the opposite side	1. lumbar artery 2. subcostal artery	ventral rami, L1,2,3,4