

**MUSCLE LIST**  
**ANATOMY & PHYSIOLOGY I**  
**C. J. SHUSTER**

ID MUSCLES, KNOW ORIGIN, INSERTIONS AND ACTIONS FOR CLASS

Name	Origin	Insertion	Action	Antagonist
A. Face, Skull & Neck				
epicranius	Crainial Aponeurosis	-----	-----	none that we studied
platysma	-----	-----		none that we studied
temporalis	Temporal Fossa	Coronoid Process	Elevate Mandible	none that we studied
masseter	zygomatic arch (arch extending posteriorly from the cheekbone)	angle and ramus (rear portion) of mandible (lower jaw)	closes mouth (elevates mandible) and moves jaw from side to side as in chewing	none that we studied
orbicularis oculi	-----	-----	Blinking, Squinting	none that we studied
orbicularis oris	-----	-----	Close Mouth	none that we studied
Pterygoid	-----	-----	Synergist w/Temporalis & Masseter	
zygomaticus	-----	-----	Smiling Muscle	none that we studied
digastric	-----	-----	Swallowing	none that we studied
sternohyoid	hyoid	sternum	depresses hyoid	mylohyoid
mylohyoid	mandible	hyoid	elevates hyoid, depresses mandible	sternohyoid
Pharyngeal Constrictor Group	they are very deep	they are very deep	Swallowing	none that we studied

sternocleido- mastoid	manubrium (upper part) of sternum and medial third of clavicle	mastoid process of temporal bone (base of skull just behind and below the ear)	flexes (bows) at neck (head forward) and rotates at neck (turns` head to side); also elevates (raises) sternum and rib cage in breathing	trapezius extends at neck (tilts head back)
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<b>Name</b>	<b>Origin</b>	<b>Insertion</b>	<b>Action</b>	<b>Antagonist</b>
<b>B. Deep Back -- Movement of head &amp; trunk</b>				
Erector Spinae Group	-----	-----	Extension of Back	-----
<b>C. Thorax: Breathing (along with sternocleidomastoid)</b>				
diaphragm	Inferior Border of Rib Cage	-----	Flattens on Contraction	-----
pectoralis minor	-----	-----	-----	-----
Internal & External Intercostals	Border of Ribs	-----	-----	-----
<b>D. Abdominal Wall (note the aponeurosis)</b>				
rectus abdominis	pubic symphysis (central part of pelvic girdle)	sternum and cartilage of rib cage	flexes vertebral column (bends body forward); also increases abdominal pressure	none that we studied
external & internal obliques	-----	-----	Synergist w/Rectus Abdominis	-----
transverse abdominis	-----	-----	Compress Abdominal Contents	-----
<b>E. Superficial Thorax</b>				
serratus anterior	-----	-----	Stabilize Scapulae	

Name	Origin	Insertion	Action	Antagonist
trapezius	spines of cervical and thoracic vertebrae and occipital bone (rear of skull)	spine and acromion process of scapula and lateral third of clavicle	Shoulder joint - depresses (lowers) and adducts (draws scapulae in towards midline), also extends at neck (tilts head back)	sternocleidomastoid flexes at neck (bows head forward)

#### F. Shoulder Joint

pectoralis major	medial half of clavicle, sternum, and rib cartilage	intertubercular groove of humerus (groove between greater and lesser tubercles at proximal end of humerus)	adducts at shoulder (pulls arm toward midline) and flexes at shoulder (pulls arm across the front of the body)	latissimus dorsi extends at shoulder (pulls arm across back of body); deltoid abducts at shoulder (lifts arm away from midline)
deltoid	spine and acromion process of scapula, lateral half of clavicle	deltoid tuberosity of humerus (rough area about half way down the lateral shaft of humerus)	abducts at shoulder (lifts arm away from body), can be used to flex at shoulder (bring arm across front) or extend at shoulder (back of body)	both latissimus dorsi and pectoralis major adduct at shoulder (pull arm toward midline)
subcapularis	-----		Rotator of Humerus	

<b>Name</b>	<b>Origin</b>	<b>Insertion</b>	<b>Action</b>	<b>Antagonist</b>
Rotator Cup Group	Fossa, Lateral Border & posterior Surface of Scapula	Greater & Lesser Tubercles of Humerus	Stabilize Shoulder Joint	
latissimus dorsi	spines of lower thoracic and lumbar vertebrae, sacrum, and iliac crest (crest of hip bone)	Insertion: intertubercular groove of humerus (groove between greater and lesser tubercles at proximal end of humerus)	Action: adducts at shoulder (pulls arm toward midline) and extends at shoulder (across the back of the body)	pectoralis major flexes at shoulder (pulls arm across front of body); deltoid abducts at shoulder (lifts arm away from midline)

**G. Arm - Flex/Extend Elbow, Wrist, & Fingers**

biceps brachii	coracoid process of scapula and superior to glenoid cavity of scapula	radial tuberosity (anterior proximal end) of radius	flexes arm at elbow, supinates, abducts and flexes arm	triceps brachii extends at elbow (straightens arm)
brachialis	lower anterior half of humerus	coronoid process (anterior proximal end) of ulna	flexes arm at elbow	triceps brachii extends arm at elbow
triceps brachii	inferior to glenoid cavity of scapula, lateral and posterior portions of humerus	olecranon process (proximal posterior end) of ulna	extends at elbow (straightens arm), also adducts and extends at shoulder (pulls arm down and back)	biceps brachii and brachialis both flex at elbow

<b>Name</b>	<b>Origin</b>	<b>Insertion</b>	<b>Action</b>	<b>Antagonist</b>
supinator	lateral epicondyle (distal end) of humerus	proximal portion of radius	supinates (turns hand palm up or palm forward)	pronator teres pronates (turns hand palm down or palm to the rear)
pronator teres	medial epicondyle (distal end) of humerus	midway along the radius	turns hand palm down or palm to rear (pronates)	supinator and biceps brachii both roll hand palm up or palm forward (supinate)
flexor carpi ulnaris	medial epicondyle (distal end) of humerus	anterior surface of 5th metacarpal and carpals on little finger side of hand	bends wrist forward (flexes) and toward little finger side of hand (adducts)	extensor carpi ulnaris and extensor carpi radialis both extend at wrist flexor carpi radialis abducts at wrist
flexor carpi radialis	medial epicondyle (distal end) of humerus and proximal end of ulna	anterior surface of 2nd and 3rd metacarpals on thumb side of hand	bends wrist forward (flexes) and toward thumb side of hand (abducts)	extensor carpi ulnaris and extensor carpi radialis both extend at wrist, flexor carpi ulnaris adducts at wrist
extensor carpi ulnaris	lateral epicondyle (distal end) of humerus and proximal ulna	posterior surface of 5th metacarpal on little finger side of hand	bends wrist backward (extends) and toward little finger side of hand (adducts)	flexor carpi ulnaris and flexor carpi radialis both flex at wrist extensor carpi radialis abducts at wrist

<b>Name</b>	<b>Origin</b>	<b>Insertion</b>	<b>Action</b>	<b>Antagonist</b>
extensor carpi radialis	lateral epicondyle (distal end) of humerus	posterior surface of 2nd metacarpal on thumb side of hand	bends wrist backward (extends) and toward thumb side of hand (abducts)	flexor carpi ulnaris and flexor carpi radialis both flex at wrist, extensor carpi ulnaris adducts at wrist
ID all superficial forearm muscles				

#### H. Hip & Knee Joint

gluteus maximus	ilium (crest of hip bone), sacrum, and coccyx	proximal posterior portion of femur	extends at hip (draws leg back) and lateral rotation at hip (turns foot outward)	rectus femoris flexes at hip (lifts leg forward), gluteus medius medial rotation at hip (turns foot inward)
gluteus medius	ilium (crest of hip bone)	Insertion: greater trochanter (lateral proximal end) of femur	abducts at hip (lifts leg away from midline) and medial rotation at hip (turns foot inward)	gracilis adducts at hip (pulls leg in towards midline); gluteus maximus lateral rotation at hip (turns foot outward)

	Name	Origin	Insertion	Action	Antagonist
Q u a d r i c e p s	rectus femoris	anterior inferior iliac spine of pelvic girdle	patella and then to tibial tuberosity on anterior proximal end of tibia	extends (straightens) at knee also flexes at hip (raises leg forward)	gastrocnemius, sartorius, gracilis and all 'hamstring' muscles all flex at knee, gluteus maximus and all 'hamstrings' extend at hip
	vastus lateralis	linea aspera (ridge on posterior shaft) of femur	patella and then to tibial tuberosity on anterior proximal end of tibia	extends (straightens) at knee	gastrocnemius, sartorius, gracilis and all 'hamstring' muscles all flex at knee
	vastus medialis	linea aspera (ridge on posterior shaft) of femur	patella and then to tibial tuberosity on anterior proximal end of tibia	extends (straightens) at knee	gastrocnemius, sartorius, gracilis and all 'hamstring' muscles all flex at knee
	vastus intermedius	anterior shaft of femur	patella and then to tibial tuberosity on anterior proximal end of tibia	extends (straightens) at knee	gastrocnemius, sartorius, gracilis and all 'hamstring' muscles all flex at knee
	sartorius	anterior superior iliac spine of pelvic girdle	medial proximal end of tibia	flexes (bends) at knee, flexes at hip (lifts leg forward), rotates hip outward (lateral). Combined motion results in sitting cross-legged	gluteus maximus and all 'hamstrings' extend at hip, all 'quadriceps' muscles extend at knee
	gracilis	pubic symphysis (medial portion) of pelvic girdle	medial proximal end of tibia	adducts at hip (brings legs together at midline) also flexes (bends) at knee	gluteus medius abducts at hip, all 'quadriceps' muscle extend at knee
	Adductor Group: adductor brevis is deep, and can't be seen on any model EXCEPT the "longer leg model". Know the pectineus, adductor longus, adductor magnus.	Ischial & Pubic Bone Near the Symphysis	Medial Aspect of Femur	Adduction of Thigh	

	Name	Origin	Insertion	Action	Antagonist
H a m s t r i n g s	biceps femoris	ischial tuberosity (posterior portion) of pelvic girdle and linea aspera (posterior ridge on shaft) of femur	lateral proximal end of fibula and tibia	flexes (bends) at knee, extends at hip (draws leg backward)	all 'quadriceps' muscles extend at knee, rectus femoris and sartorius flex at hip
	sem- itendinosus	ischial tuberosity (posterior portion) of pelvic girdle	medial proximal end of tibia	flexes (bends) at knee, extends at hip (draws leg backward)	all 'quadriceps' muscles extend at knee, rectus femoris and sartorius flex at hip
	semi- membranousus	ischial tuberosity (posterior portion) of pelvic girdle	medial proximal end of tibia	flexes (bends) at knee, extends at hip (draws leg backward)	all 'quadriceps' muscles extend at knee, rectus femoris and sartorius flex at hip

#### I. Calf Muscles & Ankle Movement

gastrocnemius	medial and lateral condyles (posterior distal end) of femur	calcaneus (heel)	plantar flexion (stand on tip-toes) and flexes (bends) knee	tibialis anterior causes dorsiflexion, all 'quadriceps' muscles extend at knee
soleus	posterior proximal ends of tibia and fibula	calcaneus (heel)	plantar flexion (stand on tip-toes)	tibialis anterior causes dorsiflexion
tibialis anterior	lateral proximal end of tibia	1st metatarsal on medial edge of foot just above instep	dorsiflexion (bends ankle to raise foot towards front of lower leg)	soleus and gastrocnemius cause plantar flexion

Trends worth noting:

1. If a muscle crosses a joint, it moves it (action!)
2. Muscles on the anterior surface of the body tend to flex a joint (only true up to the knee!)
3. Muscles on the posterior surface of the body tend to extend a joint (only true up to the knee!)
4. Muscles on the lateral or medial surface of the torso or limb tend to adduct, abduct, and/or rotate a joint.