

ACTIVITIES 5 & 6: APPENDICULAR AND AXIAL MUSCLES

Objectives:

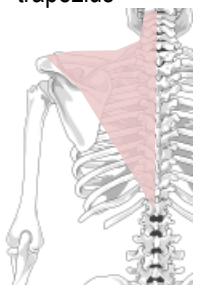
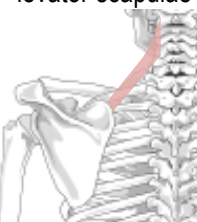
- 1) **How to get ready:** Read [Chapter 11 & 12, McKinley et al., Human Anatomy, 4e](#). All text references are for this textbook. Begin identifying muscles in your textbook BEFORE you come to the laboratory. **YOU MUST BRING GLOVES FOR THIS ACTIVITY.**
- 2) Identify muscles listed on models and/or cadavers.
- 3) When indicated, identify the action and attachments for each muscle.
- 4) **Before next class:** You will be working on muscles in the laboratory for two weeks, so continue your study of the muscle tables in preparation for your laboratory practical exam.

Skeletal muscle identification:

- You will be required to identify each of the following muscles or associated structures on the cadavers and/or models in lab.
- Muscle actions are required for each muscle.
- Remember: **Spelling is important!** Practice writing and rewriting the names of each muscle and associated structure.
- **PLEASE NOTE: THE DRAWINGS PROVIDED ARE FOR GUIDANCE ONLY. USE YOUR TEXTBOOK FOR MORE DETAILED DRAWINGS, INCLUDING ORIGINS AND INSERTIONS.**

APPENDICULAR MUSCLES: *These muscles control the movement of the upper and lower limbs, pelvic and pectoral girdles.*

TABLE 1. MUSCLES THAT MOVE THE PECTORAL GIRDLE: (6 MUSCLES TO IDENTIFY) muscles that are attached only to the axial skeleton and thus move the pectoral girdle; [for summary of movement see fig. 12.3, p. 355](#)

NAME	ACTION	TEXTBOOK REFERENCE & NOTES
<input type="checkbox"/> trapezius 	<ul style="list-style-type: none"> ▪ superior: elevates & superiorly rotates scapula; elevates clavicle ▪ middle: retracts scapula ▪ inferior: depresses scapula; extends head 	described: p. 354-355 fig. 11.1b, 12.2, 12.4
<input type="checkbox"/> levator scapulae 	elevates scapula	described: p. 355 fig. 12.2, 12.3, 12.4b

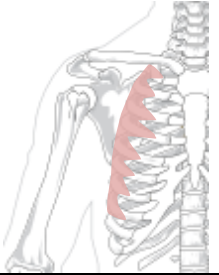
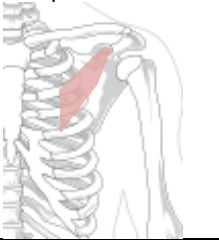




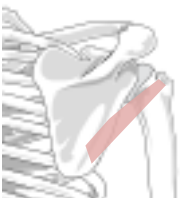


<input type="checkbox"/> serratus anterior 	<p>protracts & stabilizes scapula</p>	<p>described: p. 354 fig. 11.1b, 11.14a, 12.1, 12.4a</p>
<input type="checkbox"/> pectoralis minor 	<p>protracts & depresses scapula</p>	<p>described: p. 354 fig. 12.1, 12.4a</p>
<input type="checkbox"/> rhomboid major 	<p>elevates & retracts (adducts) scapula; rotates scapula inferiorly</p>	<p>described: p. 355 fig. 12.2, 12.4b</p>
<input type="checkbox"/> rhomboid minor 		

TABLE 2. MUSCLES THAT ATTACH TO THE AXIAL SKELETON AND TO THE HUMERUS: (8 MUSCLES PLUS ONE MUSCLE GROUP TO IDENTIFY) These muscles move the glenohumeral (shoulder) joint. For illustrations and summary of movement, see fig. 12.5a–c, and table 12.3.

NAME	PROXIMAL ATTACHMENT (ORIGIN)	DISTAL ATTACHMENT (INSERTION)	ACTION	TEXTBOOK REFERENCE & NOTES
ROTATOR CUFF MUSCLES (4 MUSCLES WITH A COMMON INSERTION POINT)				
<input type="checkbox"/> supraspinatus 	supraspinous fossa of scapula	greater tubercle of humerus	together, stabilize & rotate glenohumeral joint	described: p.359 fig. 12.2, 12.4a & b
<input type="checkbox"/> infraspinatus 	infraspinous fossa of scapula			described: p.359 fig. 12.2, 12.4b
<input type="checkbox"/> teres minor 	lateral border of scapula			described: p.359 fig. 12.2, 12.4b
<input type="checkbox"/> subscapularis 	subscapular fossa of scapula			described: p.359 fig. 12.4a, 12.5a
<input type="checkbox"/> teres major 	lateral border and angle of scapula	lesser tubercle & intertubercular sulcus of humerus	extends, adducts, & medially rotates arm	described: p.359 fig. 12.2, 12.4b

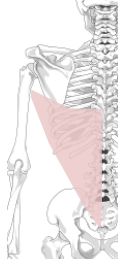
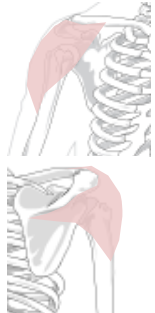
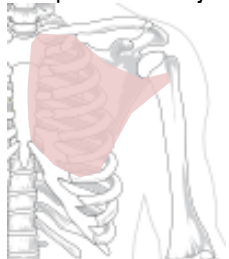
<input type="checkbox"/> latissimus dorsi 	<ul style="list-style-type: none"> ▪ spinous processes of lower thoracic vertebrae ▪ lower ribs (8-12) ▪ iliac crest 	<p style="text-align: center;">intertubercular sulcus of humerus</p>	<ul style="list-style-type: none"> ▪ extends, adducts, & medially rotates arm ▪ draws arm inferiorly & posteriorly 	<p style="color: green;">described: p.358 fig. 11.1, 12.1, 12.2, 12.4b</p>
<input type="checkbox"/> deltoid 	<ul style="list-style-type: none"> ▪ acromial end of clavicle ▪ acromion and spine of scapula 	<p style="text-align: center;">deltoid tuberosity of humerus</p>	<p style="text-align: center;">abducts, flexes, extends, & rotates arm</p>	<p style="color: green;">described: p.358 fig. 11.1, 12.1, 12.2, 12.4a & b</p>
<input type="checkbox"/> pectoralis major 	<ul style="list-style-type: none"> ▪ clavicle ▪ costal cartilages 	<p style="text-align: center;">greater tubercle & lateral intertubercular sulcus of humerus</p>	<p style="text-align: center;">flexes, adducts, & medially rotates arm</p>	<p style="color: green;">described: p.358 fig. 11.1, 12.1, 12.4a</p>

TABLE 3. POSTERIOR COMPARTMENT OF THE ARM (1 MUSCLE WITH 3 HEADS TO IDENTIFY): For summary of actions at elbow, see table 12.5.


NAME	PROXIMAL ATTACHMENT (ORIGIN)	DISTAL ATTACHMENT (INSERTION)	ACTION	TEXTBOOK REFERENCE & NOTES
<input type="checkbox"/> triceps brachii (triceps brachii has three heads)				
<input type="checkbox"/> <i>long head</i> <input type="checkbox"/> <i>lateral head</i> <input type="checkbox"/> <i>medial head</i> 	infraglenoid tubercle of scapula	olecranon process of ulna	extends forearm and assists in arm adduction	described: p.364 fig. 12.8a & b
	posterior shaft of humerus			
	posterior shaft of humerus distal to radial groove			

TABLE 4. ANTERIOR COMPARTMENT OF THE ARM (5* MUSCLES TO IDENTIFY): For summary of actions at elbow, see table 12.5.


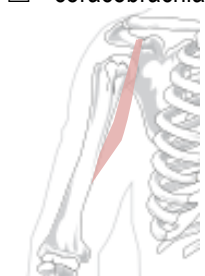


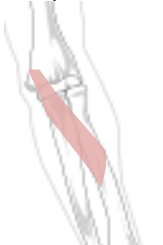



NAME	PROXIMAL ATTACHMENT (ORIGIN)	DISTAL ATTACHMENT (INSERTION)	ACTION	TEXTBOOK REFERENCE & NOTES
<input type="checkbox"/> biceps brachii (biceps brachii has two heads)*				
<input type="checkbox"/> <i>long head</i> <input type="checkbox"/> <i>short head</i> 	supraglenoid tubercle of scapula <hr/> coracoid process of scapula	radial tuberosity	<ul style="list-style-type: none"> ▪ flexes arm (glenohumeral joint) ▪ flexes & supinates forearm (elbow joint) 	described: p.363 fig. 12.7a & b, table 12.4
<input type="checkbox"/> coracobrachialis 	coracoid process of scapula	middle medial shaft of humerus	adducts & flexes arm (glenohumeral joint)	described: p.363 fig. 12.7a & b
<input type="checkbox"/> brachialis 	distal, anterior surface of humerus	coronoid process of ulna	flexes forearm (elbow joint)	
<input type="checkbox"/> brachioradialis 	lateral humerus	styloid process of radius		described: p.363 fig. 12.7a, 12.11a

TABLE 5. ANTERIOR COMPARTMENT OF THE FOREARM: (6 MUSCLES PLUS 1 ASSOCIATED STRUCTURE TO IDENTIFY)
 For summary of actions at wrist, see table 12.8.

NOTE:	MP = metacarpophalangeal	PIP = proximal interphalangeal
	IP = interphalangeal	MIP = middle interphalangeal
		DIP = distal interphalangeal

NAME	ACTION	TEXTBOOK REFERENCE & NOTES
<input type="checkbox"/> pronator teres 	pronates forearm	described: p.364 fig. 12.9, 12.11, 12.12
<input type="checkbox"/> flexor carpi radialis 	<ul style="list-style-type: none"> ▪ flexes wrist ▪ abducts hand 	described: p.369 fig.12.11, 12.12
<input type="checkbox"/> palmaris longus 	<ul style="list-style-type: none"> ▪ weakly flexes wrist ▪ tenses fascia of palm 	described: p.369 fig.12.11, 12.12
<input type="checkbox"/> flexor carpi ulnaris 	<ul style="list-style-type: none"> ▪ flexes wrist ▪ adducts hand 	described: p.369 fig.12.11, 12.12, 12.13a



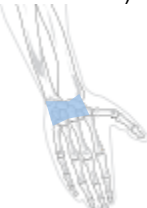
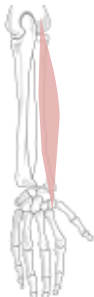



<input type="checkbox"/> flexor digitorum superficialis 	<ul style="list-style-type: none"> ▪ flexes wrist ▪ flexes 2nd-5th MP & PIP joints 	described: p.369 fig.12.11b
<input type="checkbox"/> flexor digitorum profundus 	<ul style="list-style-type: none"> ▪ flexes wrist ▪ flexes 2nd-5th MP, PIP, & DIP joints 	described: p.369 fig.12.11c
<input type="checkbox"/> flexor retinaculum (associated structure) 	significance: fibrous band of connective tissue that covers the palmar surface of the carpals	described: p.366 fig.12.11a, 12.14a

TABLE 6. POSTERIOR COMPARTMENT OF THE FOREARM: (8 MUSCLES PLUS 1 ASSOCIATED STRUCTURE TO IDENTIFY)

NAME	ACTION	TEXTBOOK REFERENCE & NOTES
<input type="checkbox"/> extensor carpi radialis longus 	<ul style="list-style-type: none"> ▪ extends wrist ▪ abducts hand 	<p>described: p.369, 371 fig.12.13a & b</p>
<input type="checkbox"/> extensor carpi radialis brevis 		
<input type="checkbox"/> extensor carpi ulnaris 	<ul style="list-style-type: none"> ▪ extends wrist ▪ adducts hand 	
<input type="checkbox"/> extensor digitorum 	<ul style="list-style-type: none"> ▪ extends wrist ▪ extends 2nd - 5th MP, PIP, & DIP joints 	










<input type="checkbox"/> abductor pollicis longus 	<ul style="list-style-type: none"> ▪ abducts thumb ▪ weakly extends wrist 	
<input type="checkbox"/> extensor pollicis longus 	<ul style="list-style-type: none"> ▪ extends MP & IP joints of thumb ▪ weakly extends wrist 	
<input type="checkbox"/> extensor pollicis brevis 	<ul style="list-style-type: none"> ▪ extends MP joint of thumb ▪ weakly extends wrist 	
<input type="checkbox"/> supinator 	<p>supinates forearm</p>	<p>described: p.364 fig. 12.9, 12.13b</p>
<input type="checkbox"/> extensor retinaculum (associated structure) 	<p>significance: fibrous band of connective tissue that covers the dorsal surface of the carpals</p>	<p>described: p.369 fig. 12.13b, 12.14c</p>

TABLE 7. ANTERIOR COMPARTMENT OF THE THIGH (5 INDIVIDUAL MUSCLES PLUS 1 MUSCLE GROUP TO IDENTIFY): For summary of actions at hip, see tables 12.10, 12.13.

NAME	PROXIMAL ATTACHMENT (ORIGIN)	DISTAL ATTACHMENT (INSERTION)	ACTION	TEXTBOOK REFERENCE & NOTES
QUADRICEPS FEMORIS GROUP: FOUR MUSCLES WITH A COMMON INSERTION POINT				
<input type="checkbox"/> rectus femoris 	anterior inferior iliac spine		<ul style="list-style-type: none"> ▪ extends leg ▪ flexes thigh 	described: p. 381 fig. 12.17a & b
<input type="checkbox"/> vastus lateralis 				described: p. 381 fig. 12.17a & b, 12.15
<input type="checkbox"/> vastus medialis 		patella via quadriceps tendon and then tibial tuberosity via patellar ligament	extends leg	described: p. 381 fig. 12.17a & b
<input type="checkbox"/> vastus intermedius 				described: p. 381 fig. 12.17a & b


NAME	PROXIMAL ATTACHMENT (ORIGIN)	DISTAL ATTACHMENT (INSERTION)	ACTION	TEXTBOOK REFERENCE & NOTES
<input type="checkbox"/> sartorius 	anterior superior iliac spine	tibial tuberosity, medial side	<ul style="list-style-type: none"> ▪ flexes, abducts, & laterally rotates thigh ▪ flexes leg & rotates leg medially (sitting crosslegged on floor) 	described: pp. 375, 381 fig. 12.17a & b

TABLE 8. ILIOPSOAS GROUP (2 INDIVIDUAL MUSCLES PLUS 1 MUSCLE GROUP TO IDENTIFY): These two muscles are collectively known as the iliopsoas group.


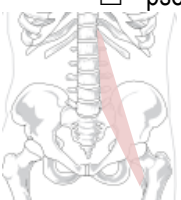

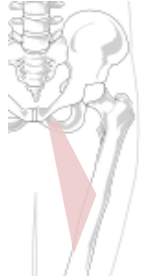
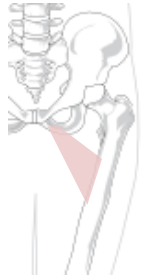
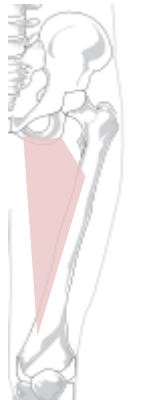
NAME	PROXIMAL ATTACHMENT (ORIGIN)	DISTAL ATTACHMENT (INSERTION)	ACTION	TEXTBOOK REFERENCE & NOTES
<input type="checkbox"/> ILIOPSOAS GROUP: TWO MUSCLES WITH A COMMON INSERTION POINT				
<input type="checkbox"/> iliacus 	iliac fossa	lesser trochanter of femur	flexes thigh	described: p. 375 fig. 12.15a, 12.17a
<input type="checkbox"/> psoas major 	T ₁₂ -L ₅ vertebrae			

TABLE 9. MEDIAL COMPARTMENT OF THE THIGH (5 MUSCLES TO IDENTIFY)

NAME	PROXIMAL ATTACHMENT (ORIGIN)	DISTAL ATTACHMENT (INSERTION)	ACTION	TEXTBOOK REFERENCE & NOTES
<input type="checkbox"/> pectineus 				described: p. 376 fig. 12.15, 12.17
<input type="checkbox"/> adductor longus 			adducts thigh; weakly flexes thigh	
<input type="checkbox"/> adductor brevis 				
<input type="checkbox"/> adductor magnus 			adducts thigh; flexes or extends and laterally rotates thigh (depending on starting position)	described: p. 376 fig. 12.15, 12.18




<input type="checkbox"/> gracilis 	inferior ramus & body of pubis	upper medial surface of tibia	<ul style="list-style-type: none"> ▪ weakly adducts & weakly flexes thigh ▪ flexes leg 	described: p. 376, 381 fig. 12.15a, 12.17a
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TABLE 10. POSTERIOR COMPARTMENT OF THE THIGH (3* MUSCLES PLUS ONE MUSCLE GROUP TO IDENTIFY)

NAME	PROXIMAL ATTACHMENT (ORIGIN)	DISTAL ATTACHMENT (INSERTION)	ACTION	TEXTBOOK REFERENCE & NOTES
HAMSTRINGS GROUP (3 MUSCLES)				
<input type="checkbox"/> semitendinosus 	ischial tuberosity	proximal medial surface of tibia	<ul style="list-style-type: none"> ▪ extends thigh ▪ flexes leg; medially rotates leg 	described: p. 381 fig. 12.18a & b
<input type="checkbox"/> semimembranosus 		medial condyle of tibia		described: p. 381 fig. 12.18a & b, 12.15b


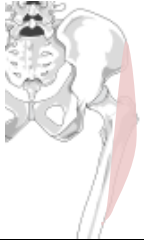



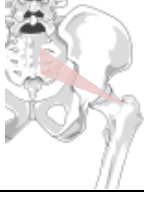
<input type="checkbox"/> biceps femoris* (biceps femoris is composed of a long head and short head)				
<input type="checkbox"/> long head <input type="checkbox"/> short head 	ischial tuberosity			described: p. 381 fig. 12.18a & b, 12.15b
	linea aspera of femur	head of fibula	<ul style="list-style-type: none"> ▪ extends thigh ▪ flexes leg; laterally rotates leg 	

TABLE 11. GLUTEAL MUSCLES (5 MUSCLES PLUS ONE ASSOCIATED STRUCTURE TO IDENTIFY)

NAME	PROXIMAL ATTACHMENT (ORIGIN)	DISTAL ATTACHMENT (INSERTION)	ACTION	TEXTBOOK REFERENCE & NOTES
<input type="checkbox"/> tensor fasciae latae 	<ul style="list-style-type: none"> ▪ iliac crest ▪ anterior superior iliac spine 	iliotibial tract	abducts thigh; medially rotates thigh	described: p. 396 fig. 12.15b, 12.17
<input type="checkbox"/> gluteus maximus 	<ul style="list-style-type: none"> ▪ iliac crest ▪ sacrum ▪ coccyx 	<ul style="list-style-type: none"> ▪ iliotibial tract ▪ linea aspera 	extends thigh; laterally rotates thigh	described: p. 377 fig. 12.15b, 12.18
<input type="checkbox"/> gluteus medius 	iliac crest	greater trochanter of femur	abducts thigh; medially rotates thigh	described: p. 377 fig. 12.15b, 12.18a
<input type="checkbox"/> gluteus minimus 	lateral surface of ilium		abducts thigh; medially rotates thigh	described: p. 377 fig. 12.15c
<input type="checkbox"/> piriformis 	anterolateral surface of sacrum		laterally rotates thigh	described: p. 377 fig. 12.15c

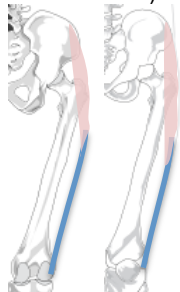
<input type="checkbox"/> iliotibial tract <i>or</i> band (associated structure) 			significance: thick band of fascia continuous with the tensor fasciae latae	described: p. 376 fig. 12.15, 12.17, 12.18
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TABLE 12. ANTERIOR COMPARTMENT OF THE LEG (3 MUSCLES TO IDENTIFY) For summary of actions at ankle, see tables 12.15.









NAME	PROXIMAL ATTACHMENT (ORIGIN)	DISTAL ATTACHMENT (INSERTION)	ACTION	TEXTBOOK REFERENCE & NOTES
<input type="checkbox"/> tibialis anterior 	lateral condyle & proximal shaft of tibia	<ul style="list-style-type: none"> ▪ metatarsal I ▪ medial cuneiform 	dorsiflexes foot; inverts foot	described: p. 383 fig. 12.20a & b, 12.21
<input type="checkbox"/> extensor digitorum longus 			<ul style="list-style-type: none"> ▪ extends toes 2-5 ▪ dorsiflexes foot 	
<input type="checkbox"/> extensor hallucis longus 			<ul style="list-style-type: none"> ▪ extends hallux ▪ dorsiflexes foot 	

TABLE 13. LATERAL COMPARTMENT OF THE LEG (2 MUSCLES TO IDENTIFY)

NAME	ACTION	TEXTBOOK REFERENCE & NOTES
<input type="checkbox"/> fibularis longus 	everts foot; weakly plantar flexes foot	described: p. 383 fig. 12.21a & b, 12.22b
<input type="checkbox"/> fibularis brevis 		

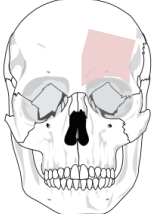

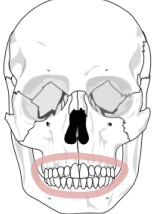
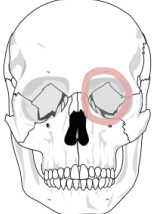

TABLE 14. POSTERIOR COMPARTMENT OF THE LEG (5 MUSCLES TO IDENTIFY)

NAME	PROXIMAL ATTACHMENT (ORIGIN)	DISTAL ATTACHMENT (INSERTION)	ACTION	TEXTBOOK REFERENCE & NOTES
<input type="checkbox"/> gastrocnemius 	lateral and medial condyles of femur	calcaneus via calcaneal (Achilles) tendon	<ul style="list-style-type: none"> ▪ plantar flexes foot ▪ flexes leg 	described: p. 383 fig. 12.20a, 12.21a, 12.22a
<input type="checkbox"/> soleus 	<ul style="list-style-type: none"> ▪ head & proximal shaft of fibula ▪ medial border of tibia 		plantar flexes foot	described: p. 383 fig. 12.21a, 12.22a

<input type="checkbox"/> tibialis posterior 			plantar flexes foot; inverts foot	described: p. 383 fig. 12.22b & c
<input type="checkbox"/> flexor digitorum longus 			<ul style="list-style-type: none"> ▪ plantar flexes foot ▪ flexes toes 2-5, MP, PIP, and DIP joints 	
<input type="checkbox"/> flexor hallucis longus 			<ul style="list-style-type: none"> ▪ plantar flexes foot ▪ flexes MP and IP joints of hallux 	

AXIAL MUSCLES: have both their origins and insertions on the axial skeleton

TABLE 15. MUSCLES OF FACIAL EXPRESSION: (8 MUSCLES TO IDENTIFY)

NAME	ACTION	TEXTBOOK REFERENCE & NOTES
<input type="checkbox"/> frontalis (frontal belly of occipitofrontalis) 	<p>draws scalp forward, raises eyebrows, wrinkles forehead</p>	<p>described: p. 322 fig. 11.2a & b</p>
<input type="checkbox"/> occipitalis (occipital belly of occipitofrontalis) 	<p>draws scalp backward</p>	<p>described: p. 322 fig. 11.1b, 11.2b</p>
<input type="checkbox"/> orbicularis oris 	<p>compresses and purses lips (kiss muscle)</p>	<p>described: p. 322 fig. 11.2a & b</p>
<input type="checkbox"/> orbicularis oculi 	<p>closes eye (blink muscle)</p>	
<input type="checkbox"/> platysma 	<p>pulls lower lip inferiorly, tenses skin of neck</p>	

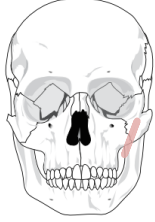
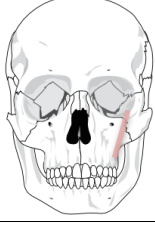
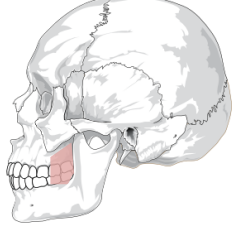
<input type="checkbox"/> zygomaticus major 		
<input type="checkbox"/> zygomaticus minor 	<p>pulls corners of mouth superiorly (smiling muscle)</p>	
<input type="checkbox"/> buccinator 	<p>presses cheeks against molar teeth, as in chewing, whistling, playing a wind instrument, and suckling in infants</p>	<p>described: p. 327 fig. 11.2a & b</p>

TABLE 16. MUSCLES OF MASTICATION (CHEWING): (2 MUSCLES TO IDENTIFY)

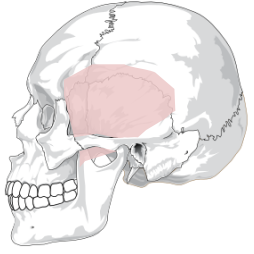
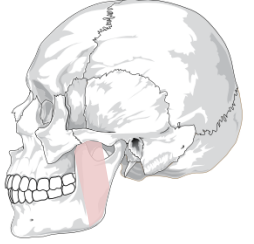
NAME	PROXIMAL ATTACHMENT (ORIGIN)	DISTAL ATTACHMENT (INSERTION)	ACTION	TEXTBOOK REFERENCE & NOTES
<input type="checkbox"/> temporalis 	<ul style="list-style-type: none"> ▪ parietal bone ▪ frontal bone 	<p>coronoid process of mandible</p>	<p>elevates and retracts mandible</p>	<p>described: p. 331 fig. 11.2b, 11.5</p>
<input type="checkbox"/> masseter 	<p>zygomatic arch</p>	<p>coronoid process, angle, and ramus of mandible</p>	<p>elevates and protracts mandible; jaw closure</p>	<p>described: p. 331 fig. 11.2a & b, 11.5</p>

TABLE 17. NECK MUSCLES: (3 MUSCLES TO IDENTIFY)




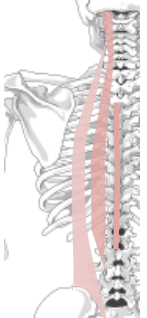
NAME	PROXIMAL ATTACHMENT (ORIGIN)	DISTAL ATTACHMENT (INSERTION)	ACTION	TEXTBOOK REFERENCE & NOTES
<input type="checkbox"/> sternocleidomastoid 	<ul style="list-style-type: none"> ▪ manubrium of sternum ▪ sternal end of clavicle 	mastoid process of temporal bone	<ul style="list-style-type: none"> ▪ <i>one side</i>: lateral flexion with rotation of head to opposite side ▪ <i>both sides</i>: flexes head & neck 	described: p. 336 fig. 11.8, 11.9
<input type="checkbox"/> splenius capitis 	ligamentum nuchae (connective tissue covering the spinal processes of the cervical vertebrae)	<ul style="list-style-type: none"> ▪ occipital bone ▪ mastoid process of temporal bone 	<ul style="list-style-type: none"> ▪ <i>one side</i>: turns head to same side ▪ <i>both sides</i>: extends head & neck 	described: p. 336 fig. 11.10, 11.11
<input type="checkbox"/> splenius cervicis 	spinous processes of T3-T6	transverse processes of cervical vertebrae		

TABLE 18. MUSCLES OF VERTEBRAL COLUMN: (3 MUSCLE GROUPS PLUS 1 INDIVIDUAL MUSCLE TO IDENTIFY)

NAME	ACTION	TEXTBOOK REFERENCE & NOTES
<input type="checkbox"/> ERECTOR SPINAE GROUPS: (3 MUSCLE GROUPS) <input type="checkbox"/> iliocostalis group (lateral) <input type="checkbox"/> longissimus group (intermediate) <input type="checkbox"/> spinalis group (medial) 	<ul style="list-style-type: none"> ▪ <i>one side</i>: laterally flexes the vertebral column ▪ <i>both sides</i>: extends vertebral column 	described: p. 339 fig. 11.11

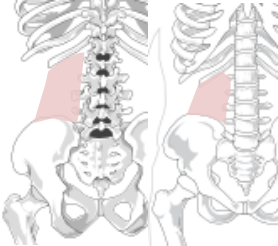
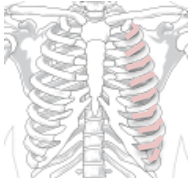
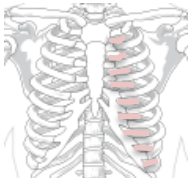
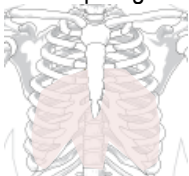
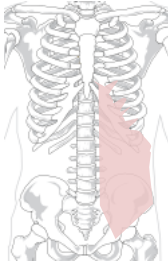
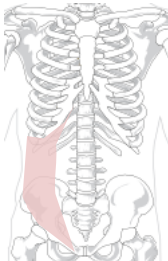
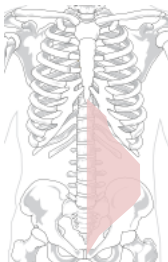
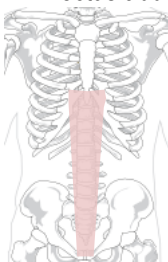

<input type="checkbox"/> quadratus lumborum 	<ul style="list-style-type: none"> ▪ <i>one side</i>: laterally flexes the vertebral column ▪ <i>both sides</i>: extends vertebral column 	described: p. 339 fig. 11.11
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TABLE 19. MUSCLES OF RESPIRATION: (3 MUSCLES TO IDENTIFY)

NAME	ACTION	TEXTBOOK REFERENCE* & NOTES
<input type="checkbox"/> external intercostals 	elevates ribs during normal inspiration (inhalation)	described: p. 342 fig. 11.11, 11.13
<input type="checkbox"/> internal intercostals 	depresses ribs during forced exhalation	described: p. 342 fig. 11.13
<input type="checkbox"/> diaphragm 	expands the thoracic cavity during normal inspiration	

***ALSO SEE: FIGURES 25.15 & 25.16, PP. 768-769**

TABLE 20. MUSCLES OF THE ABDOMINAL WALL: (4 MUSCLES PLUS 1 ASSOCIATED STRUCTURE TO IDENTIFY)

NAME	ACTION	TEXTBOOK REFERENCE & NOTES
<input type="checkbox"/> external oblique 		described: p. 344 fig. 11.14a & b
<input type="checkbox"/> internal oblique 	<ul style="list-style-type: none"> ▪ both sides: flexes vertebral column & compresses abdominal wall ▪ one side: laterally flexes vertebral column 	
<input type="checkbox"/> transversus abdominis 		
<input type="checkbox"/> rectus abdominis 	flexes vertebral column & compresses abdominal wall	
<input type="checkbox"/> inguinal ligament (associated structure) 	significance: formed by the aponeurosis of the external oblique; contains tissues coursing from the trunk to the lower limb	