

Description

Appendix 1 provides details for each individual muscle in Muscle Groups 1 to 13 as presented in Chapters 4-6 (and also for the Bonus Groups). Each page of this Appendix presents a full-page “card” for a single muscle. The card contains all the information from the A-Table, plus a picture of the muscle, a picture of the origin/insertion locations, a diagram illustrating the actions created by the muscle, its innervation and other pertinent information.

Bone picture with origins & insertions labeled.

Muscle picture to visualize fibers pulling on the bones to create movement.

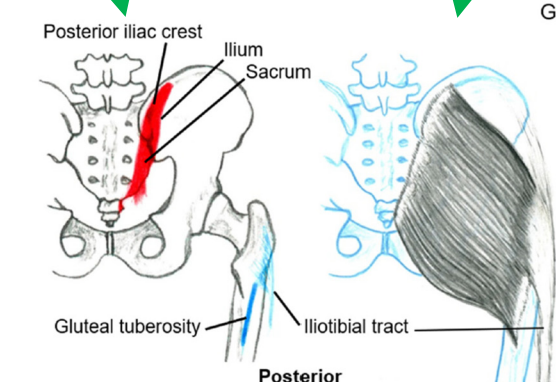
Actions created by the muscle, shown within the context of all actions available for the muscle group.



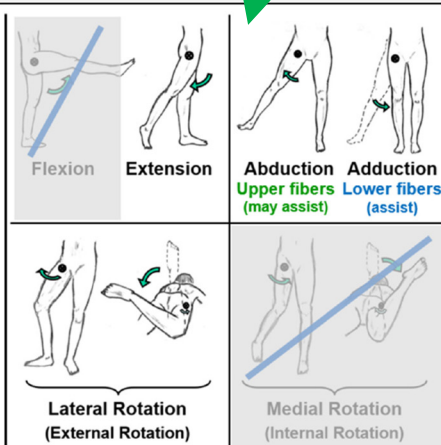
Hip Joint (Part 1)

Gluteus Maximus

Gluteus Maximus G10-1



Moves the hip joint



Origin	Insertion	Action
Posterior iliac crest, ilium, and sacrum (also lateral coccyx and sacrotuberous ligament)	Gluteal tuberosity of femur, and the iliotibial tract (ITB)	Extension and lateral rotation at the hip joint (also lower fibers assist adduction, and upper fibers may assist abduction)

Innervation: Inferior gluteal N. (L5, S1, S2)

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Details from Table 10 (A) - Hip Joint (Part 1)

1 of 6

The motor nerve(s) that supply the muscle.

An enlarged copy of the muscle's row in the A-Table.

This button links each Muscle Detail card to the A-Tables in Chapters 4-6 of the main text. (see page 2 below).

This button facilitates using Appendix 1 as a stand-alone atlas to study and memorize muscles. (see page 3 below).

Muscle Detail Cards linked to the “A” Tables in Chapters 4-6

A-Tables (muscle origins, insertions, and actions) in the main text are linked to full-page **Muscle Detail Cards** in Appendix 1. Each “card” gathers and enlarges all the details and images for an individual muscle.

Click a muscle picture to view its Muscle Detail Card

Group 2: Muscles Acting On

Shoulder Joint	Origin	Insertion	Action
 Deltoid moves the humerus	Lateral clavicle, Acromion of scapula, Spine of scapula	Deltoid tuberosity of humerus	<u>All / middle fibers:</u> Abduction of humerus at the GH joint <u>Anterior fibers:</u> Flexion, medial rotation, and horizontal adduction <u>Posterior fibers:</u> Extension, lateral rotation, and horizontal abduction
 Supraspinatus moves the humerus	Supraspinous fossa of scapula	Greater tubercle of humerus (superior aspect)	Abduction of humerus at the GH joint. Stabilizes the humerus in the glenoid fossa
 Infraspinatus moves the humerus	Infraspinous fossa of scapula	Greater tubercle of humerus (posterior aspect)	Lateral rotation of humerus at the GH joint. Stabilizes the humerus in the glenoid fossa
 Teres Minor moves the humerus	Lateral/axillary border of the scapula	Greater tubercle of humerus (posterior aspect, inferior to infraspinatus tendon)	Lateral rotation of humerus at the GH joint. Stabilizes the humerus in the glenoid fossa
 Subscapularis moves the humerus	Subscapular fossa of scapula	Lesser tubercle of humerus (on anterior humerus)	Medial rotation of humerus at the GH joint. Stabilizes the humerus in the glenoid fossa
 Pectoralis Major moves the humerus	<u>Clavicular head:</u> Medial half of clavicle <u>Sternocostal part:</u> Sternum & cartilages of ribs 1-6 (also sometimes <u>abdominal head:</u> Aponeurosis of external oblique)	Intertubercular groove of the humerus (lateral lip)	<u>All fibers:</u> Adduction and medial rotation of humerus at the GH joint <u>Upper fibers:</u> Flexion and horizontal adduction of humerus <u>Lower fibers:</u> Extension of humerus - from a flexed position
 Coracobrachialis moves the humerus	Coracoid process of scapula	Shaft of humerus -- on the medial side half way down	Flexion and adduction of the humerus at the GH joint (also assists horizontal adduction)
 Latissimus Dorsi moves the humerus and the trunk & spine	Spinous processes of lower 6 thoracic and all lumbar vertebrae, sacrum, posterior iliac crest, lumbar fascia, lower 3 or 4 ribs (and sometimes the tip of the inferior angle of the scapula)	Intertubercular groove of the humerus (medial lip)	Extension, adduction, and medial rotation of the humerus at the GH joint. Also affects lower trunk & spine: <u>UL:</u> lateral flexion, <u>BL:</u> extension of spine & anterior pelvic tilt
 Teres Major moves the humerus	Inferior angle and lower lateral border of scapula (dorsal side)	Intertubercular groove of the humerus (medial lip)	Extension, adduction, and medial rotation of the humerus at the GH joint.

(MMM page 86)

E-book will jump to the muscle's **Detail Card** in Appendix 1.

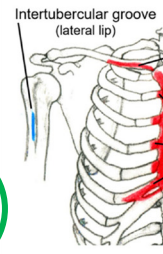
back to Table 2 (A)

Click the “back to” button to return to the A-Table



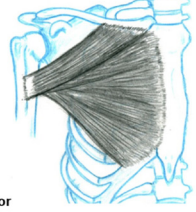
Shoulder Joint

Pectoralis Major



Intertubercular groove (lateral lip)
Clavicle (medial half)
Sternum
Cartilages of ribs 1-6

Anterior



Upper and lower portions can pull in opposite directions

G2-6

Flexion

Upper fibers

Extension

Lower fibers (starting from a flexed position)

Lateral Rotation

All fibers

Medial Rotation

All fibers

Abduction

All fibers

Adduction

All fibers

Horizontal Abduction

All fibers

Horizontal Adduction

Upper fibers

Origin	Insertion	Action
<u>Clavicular head:</u> Medial half of clavicle <u>Sternocostal part:</u> Sternum & cartilages of ribs 1-6 (also sometimes <u>abdominal head:</u> Aponeurosis of external oblique)	Intertubercular groove of the humerus (lateral lip)	<u>All fibers:</u> Adduction and medial rotation of humerus <u>Upper fibers:</u> Flexion and horizontal adduction of humerus <u>Lower fibers:</u> Extension of humerus - from a flexed position

Innervation: Lateral Pectoral N. (C5-C7) & Medial Pectoral N. (C8,T1)

Details from Table 2 (A) - Shoulder Joint

Appendix 1
TOC

Using Appendix 1 as a Stand-alone Muscle Atlas

Appendix 1 – Muscle Detail Cards – Table of Contents

Click an icon to jump to that muscle group

Muscles That Move the Upper Extremity	Muscles That Move the Axial Skeleton	Muscles That Move the Lower Extremity
G1 Movement of the Scapula/Clavicle G1-1 Trapezius G1-2 Levator Scapulae G1-3 Rhomboid Major and Minor G1-4 Serratus Anterior G1-5 Pectoralis Minor G1-6 Subclavius	G6 Movement of the Face and Jaw G6-1 Masseter G6-2 Temporalis G6-3 Lateral Pterygoid G6-4 Medial Pterygoid G6-5 Occipitofrontalis G6-6 Platysma G6-7 Suprahyoid Group G6-8 Infrahyoid Group	G10 Movement of the Hip Joint (part 1) G10-1 Gluteus Maximus G10-2 Gluteus Medius G10-3 Gluteus Minimus G10-4 Piriformis (pt of the "Deep Lateral Rotators") G10-5 The Other 5 Deep Lateral Rotators #1. Gemellus Superior #2. Gemellus Inferior #3. Obturator Internus #4. Gemellus Inferior #5. Obturator Externus #6. Quadratus Femoris G10-6 Iliopsoas (Iliacus + Psoas Major)
G2 Movement of the Shoulder Joint G2-1 Deltoid G2-2 Supraspinatus G2-3 Infraspinatus G2-4 Teres Minor G2-5 Subscapularis G2-6 Pectoralis Major G2-7 Coracobrachialis G2-8 Latissimus Dorsi G2-9 Teres Major	G7 Movement of the Neck and Head G7-1 Sternocleidomastoid G7-2 Scalenes Group A. Anterior Scalene B. Middle Scalene C. Posterior Scalene G7-3 Longus Capitis and Longus Collis G7-4 Suboccipital Group A. Rectus Capitis Posterior Major B. Rectus Capitis Posterior Minor C. Oblique Capitis Superior D. Oblique Capitis Inferior G7-5 Splenius Capitis G7-6 Splenius Cervicis G7-7 Semispinalis Capitis G7-8 Levator Scapulae (reversed OJ action) G7-9 Trapezius, upper fibers (reversed OJ action)	G11 Movement of the Knee (part 2) G11-1 Sartorius G11-2 Tensor Fasciae Latae G11-3 Pectineus G11-4 Adductor Brevis G11-5 Adductor Longus G11-6 Adductor Magnus G11-7 Gracilis
G3 Movement of the Elbow & Forearm G3-1 Biceps Brachii G3-2 Brachialis G3-3 Brachioradialis G3-4 Pronator Teres G3-5 Pronator Quadratus G3-6 Triceps Brachii G3-7 Anconeus G3-8 Supinator	G8 Movement of the Spine G8-1 Spinalis G8-2 Longissimus G8-3 Iliocostalis G8-4 Semispinalis G8-5 Multifidus G8-6 Erector Spinae (Longus and Brevis) G8-7 Quadratus Lumborum	G12 Movement of the Ankle, Foot & Toes G12-1 Rectus Femoris G12-2 Vastus Lateralis G12-3 Vastus Medialis G12-4 Vastus Intermedius G12-5 Biceps Femoris G12-6 Semitendinosus G12-7 Semimembranosus G12-8 Popliteus
G4 Movement of the Wrist, Hand, & Fingers G4-1 Flexor Carpi Radialis G4-2 Palmaris Longus G4-3 Flexor Carpi Ulnaris G4-4 Flexor Digitorum Superficialis G4-5 Flexor Digitorum Profundus G4-6 Extensor Carpi Radialis Longus G4-7 Extensor Carpi Radialis Brevis G4-8 Extensor Carpi Ulnaris G4-9 Extensor Digitorum G4-10 Extensor Indicis	G9 Movement of the Thorax, Abdomen, Breathing G9-1 Rectus Abdominis G9-2 External Oblique G9-3 Internal Oblique G9-4 Transverse Abdominis G9-5 Diaphragm G9-6 Internal Intercostals G9-7 External Intercostals G9-8 Serratus Posterior Superior G9-9 Serratus Posterior Inferior G9-10 Levator Costae G9-11 Transverse Thoracic G9-X Cross Section of the Abdomen	G13 Movement of the Ankle, Foot & Toes G13-1 Gastrocnemius G13-2 Plantaris G13-3 Soleus G13-4 Tibialis Posterior G13-5 Flexor Digitorum Longus G13-6 Flexor Hallucis Longus G13-7 Fibularis Brevis (Peroneus Brevis) G13-8 Fibularis Longus (Peroneus Longus) G13-9 Tibialis Anterior G13-10 Extensor Digitorum Longus G13-11 Extensor Hallucis Longus G13-X Cross Section of the Leg (compartment)
G5-B Intrinsic Muscles of the Hand (Bonus Group)	G9-B Pelvic Floor and Perineum (Bonus Group)	G13-B Intrinsic Muscles of the Foot (Bonus Group)

For stand-alone mode, use the **Table of Contents (TOC)** on page 232. Click on a Muscle Group icon to jump to the title card for the muscles you want to study. Then, manually advance the book pages to step through the muscle detail cards.

To search for a specific muscle, use the **Alphabetical Index** on pages 407-408.

Go to Alphabetical Index of Muscles

Muscle Group 10 (G10)

Muscles that move the Hip Joint (Part 1)

Flexion Extension Abduction Adduction

Lateral Rotation (External Rotation) Medial Rotation (Internal Rotation)

1. Gluteus Maximus
2. Gluteus Medius
3. Gluteus Minimus
4. Piriformis
5. The Other 5 Deep Lateral Rotators
A. Deep Lateral Rotator #1 (of 6)
B. Gemellus Superior (DLR #2)
C. Obturator Internus (DLR #3)
D. Gemellus Inferior (DLR #4)
E. Obturator Externus (DLR #5)
F. Quadratus Femoris (DLR #6)
6. Iliopsoas
6a. Iliacus
6b. Psoas Major

7. = Psoas Minor
* = Iliotibial Band
** = Sacrotuberous Ligament
*** = Iliofemoral Ligament

Hip Bone (Coxal Bone)
Hip Joint (Coxal Joint)
Femur

Appendix 1 – Alphabetical Index of Muscles

1. Find the muscle you're looking for, and note its group number.
2. Click a **G1** button to go to that muscle group.

Upper Extremity	A	E (continued)	G	H	Lower Extremity
G1	Abductor digiti minimi (foot)	Extensor digitorum (fingers)	G4	Hamstrings	G10
G2	Abductor digiti minimi (hand)	Extensor digitorum brevis (toes)	G13-B	Hypothar eminence muscles	G5-B
G3	Abductor hallucis	Extensor digitorum longus (toes)	G13	I	G10
G4	Abductor pollicis brevis	Extensor hallucis brevis	G13-B	Iliacus	G10
G5	Abductor pollicis longus	Extensor hallucis longus	G13	Iliococcygeus	G9-B
G6	Adductor brevis	Extensor indicis	G4	Iliocostalis	G8
G7	Adductor hallucis	Extensor pollicis brevis	G5	Iliopsoas	G10
G8	Adductor longus	Extensor pollicis longus	G9	Infraspinatus group	G6
G9	Adductor magnus	External abdominal oblique	G11	Infraspinatus	G2
G10	Adductor pollicis	External anal sphincter	G9-B	Intercostals, external	G9
G11	Anconeus	External intercostals	G9	Intercostals, internal	G9
G12	Biceps brachii	External urethral sphincter	G9-B	Internal abdominal oblique	G9
G13	Biceps femoris	F	G13	Internal intercostals	G9
G14	Brachialis	Fibularis brevis (peroneus brevis)	G13	Interspines	G8
G15	Brachioradialis	Fibularis longus (peroneus longus)	G13-B	Intertarsal	G8
G16	Buccinator	Fibularis tertius (peroneus tertius)	G13	Ischiocondemous	G9-B
G17	Bulbospongiosus	Flexor carpi radialis	G4	L	G10
G18	Coccygeus	Flexor carpi ulnaris	G4	Latissimus dorsi	G2
G19	Compressor urethrae	Flexor digiti minimi of the foot	G13-B	Levator anguli oris	G6
G20	Coracobrachialis	Flexor digiti minimi of the hand	G5-B	Levator ani	G9
G21	D	Flexor digitorum brevis	G13-B	Levator costae	G6
G22	Deep Six lateral rotators of the hip	Flexor digitorum longus	G4	Levator labii superioris	G6
G23	Deltoid	Flexor digitorum profundus	G4	Levator labii superioris alaeque	G6
G24	Depressor anguli oris	Flexor digitorum superficialis	G4	Levator scapulae (as a new mover)	G7
G25	Depressor labii inferioris	Flexor hallucis brevis	G13-B	Longissimus	G8
G26	Diaphragm	Flexor hallucis longus	G13	Longus capitis	G7
G27	Digastric	Flexor pollicis brevis	G5	Longus colli	G7
G28	Dorsal interosseus of the foot	Flexor pollicis longus	G5	Lumbricals of the foot	G13-B
G29	Dorsal interosseus of the hand	G	G13	Lumbricals of the hand	G5-B
G30	Erector spinae group (ESG)	Gastrocnemius	G13	M	G6
G31	Extensor carpi radialis longus	Gemellus inferior & superior	G10	M	G6
G32	Extensor carpi radialis brevis	Geniohyoid	G6	M	G6
G33	Extensor carpi ulnaris	Gluteus maximus	G10	M	G6
G34		Gluteus medius	G10	M	G6
		Gluteus minimus	G10	M	G6
		Gracilis	G11	N	G6
				Nasalis	G6

Gluteus maximus **G10**

In the **Alphabetical Index**, find the muscle you're looking for, and note the indicated Group number. Then, click the Group button for that muscle group.

Definitions

Abbreviations

Bones

- SP – Spinous Process of a vertebra
 TVP – Transverse Process of a vertebra
 C# – Cervical vertebrae (C1 – C7)
 T# – Thoracic vertebrae (T1 - T12)
 L# – Lumbar vertebrae (L1 – L5)

Joints

- GH – Glenohumeral
 HU – Humeroulnar
 RU – Radioulnar
 RC – Radiocarpal
 CM – Carpometacarpal
 MP or MCP – Metacarpophalangeal
 PIP – Proximal Interphalangeal
 DIP – Distal Interphalangeal
 TF – Tibiofemoral
 TC – Talocrural
 TM – Tarsometatarsal
 MP or MTP – Metatarsophalangeal
 TMJ – Temporomandibular Joint

Innervation

- N. – Nerve (example: Sciatic N.)
 Cr.N. – Cranial Nerve (example: Cr.N. VII)
 C1-C8 } Spinal segment where
 T1-T12 } motor nerve roots emerge
 L1-L5 } (see MMM pages 22-24)
 S1-S5 }

Actions

(assist) – The muscle assists the action, but is not a prime mover.

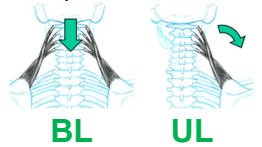
(may assist) – The muscle may assist, depending on strength requirements or relative bone angles.

Actions – Axial Skeleton only

(see Chapter 5 introductory section)

BL – Bilateral contraction of a muscle

UL – Unilateral contraction of a muscle



UL to the same side – Muscle **rotates** the neck or spine to its own side of the body (ipsilateral).



UL to the opposite side – Muscle **rotates** the neck or spine to the other side of the body (contralateral).



Note that **lateral flexion** actions are always to the same side (ipsilateral).



Other

--- or --- (dashed line):

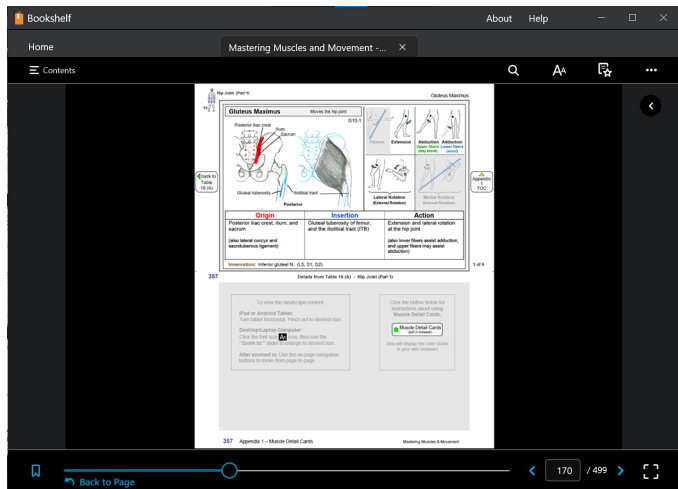
Muscle attachment is hidden from view, on the opposite side of the bone.



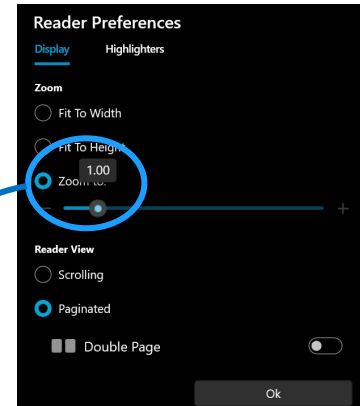
VitalSource Bookshelf – Reading Landscape-Oriented Pages

Landscape pages are displayed in the top half of portrait-shaped pages.

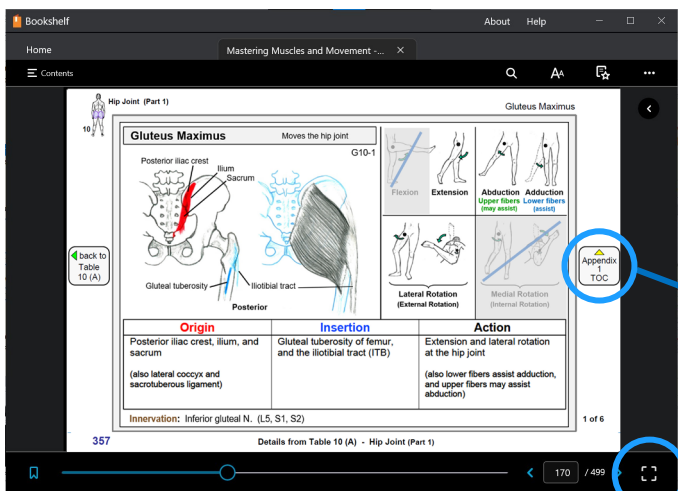
As an example, here is a Muscle Detail Card viewed in the Bookshelf Windows app:



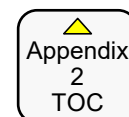
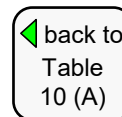
Click **AA** button for Reader Preferences.



Use “**Zoom to:**” slider to enlarge the card.



After zoomed in, use the navigation buttons to move between landscape pages.



(see pages 2-3 above for details)

For the largest view, click the  button to enter full-screen mode.

Suggestion: Try reading the entire book zoomed in as described above. On portrait pages, it's very easy to do a short scroll between the top and bottom of the page.

Keyboard shortcuts when in full-screen mode (Windows app):

Scroll up and down on the current page:

Use up & down arrow keys, or use mouse wheel or trackpad.

Go to next page or previous page:

Ctrl-PageDown, Ctrl-PageUp