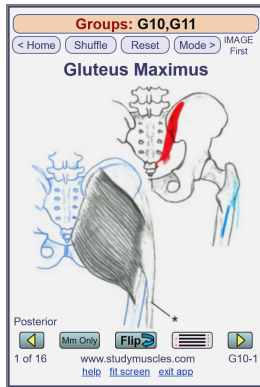
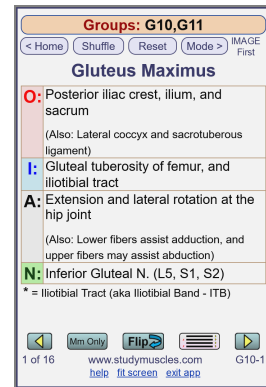


MusclePlus⁺ Flashcard App – User Guide



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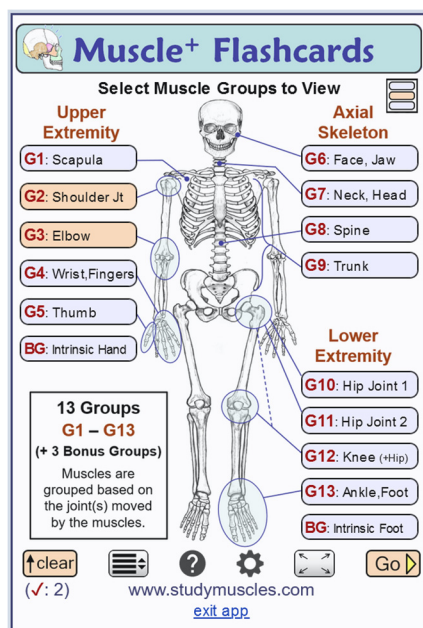
Introduction

The MusclePlus⁺ Flashcard app is designed to go with the textbook **Mastering Muscles & Movement - A Brain-Friendly System for Learning Musculoskeletal Anatomy and Basic Kinesiology**. The flashcards are called "MusclePlus" because the front of each card has a **muscle** illustration **plus** a bone drawing showing the muscle attachments in red & blue. This app is available on the **MMM** companion website: www.studymuscles.com.

Organization

Muscles are organized in a hierarchical arrangement based on the bones and joints being *moved* by the muscles. At the top level of this organization are the three major **Body Regions**: Upper Extremity, Axial Skeleton, and Lower Extremity.


Each body region is divided into **Muscle Groups**. A muscle group is a family of muscles that move a particular part of the body, for example, the humerus being moved at the glenohumeral joint (shoulder joint). There are a total of 13 muscle groups (+2 bonus groups), and each has a group identification number (**G1**, **G2**, up to **G13**). Please see page v in the Contents section of your **MMM** textbook for a list of all the muscles in their respective groups.

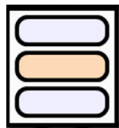
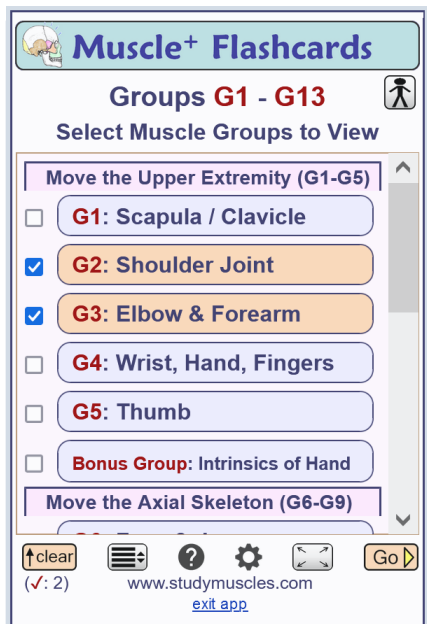


Selecting Flashcards to View

The “skeleton” **Home Screen** displays the available muscle groups. Each muscle group contains from 6 to 15 individual muscles. Click/tap the gray buttons to select one or more muscle groups.

After you have selected the muscle group(s) you wish to view, click/tap the **Go** button to view the flashcards.

If your device screen is too small to easily read the muscle group buttons around the skeleton, click the  button at the upper right corner of the screen. This will bring up a different muscle-group-selection screen that has bigger buttons (see next section).

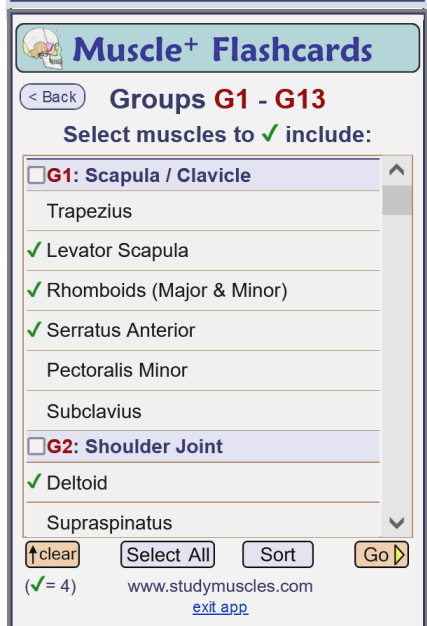


Clicking the above button (at the upper right corner of the “skeleton” screen) switches to a button-list interface for selecting muscle groups, as shown here. Scroll down the list and select muscle groups to create the flashcard set you wish to view.

As before, when you are finished selecting muscle group(s), click/tap the **Go** button to view the flashcards.

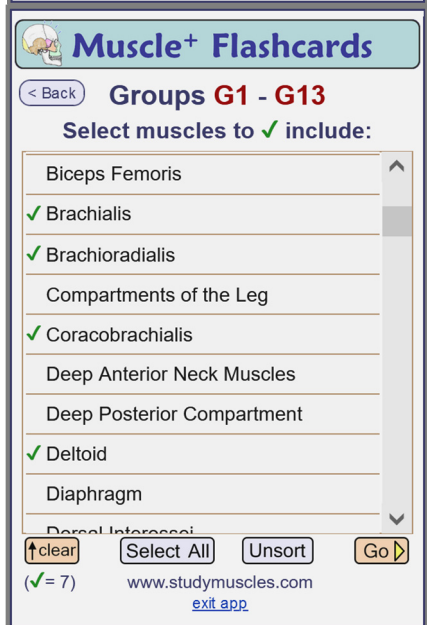


Note that a different button now occupies the upper right corner of the screen. You can click/tap it to go back to the "skeleton" home screen.



This button (in the button bar at the bottom of the home screen), provides a third method for selecting your set of muscles for flashcard viewing.

To select a custom set of *individual* muscles (instead of the pre-set muscle *groups*), click/tap the **Sort** button. A new Selection screen will come up and display a long list of **all muscles**. Scroll down the list and select muscles to build your flashcard set. As you select muscles, they are marked with a green checkmark ✓.



Initially, the list shows the muscles organized by Muscle Group, with a group header separating the groups (see top example at left). You can also click/tap the **Sort** button to instead show all the muscles listed alphabetically (see bottom example). Click/tap **Unsort** to go back to the muscle-group arrangement.

As before, when you are finished selecting muscles, click/tap the **Go** button to view the flashcards.

Groups: G2,G3

< Home Shuffle Reset Mode > IMAGE First

Show

Posterior

1 of 17 www.studymuscles.com G2-1

fit screen exit app help

Groups: G2,G3

< Home Shuffle Reset Mode > NAME First

Deltoid

O: Lateral clavicle, Acromion of scapula, and Spine of scapula

I: Deltoid tuberosity of the humerus

A: **All / middle fibers:** Abduction of the humerus at the shoulder joint

Anterior fibers: Flexion, medial rotation, and horizontal adduction

Posterior fibers: Extension, lateral rotation, and horizontal abduction

N: Axillary N. (C5, C6)

1 of 15 (-2) www.studymuescles.com G2-1

help fit screen exit app

Groups: G2,G3

< Back Shuffle Reset

Current Card Set (tap to X exclude)

Deltoid	▶
Supraspinatus	▶
Infraspinatus	▶
X Teres Minor	▶
Subscapularis	▶
Pectoralis Major	▶
Coracobrachialis	▶
Latissimus Dorsi	▶
X Teres Major	▶
Biceps Brachii	▶

↑ clear Select All Sort Go

X: (-2) www.studymuscles.com exit app

Viewing Flashcards

After you click the **Go** button, you are viewing the flashcards for the muscles you have selected. In this example we have selected muscle groups G2 and G3.

There are several ways to tailor how you view and use the cards. Buttons above and below the cards provide many ways to customize and add variety to your repetitive study and self-testing.

Navigation Buttons

These buttons allow you to step through the cards, reveal hidden information, flip the card to view the other side, and control which type of muscle image you will use.



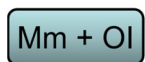
Step forward and backward through the cards.



Flip the current card. The reverse side has details of origin, insertion, actions, and innervation for the muscle.



Reveal hidden information on the current card. This button relates to **Viewing Modes** (see below). Certain modes will hide either the muscle name or the muscle image so you can test your recall of the missing piece, before you flip the card to read the details.



Toggle which type of muscle image to view on the cards:

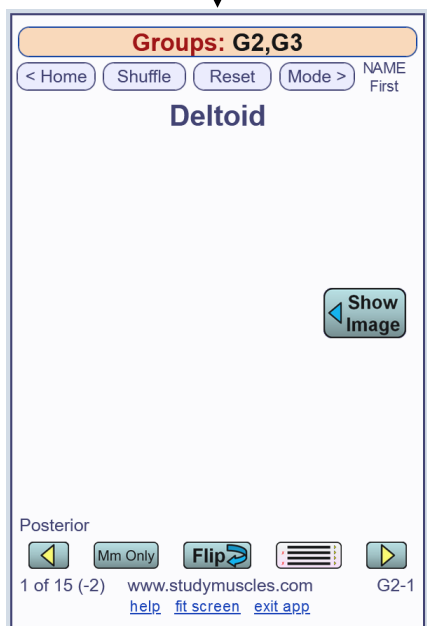
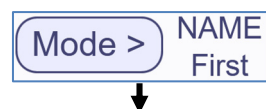
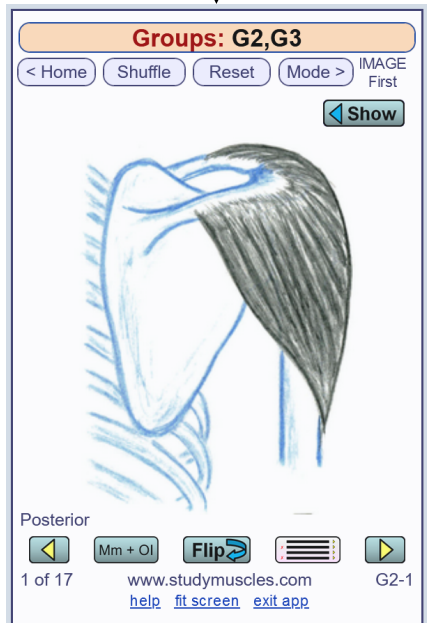
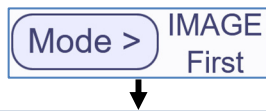
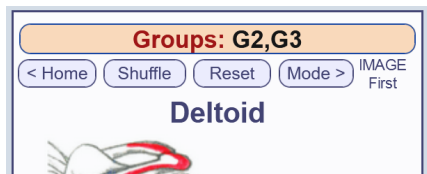
[Mm + OI] = Muscle + origin/insertion pictures

[Mm Only] = Only muscle picture (example on next page)



View a list of the muscles in the **current card set**, and select specific muscles to exclude (hide) while viewing the current card set. The muscles you select will be marked with a red **X** to indicate they will be hidden when you click **Go** to go back to viewing the flashcards.

Note: You can click **Shuffle**, **Reset**, and **Sort** to change the order of the list.



Top Buttons

Buttons at the **top** of the screen change viewing modes, shuffle the deck, or reset the deck back to original order.



Return to the Home screen to select a different group of muscles to view.



Shuffle the order of the cards. You can shuffle the deck as many times as you wish.



Reset the cards back to their original order.




Choose from four different viewing modes (see next section).

Viewing Modes

Viewing modes change how the muscle image and text information are presented as you step through the cards. These modes allow you to approach the information from different directions to reinforce your brain's strength and speed of recall. The four modes are:





View both the muscle **name** and the muscle **image**. Tap the  button to study the details.



(see example: upper left)



View the **image** of the muscle first.

Tap the  button to reveal the muscle's name, or tap the  button to study the details.



(see example: lower left)

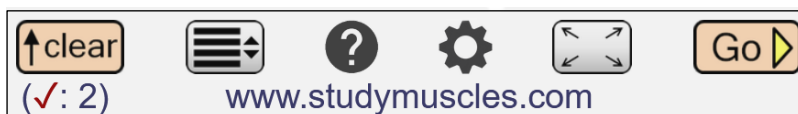
View the **name** of the muscle first.

Tap the  button to reveal the muscle picture, or tap the  button to study the details.



As you step through the cards, you view the reverse side first (the O, I, A, N information).

Home Screen: More Buttons



Buttons at the bottom of the **Home Screen** provide additional ways to select cards, set options, view help, etc.



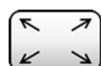
View a list of all muscles available (in all groups), and select individual muscles for a custom card set. This method is described [above](#), in the **Selecting Flashcards to View** section.



View help (this user guide).



Set program options.



Scale the card view to fit the current screen size. When you switch from portrait to landscape viewing on a tablet or phone, or when you resize a browser window, the flashcard display may no longer fit properly. Click/tap this button to re-fit it to the current display.

Link-Buttons at Bottom



When viewing **muscle flashcards**: The far bottom of the screen has link-buttons to provide additional functions.

[help](#): View help (this user guide).

[fit screen](#): Scale the card view to fit the current screen size.


[exit app](#): This closes the flashcard app and returns the browser to the main Study Aids web page.

Note that the “exit” button has no effect if you have accessed the flashcard app by tapping a home screen icon on a tablet or phone (see next section).

Notes for Tablets and Phones

If you are using this app in the browser on a smartphone or tablet device, you can **add an icon** for the app to your **home screen**. That way, you can tap the icon to go straight to the muscle flashcards without having to use the browser.



Here's how: While viewing this flashcard app in the Safari browser on an iPhone or iPad, tap on the "arrow" icon  in the Toolbar and select "Add to Home Screen" from the list of options.

(Most other mobile devices have a similar capability.)

Muscles – List by Group

Muscles are placed in groups based on the bones and joints they *move* as they contract.

----- Upper Extremity ----- (Chapter 4)

Group 1 – Scapula / Clavicle

Trapezius
Levator scapula
Rhomboid major & minor
Serratus anterior
Pectoralis minor
Subclavius

p. 75-82



1

Group 2 – Shoulder Joint

Deltoid
Supraspinatus
Infraspinatus
Teres minor
Subscapularis
Pectoralis major
Coracobrachialis
Latissimus dorsi
Teres major

p. 83-90

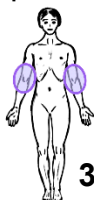


2

Group 3 – Elbow, Forearm

Biceps brachii
Brachialis
Brachioradialis
Pronator teres
Pronator quadratus
Triceps brachii
Anconeus
Supinator

p. 91-98



3

Group 4 – Wrist, Hand, Fingers

Flexor carpi radialis
Palmaris longus
Flexor carpi ulnaris
Flexor digitorum superficialis
Flexor digitorum profundus
Extensor carpi radialis longus
Extensor carpi radialis brevis
Extensor carpi ulnaris
Extensor digitorum
Extensor indicis

p. 99-106



4

Group 5 – Thumb

Flexor pollicis longus
Flexor pollicis brevis
Opponens pollicis
Adductor pollicis
Abductor pollicis brevis
Abductor pollicis longus
Extensor pollicis longus
Extensor pollicis brevis

p. 107-113



5

Bonus Group

Intrinsic muscles of the hand

p. 114-115

----- Axial Body ----- (Chapter 5)

Group 6 – Face, Jaw

Masseter
Temporalis
Lateral pterygoid
Medial pterygoid
Occipitofrontalis
Platysma
Suprahyoids Group
Geniohyoid, Mylohyoid,
Stylohyoid, Digastric
Infrahyoids Group
Sternohyoid, Sternothyroid,
Omohyoid, Thyrohyoid
Muscles of facial expression

p. 127-134



6

Group 7 – Neck, Head

Sternocleidomastoid
Scalenes group
Longus capitis & longus colli
Suboccipital group
Rectus capitis posterior major
Rectus capitis posterior minor
Oblique capitis superior
Oblique capitis inferior
Splenius capitis
Splenius cervicis
Semispinalis capitis
Levator scapula*
Trapezius, upper fibers*

p. 135-142



7

*(revisited for reversed O/I actions)

Group 8 – Spine

Spinalis
Longissimus
Iliocostalis
Semispinalis
Multifidus
Rotatores
Quadratus lumborum
Interspinales & Intertransversarii

p. 143-150

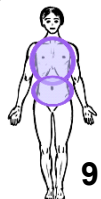


8

Group 9 – Thorax, Abdomen, Breathing

Rectus abdominis
External oblique
Internal oblique
Transverse abdominis
Diaphragm
External intercostals
Internal intercostals
Serratus posterior superior
Serratus posterior inferior
Levator costae
Transversus Thoracis

p. 151-157



9

Bonus Group

Muscles of the pelvic floor and perineum

p. 158-159*

----- Lower Extremity ----- (Chapter 6)

Group 10 – Hip Joint (Part 1)

Gluteus maximus
Gluteus medius
Gluteus minimus
Piriformis (1st lateral rotator)
The other 5 lateral rotators
Gemellus superior
Obturator internus
Gemellus inferior
Obturator externus
Quadratus femoris
Iliopsoas
(Iliacus & Psoas major)

p. 167-174

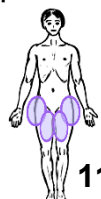


10

Group 11 – Hip Joint (Part 2)

Sartorius
Tensor fascia latae
Pectineus
Adductor brevis
Adductor longus
Adductor magnus
Gracilis

p. 175-182

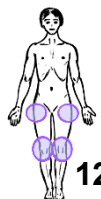


11

Group 12 – Knee (& Hip Joint, Part 3)

Rectus femoris
Vastus lateralis
Vastus intermedius
Vastus medialis
Biceps femoris
Semitendinosus
Semimembranosus
Popliteus

p. 183-190



12

Group 13 – Ankle, Foot, Toes

Gastrocnemius
Plantaris
Soleus
Tibialis posterior
Flexor digitorum longus
Flexor hallucis longus
Fibularis longus (peroneus)
Fibularis brevis (peroneus)
Tibialis anterior
Extensor digitorum longus
Extensor hallucis longus

p. 191-197



13

Bonus Group

Intrinsic muscles of the foot

p. 198-199