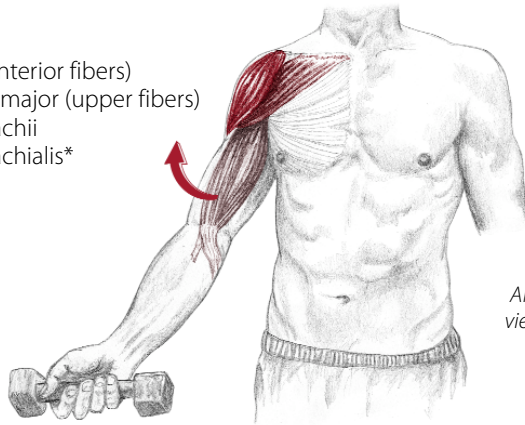


Synergists - Muscles Working Together

*muscles not shown

Flexion

Deltoid (anterior fibers)
Pectoralis major (upper fibers)
Biceps brachii
Coracobrachialis*

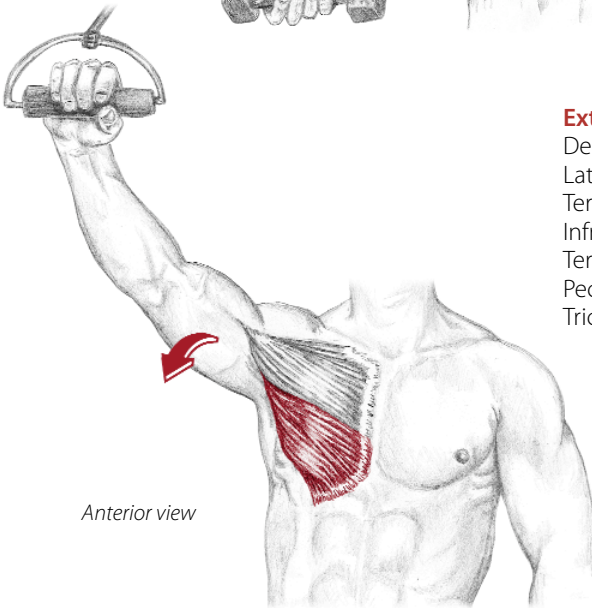


Anterior/medial view of right arm

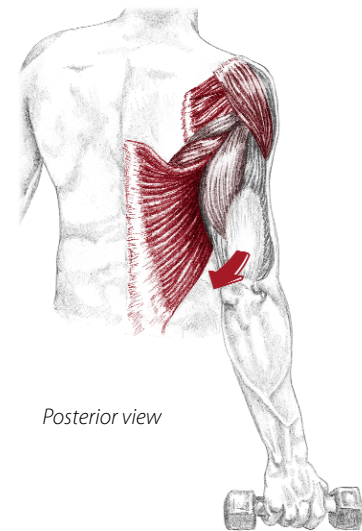
Shoulder (glenohumeral joint)

Extension

Deltoid (posterior fibers)
Latissimus dorsi
Teres major
Infraspinatus
Teres minor
Pectoralis major (lower fibers)
Triceps brachii (long head)



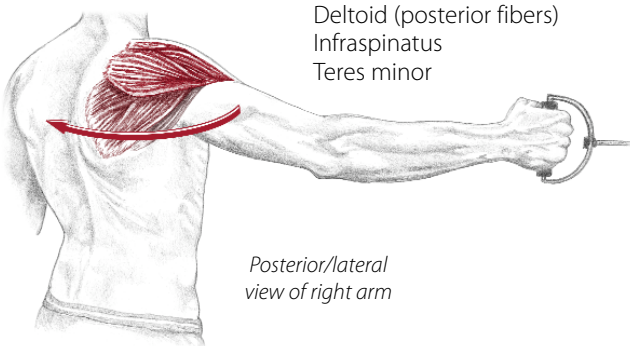
Anterior view



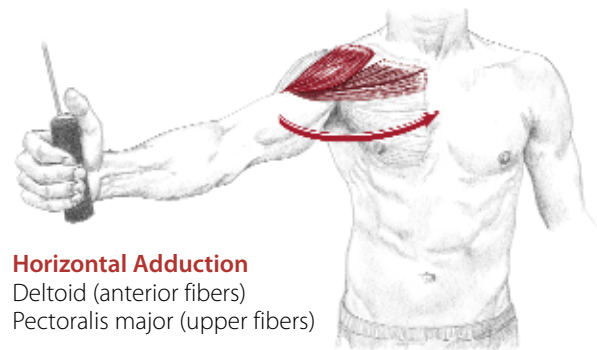
Posterior view

Horizontal Abduction

Deltoid (posterior fibers)
Infraspinatus
Teres minor



Posterior/lateral view of right arm



Anterior view

Horizontal Adduction

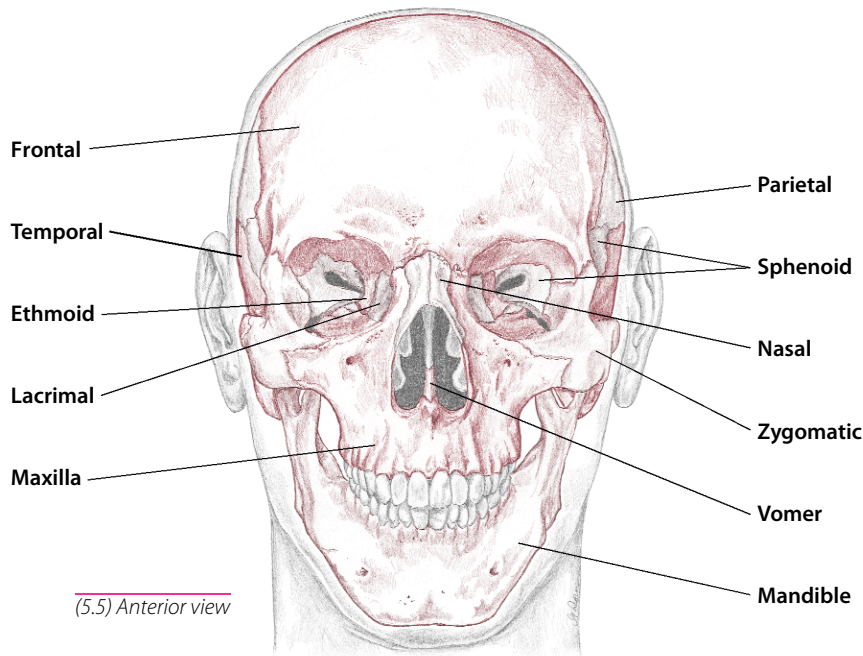
Deltoid (anterior fibers)
Pectoralis major (upper fibers)

Bones & Bony Landmarks of the Head, Neck and Face

The **skull** is composed of twenty-two bones: eight in the cranium and fourteen in the facial region. Seven of the eight **cranial** bones are directly accessible. The eighth, the ethmoid, is accessible only by way of the nasal cavity. Most of the cranial bones are superficial. Seven of the fourteen **facial** bones are palpable, as are

the numerous bony landmarks of the **mandible** (jaw) (5.5, 5.6).

The articulations of the cranial bones are different from the articulations of the appendages. The joints of the arms and legs have a synovial (mobile) joint structure. The cranial bones, in contrast, have fibrous joints that are woven together to form tight-fitting sutures.



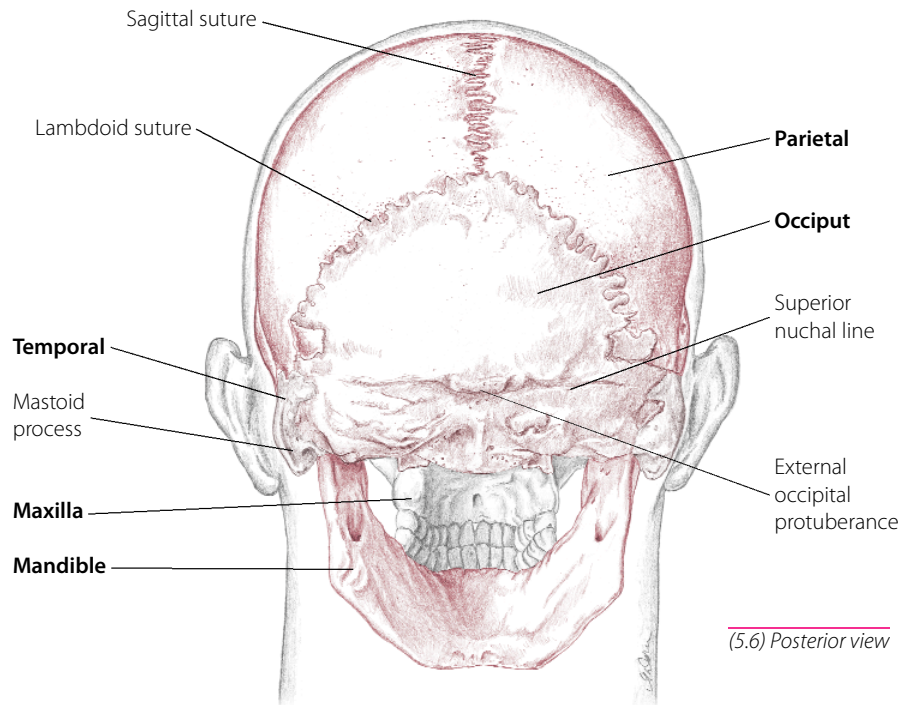
(5.5) Anterior view

Cranial bones (8):

- Ethmoid
- Frontal
- Occiput
- Parietal (2)
- Sphenoid
- Temporal (2)

Facial bones (14):

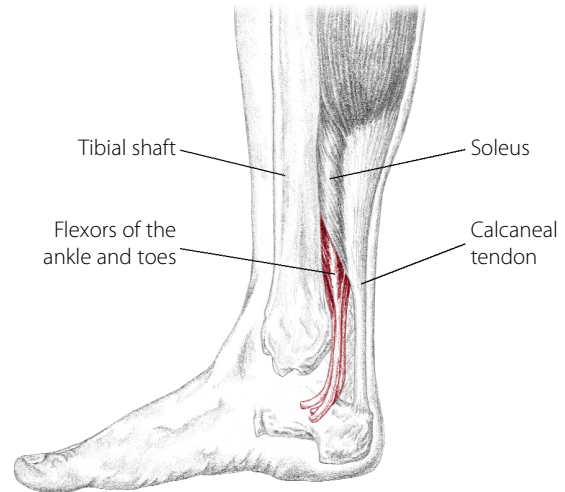
- Inferior nasal concha (2)
- Lacrimal (2)
- Mandible
- Maxilla (2)
- Nasal (2)
- Palatine (2)
- Vomer
- Zygomatic (2)



(5.6) Posterior view

Tibialis Posterior

- A** Invert the foot
Plantar flex the ankle (talocrural joint)
- O** Proximal posterior shaft of tibia,
proximal fibula and interosseous membrane
- I** Navicular, cuneiforms, cuboid and bases
of second through fourth metatarsals
- N** Tibial



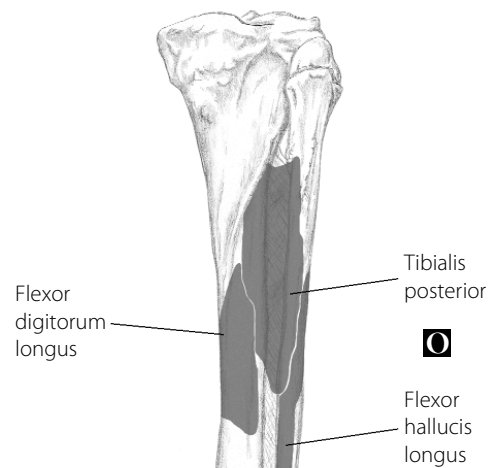
(7.89) Medial view of right leg and foot

Flexor Digitorum Longus

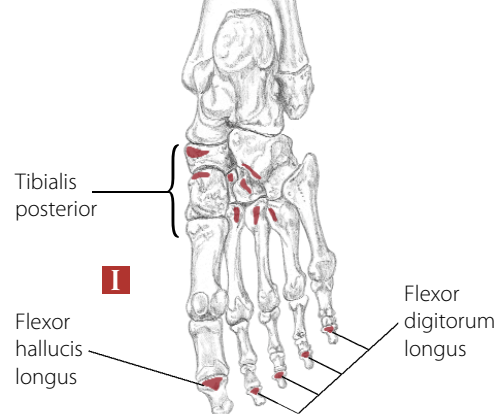
- A** Flex the second through fifth toes
(metatarsophalangeal and interphalangeal joints)
Weak plantar flexion of ankle (talocrural joint)
Invert the foot
- O** Middle posterior surface of tibia
- I** Distal phalanges of second through fifth toes
- N** Tibial

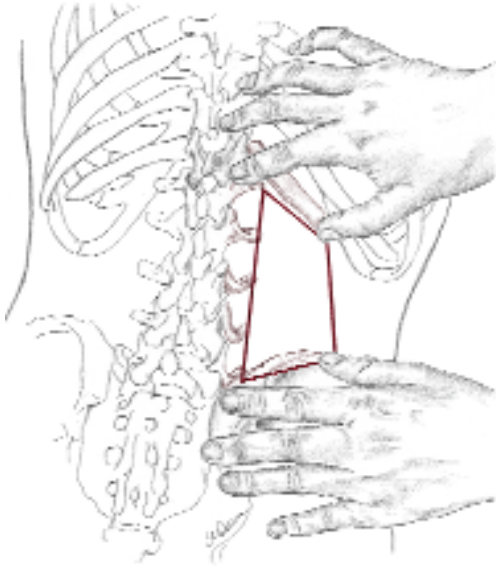
Flexor Hallucis Longus

- A** Flex the first toe
(metatarsophalangeal and interphalangeal joints)
Weak plantar flexion of ankle (talocrural joint)
Invert the foot
- O** Middle half of posterior fibula
- I** Distal phalange of first toe
- N** Tibial

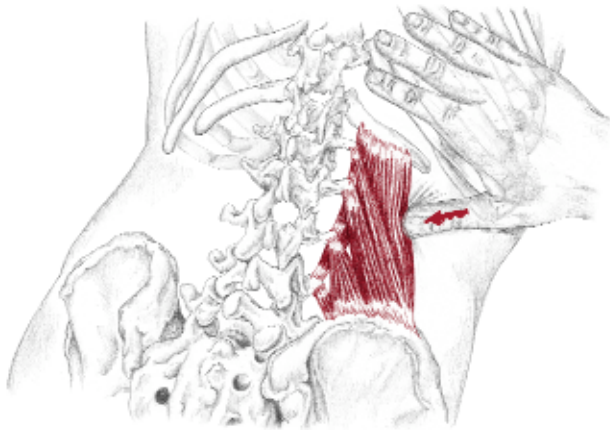


(7.90) Posterior view with foot plantarflexed showing origins and insertions






(4.83) Partner prone, laying your fingers along the corners of the quadratus lumborum




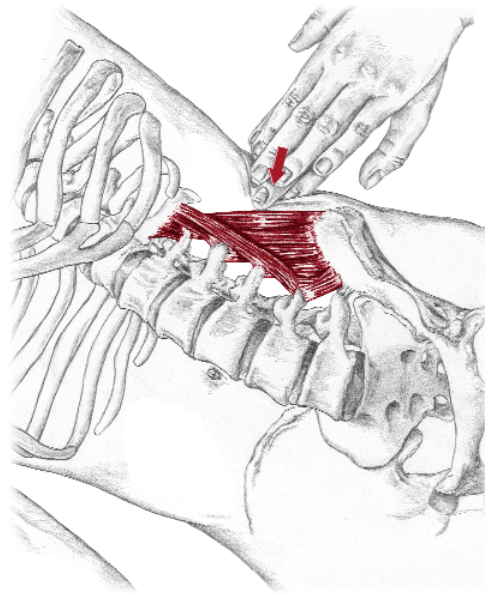
(4.84) Partner prone, accessing the quadratus lumborum

Quadratus lumborum

- 1) Prone. Isolate the borders of the quadratus by locating the twelfth rib, posterior iliac crest and transverse processes of the lumbar vertebrae.
- 2) Lay your fingers along these landmarks to outline the edges of the quadratus (4.83).
- 3) Lay your thumb pad along the lateral edge of this square. Using slow, firm pressure, sink your thumb medially toward the lumbar vertebrae and into the edge of the quadratus (4.84).
- 4) Ask your partner to laterally tilt (elevate) his hip toward his shoulder in order to feel its solid contraction. The hip should remain on the table.

 As you palpate, be sure you are accessing the deeper tissue in the low back and not just the superficial external oblique fibers. When your partner hikes his hip, can you feel the lateral edge of the quadratus contract? Can you distinguish between the edge of the erector spinae and the quadratus?

 Follow the above instructions, only this time with your partner sidelying (4.85). Placing a bolster between his knees will balance the pelvis and soften the tissue around the quadratus. This position will also allow the abdominal contents to shift away from where you are accessing.



(4.85) Anterior/lateral view, partner sidelying