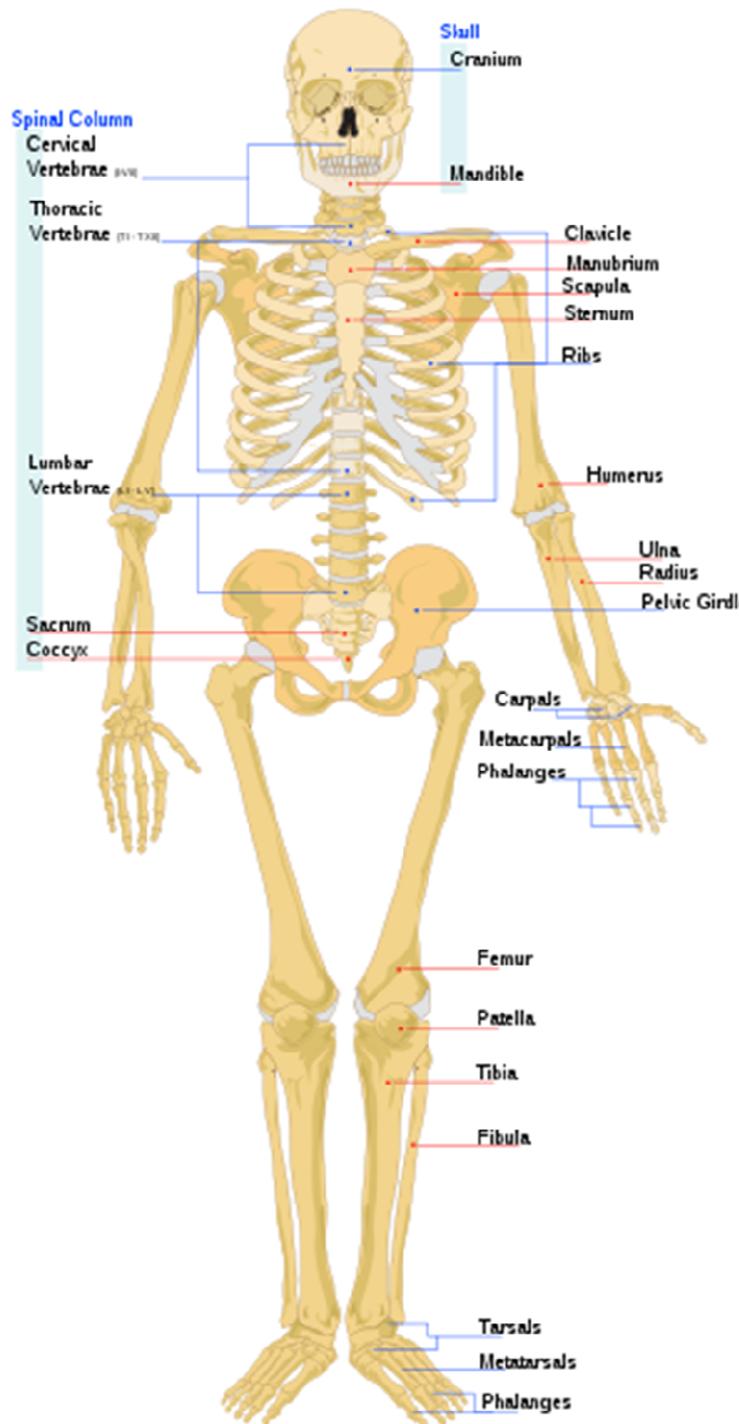


Holy Yoga Instructor Training Anatomy



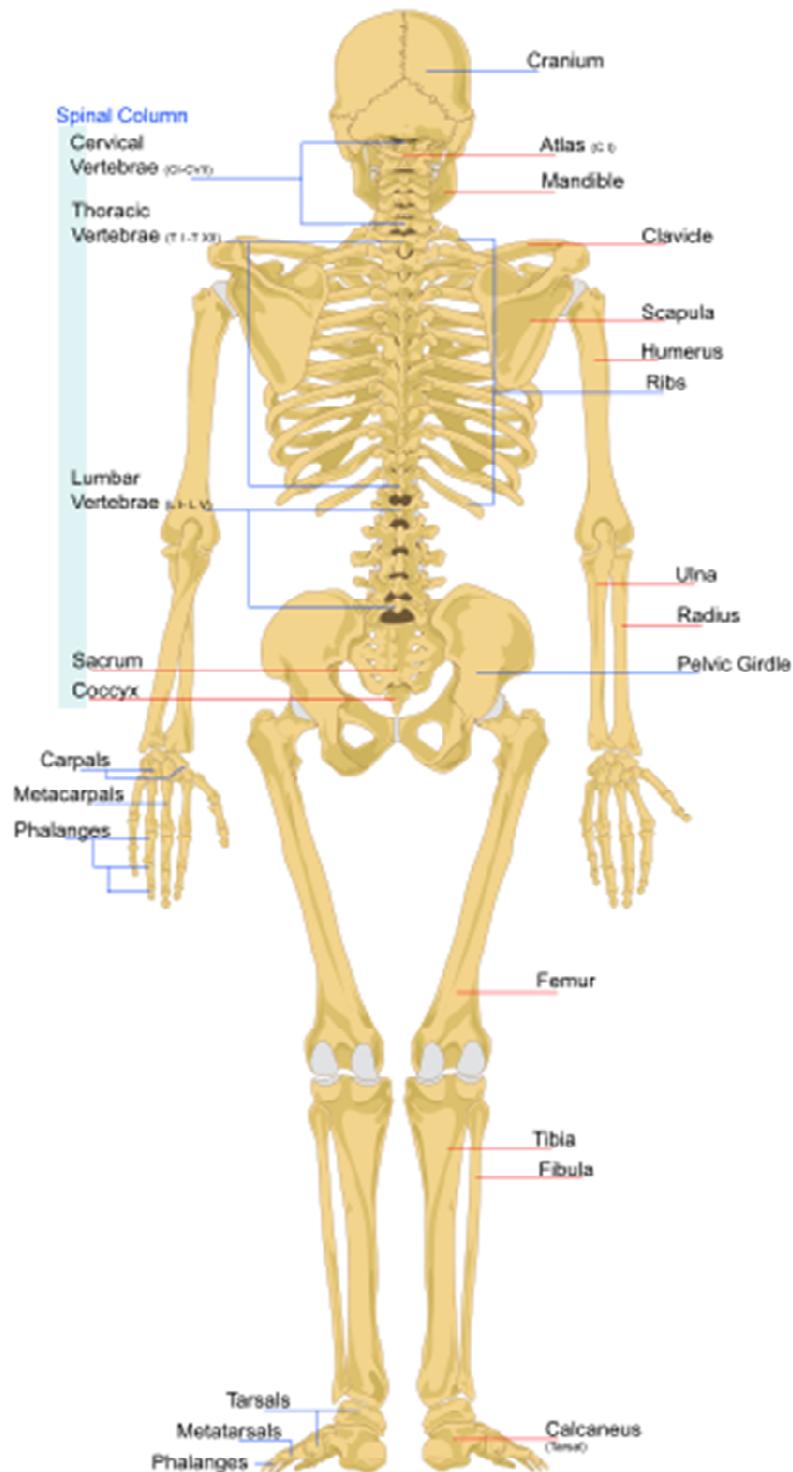
Skeleton-Bone, Living Tissue



Holy Yoga Instructor Training Anatomy

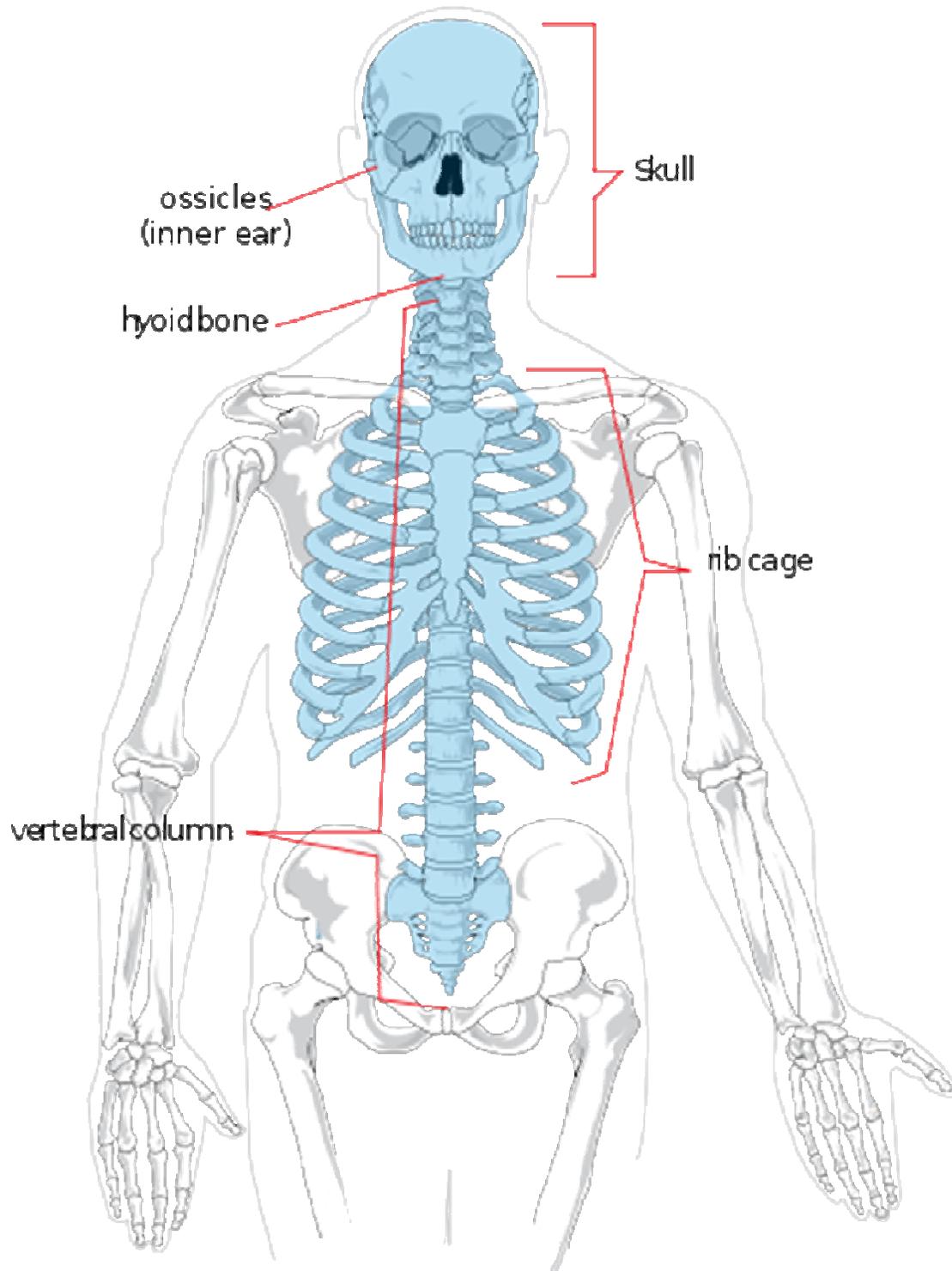


Skeleton



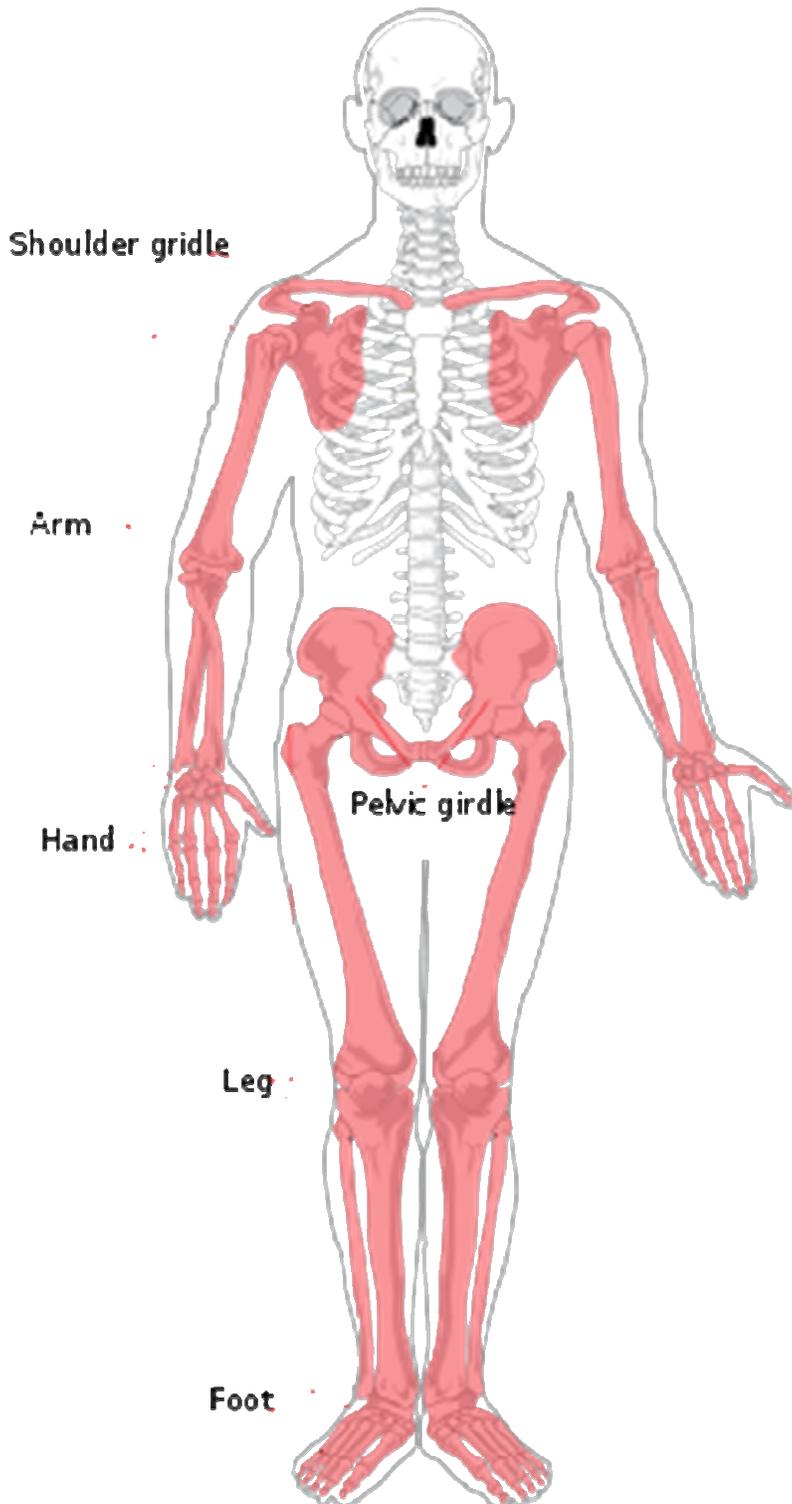


Axial Skeleton





Appendicular Skeleton



Holy Yoga Instructor Training Anatomy



Introduction to the parts and tissues of the body

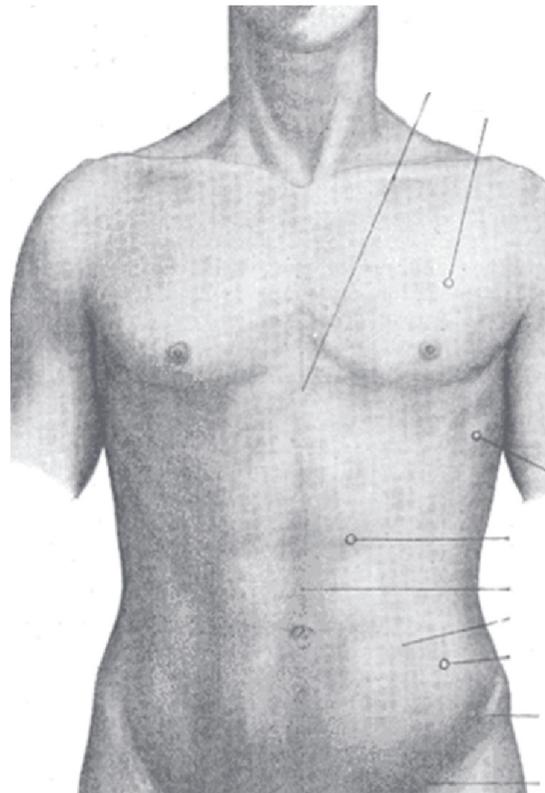
- **Head**

The head is the uppermost part of the body. Made up of the facial skeleton and the bony cavity called the cranium.

- **Trunk**

Four regions of the torso.

- The cervical (neck) region contains the many muscles that move the neck and head.
- The thorax (rib cage area) with the intercostals and muscle of the upper back.
- The abdomen (belly) and pelvis donating the powerful hip flexors, abdominals and lower back muscles.



Tissue Types:

Connective:

Blood, Bone,
Tendons and
Ligaments

Different recipe,
Same material.

Thixotropic nature
Of Fascia

Muscle Tissue
Contractile in
Nature.

Types of contractions:

Concentric

Eccentric

Isometric

Action covered

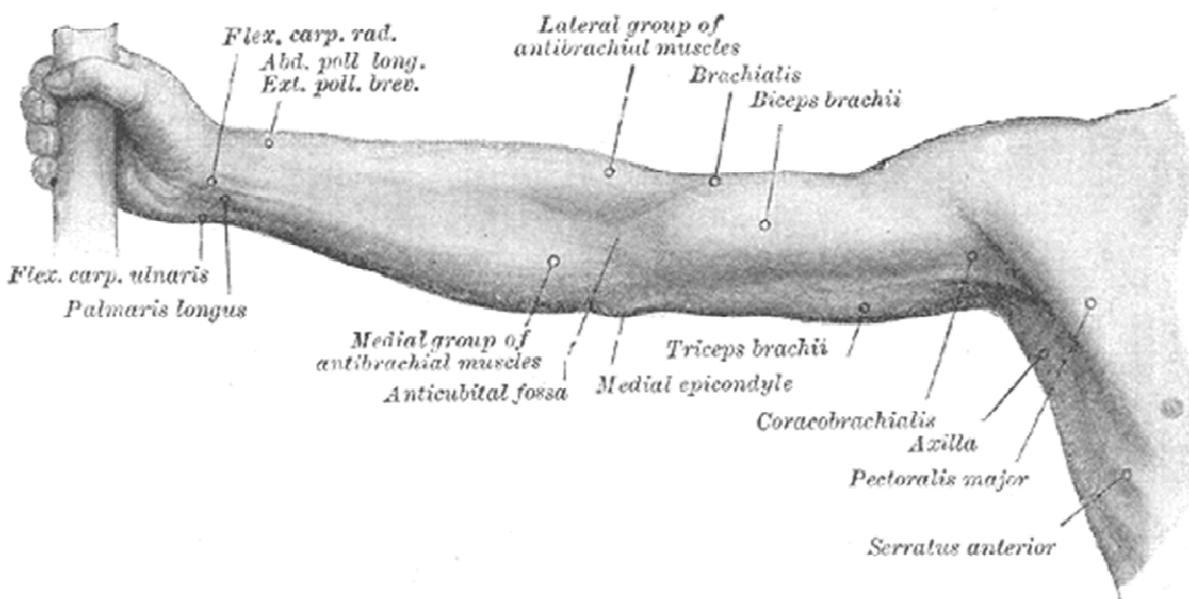
Holy Yoga Instructor Training Anatomy



Upper Limb

What most consider the arm. It is broken down into four regions.

- The segment closest to the torso is the pectoral girdle. It is made up of 2 bones, the clavicle (collar bone) and the scapula (shoulder blade).
- Moving away from the torso is the next segment, the brachium. The skeletal component of this region is the humerus and houses the strong muscles that move the elbow.
- Further away we come to the antibrachium (forearm) and hand. The antibrachium contains 2 bones, the radius and ulna. The muscles in the regions are responsible for the movement of the wrist and fingers.



Core Concepts of a yoga practice

In understanding upper body vs. lower body and how they work together, it is important to understand how the mind and body are connected. The neuromuscular connection is key in teaching yoga.

Prime Movers, Agonists & Synergists-

Antagonists-

Reciprocal Inhibition-

Proprioceptive neuromuscular facilitation-

Static Stretching-Active and Passive-

Joint Congruency-Keeping a joint stable

Holy Yoga Instructor Training Anatomy

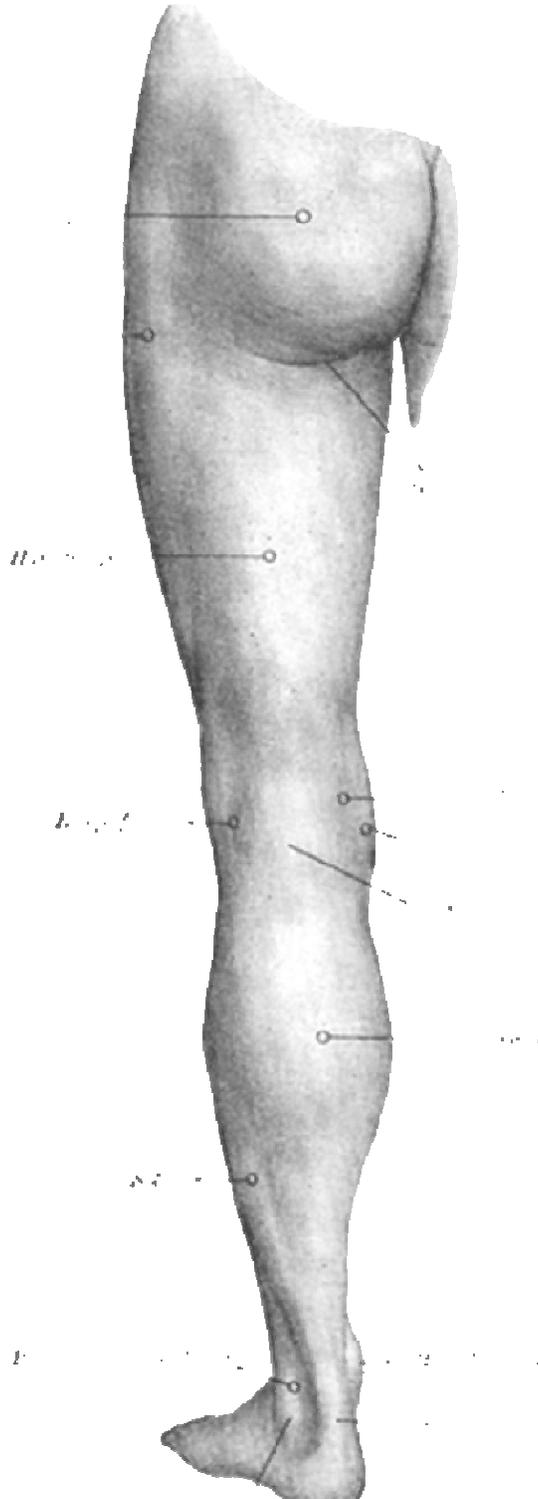


Lower Limb

What most would describe as the leg. This region contains some of the largest muscles of the body

- The segment closest to the torso is called the gluteal region. The muscles of the buttocks are the largest group here.
- The thigh houses the femur as its skeletal element and 3 major muscle groups, the quadriceps, the hamstrings and the adductors. The muscles play a major role in hip and knee movement.
- The region between the knee and ankle is called the crus or leg. It is made of 2 bones, the tibia and fibula and the powerful muscles of ankle movement, such as gastrocnemius, soleus and tibialis anterior.

Recruitment of muscles-Bandhas
Using larger muscle groups to draw awareness and contraction to Bandhas.



Example of lower limb recruitment to enhance Mula Bandha-
Pressing the knees together to enhance and recruit the pelvic floor muscles to fire. Learning to isolate these muscle groups is a key skill in yoga.
Where there is connection, there is pressure. Pressure helps to engage and recruit muscles to strengthen your practice.

Holy Yoga Instructor Training Anatomy



Muscles of the head

The muscles of the head and face play 4 major roles.

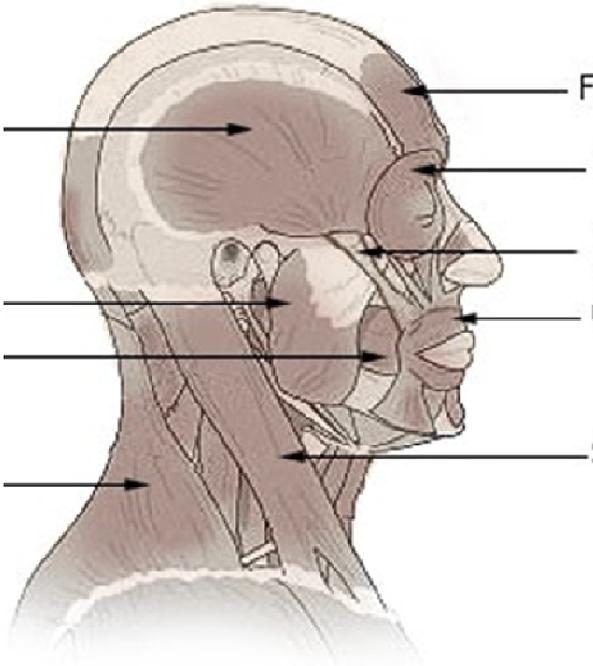
- Chewing and swallowing
- Breathing
- Speaking
- Facial expression

Core Concepts continued:

Muscles have natural protective qualities:

Muscle Spindle Stretch Receptors-located in the belly. Tells the muscle to contract to prevent over-stretching; spinal cord reflex arc.

Golgi Tendon Organ-Located at ends of muscles, where muscle and tendon come together. Forms the basis for PNF



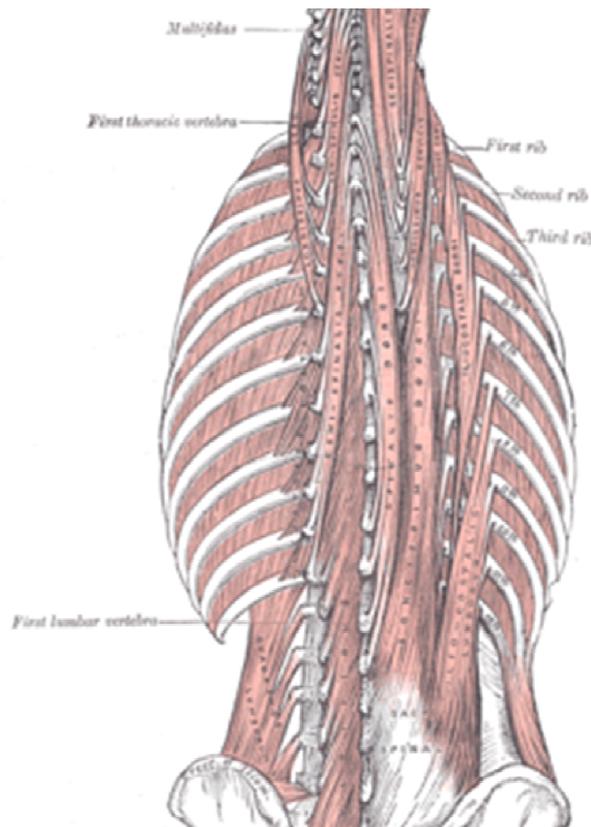
Muscles of the back

The muscles of the back are more properly called the extensor muscles. These sit in 4 layers sitting just posterior the vertebral column. We organize them from most superficial to deepest (closest to the spine). The most superficial muscles sit just deep to the muscles that move the scapula.

While the main action of all the extensor muscles is to extend the spine, they also play a major role in posture. Improper posture leads to muscle tension and pain and chronic poor posture can lead to bone deformities.

Chronic Holding Patterns:

- Loss of Cervical Lordotic Curve
- Hyper Kyphotic Curve-Kyphosis
- Lordosis
- Injuries-Disk and Nerve Injuries



Holy Yoga Instructor Training Anatomy

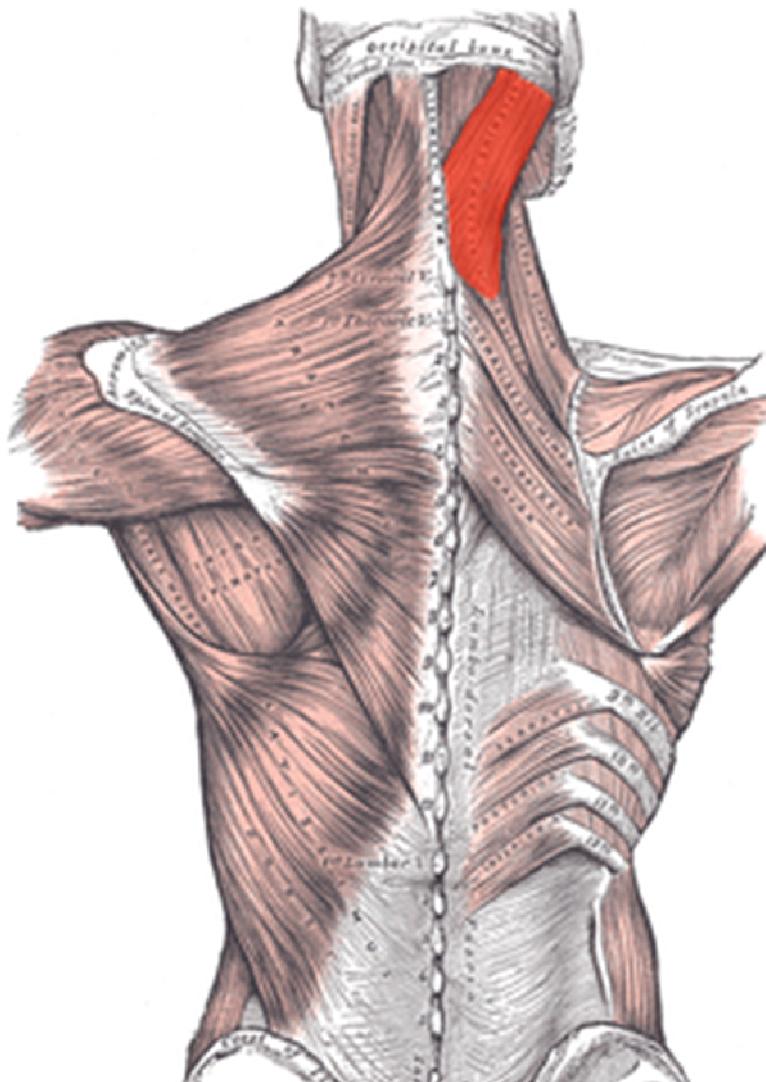


Muscles of the back

Spinotransverse group:

The most superficial layer. Two muscles mostly associated with the back of the neck.

- Splenius Capitis and Cervicis
- These 2 straps of muscle originate in the upper thoracic region of the spine and insert into the base of the skull and upper neck vertebrae.
- Splenius capitis has a strong association with headaches and neck pain. Common causes are holding the head in one position for prolonged periods of time.
 - Origin: Spinous processes of 7th cervical and upper 3 thoracic vertebrae.
 - Insertion: Mastoid process of temporal and occiput bones of the skull.
 - Function: Extends, rotates and laterally flexes the head.



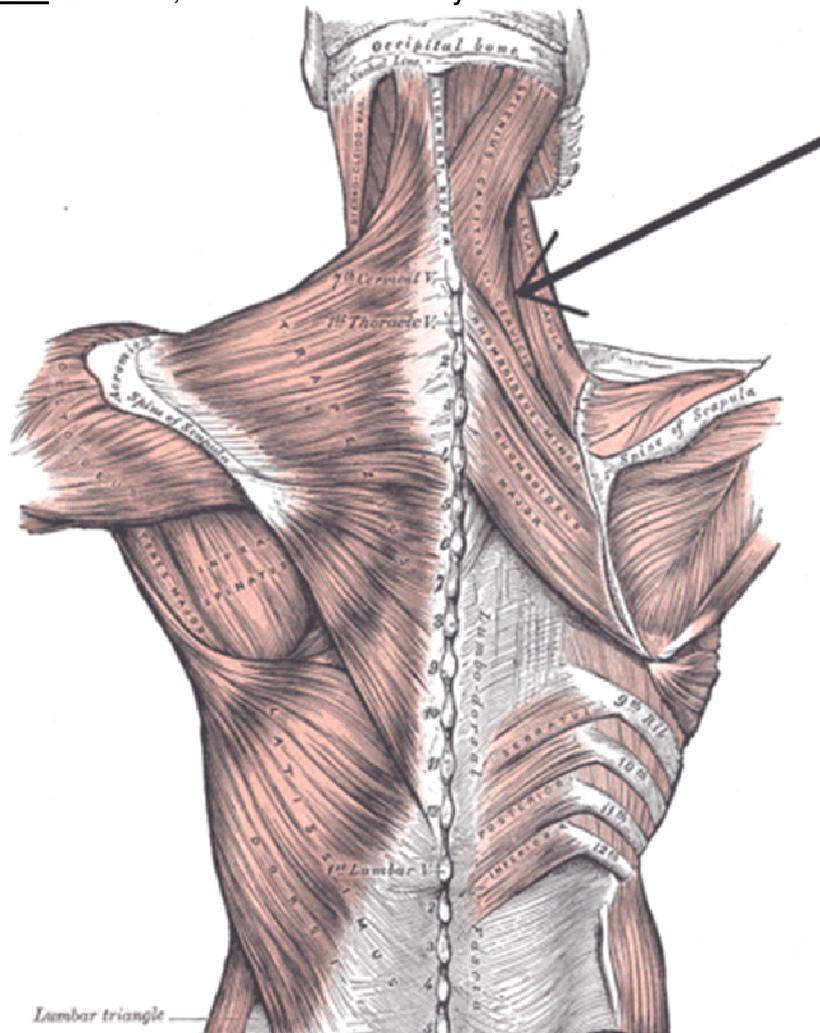
Holy Yoga Instructor Training Anatomy



Muscles of the back

Spinotransverse group:

- Splenius Cervicis has a strong association with neck pain. Common causes are holding the head in one position for prolonged periods of time.
- Origin: Spinous processes of thoracic vertebrae 3 through 7 thoracic vertebrae.
- Insertion: Transverse processes of cervical bones 1 through 3.
- Function: Extends, rotates and laterally flexes the neck.



Holy Yoga Instructor Training Anatomy

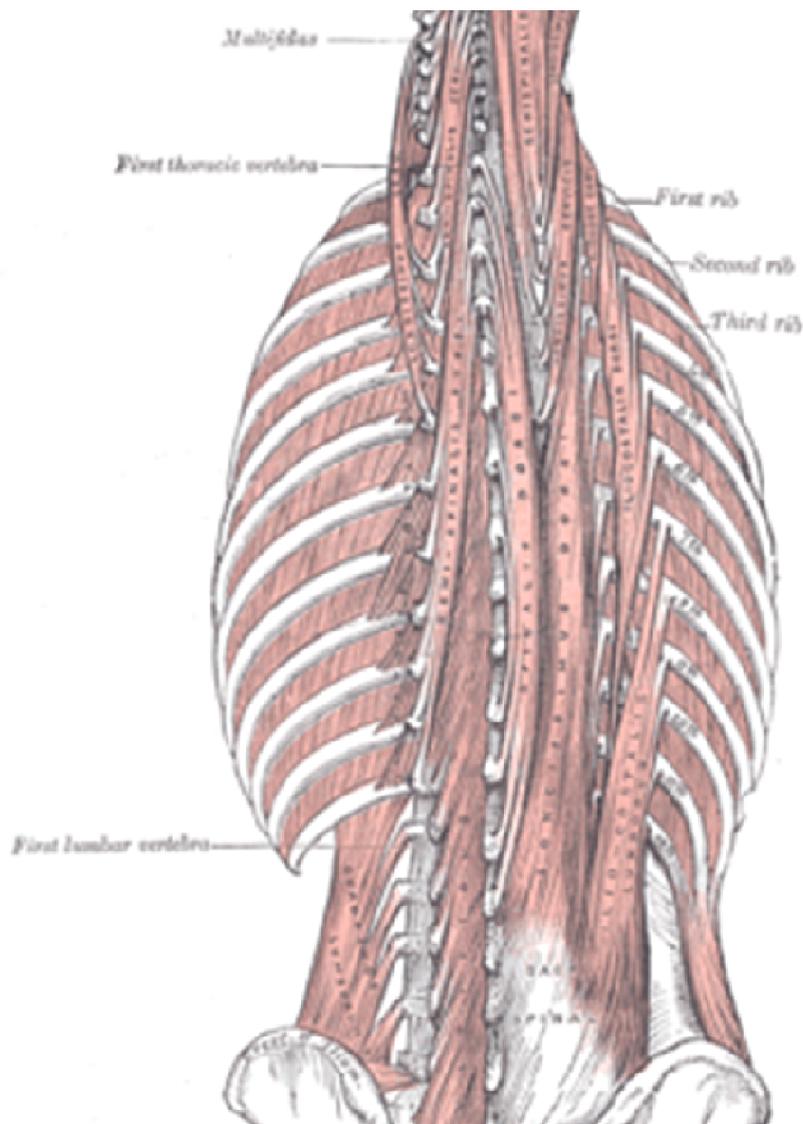


Muscles of the back

Erector Spinae

This layer of 3 muscles that sit side by side each other; starts in the lumbo-sacral region and moves upwards toward the ribs and head.

- Iliocostalis
 - This muscle is the most lateral of the erector spinae group. It gets its name from its origin off of the ilium and insertion into the costals (ribs). Issues with this muscle tends to reflect as poor posture.
 - Origin: Iliac crest and sacrum
 - Insertion: Ribs
 - Function: Extends, and laterally flexes the spine. Assist with breathing.



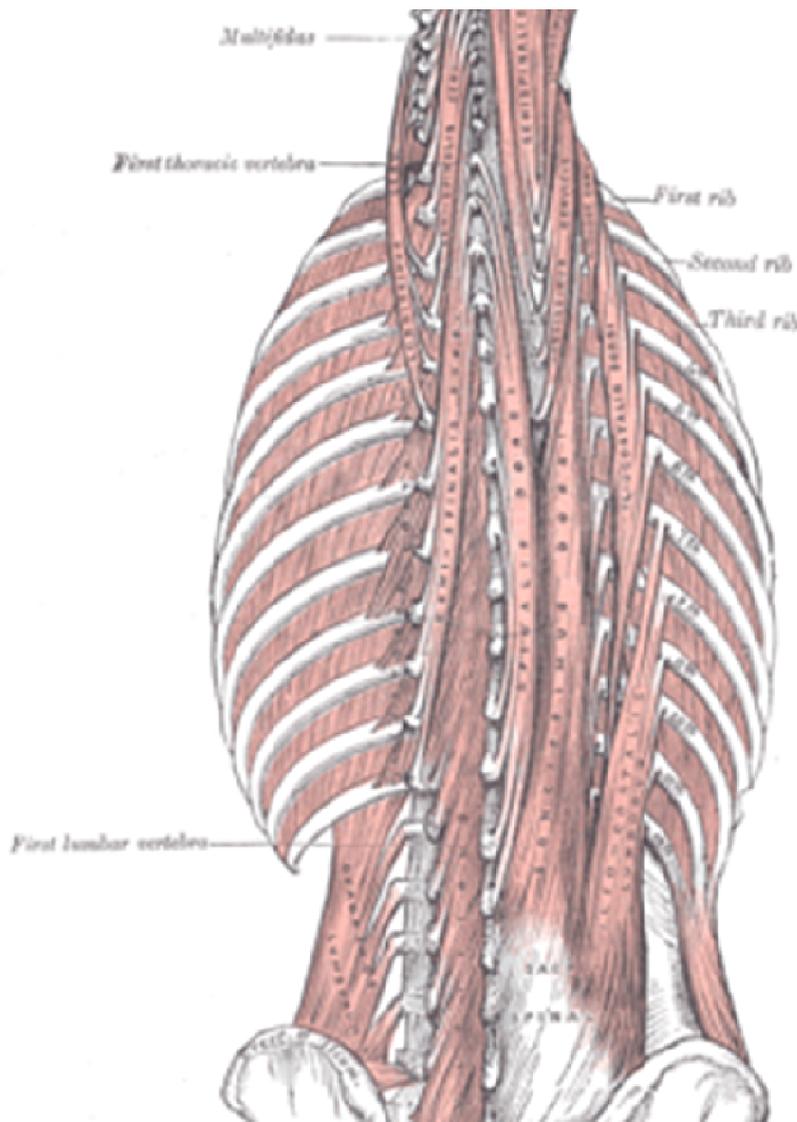
Holy Yoga Instructor Training Anatomy



Muscles of the back

Erector Spinae:

- Longissimus
 - This muscle lies more medial than the Iliocostalis muscle. It is broken into segments depending on the area the muscle resides in. Longissimus lumborum, Longissimus thoracis and Longissimus cervicis. This muscle originates slightly higher than Iliocostalis and extends all the way to the cranium.
 - Origin: Transverse process of vertebrae.
 - Insertion: Transverse process of vertebrae.
 - Function: Extends, rotates and laterally flexes the spine.



Holy Yoga Instructor Training Anatomy

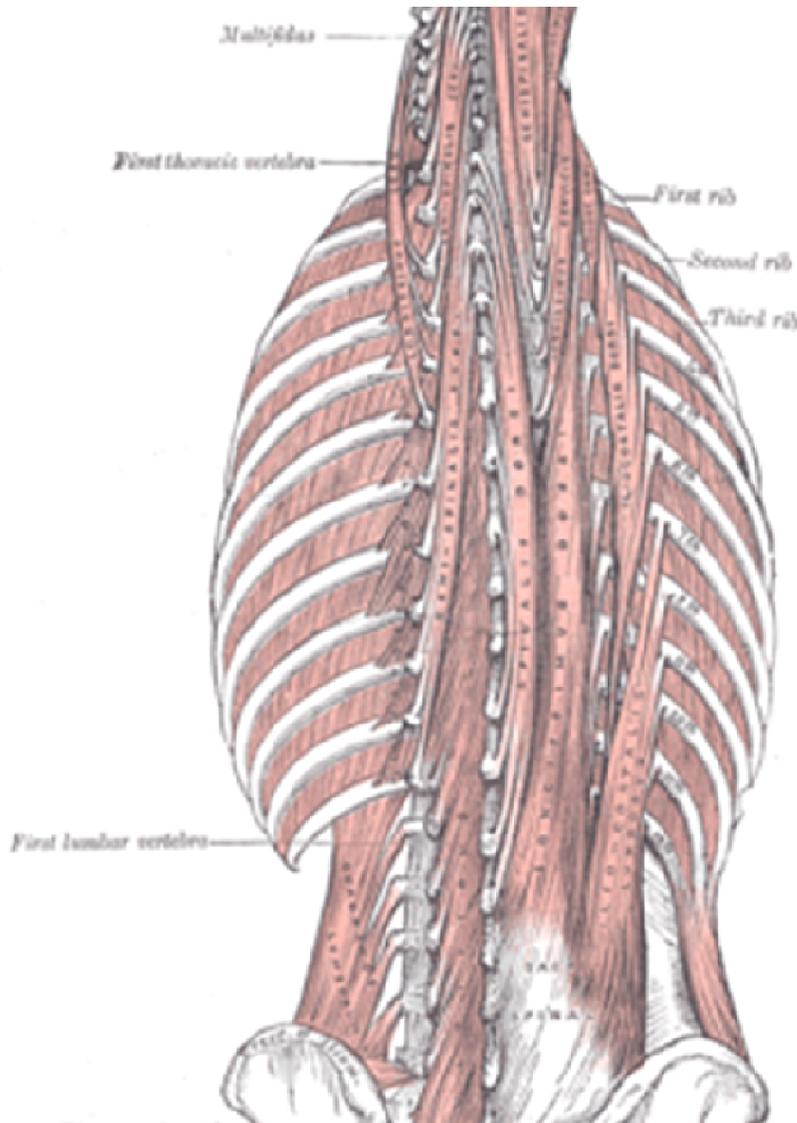


Muscles of the back

Erector Spinae:

- Spinalis
 - Spinalis is the most medial of the erector muscles and gets its name from its attachment to the spinous processes of the vertebrae.
 - Origin: Spinous process of vertebrae.
 - Insertion: Spinous process of vertebrae.
 - Function: Extends, and laterally flexes the spine.

Chronic Holding Pattern: Hyperkyphosis



Holy Yoga Instructor Training Anatomy



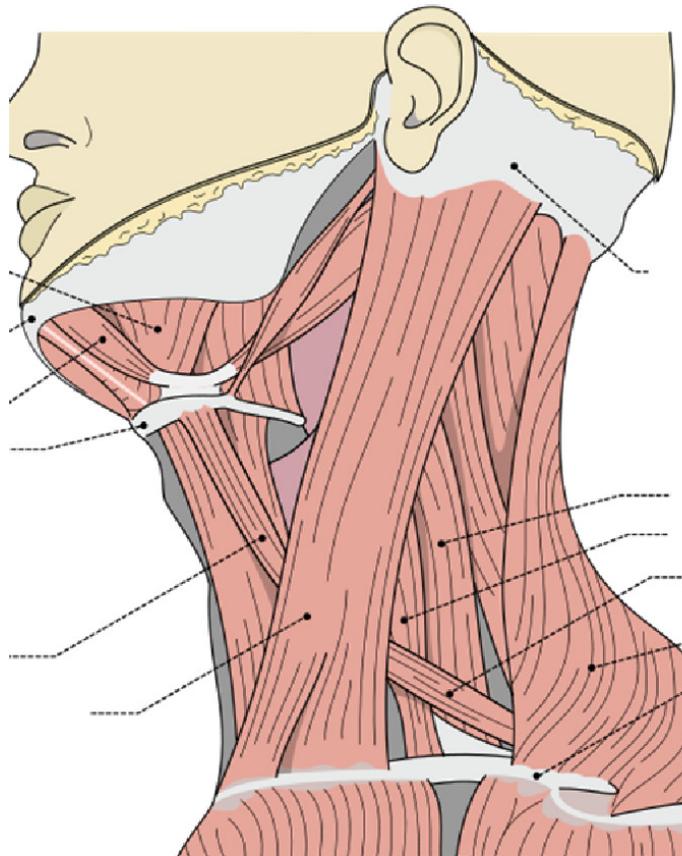
Body Wall Neck

We will look at the body wall of the neck in this segment. Body wall muscles create the outer boundary in the trunk that separates it from the outside environment as well as providing movement of the torso.

Lateral Wall Neck

Scalenes

3 Muscles that mainly function to laterally flex the neck as well as assist with breathing. The large bundle of nerves that innervate the upper limb pass through the two most anterior scalenes. Tightness in this group can lead to conditions that would mimic Carpal Tunnel Syndrome.



**Chronic Holding Pattern-Slouching
Injury-Thoracic Outlet Syndrome**

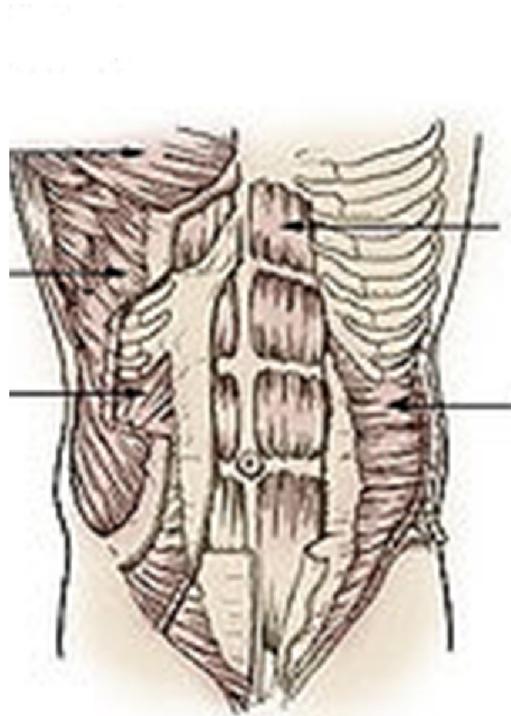
Holy Yoga Instructor Training Anatomy



Body Wall Abdomen

These muscles play a huge role in movement of the spine as well as aiding in gut function.

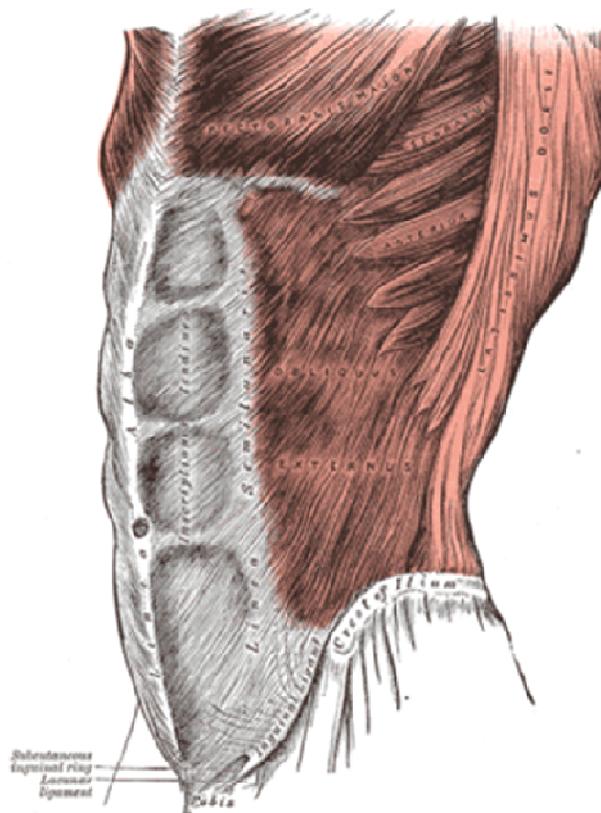
Chronic Holding Pattern:
Anterior/Posterior Tilt in the pelvis



Lateral Wall

External and Internal Obliques

These 2 sets of muscles on the lateral aspect of the abdomen form a criss-cross mesh. This pattern allows the muscles to flex the trunk while also providing the ability to rotate in both directions. Another important function of this group is compression of the abdomen, which aids in breathing and gut function.



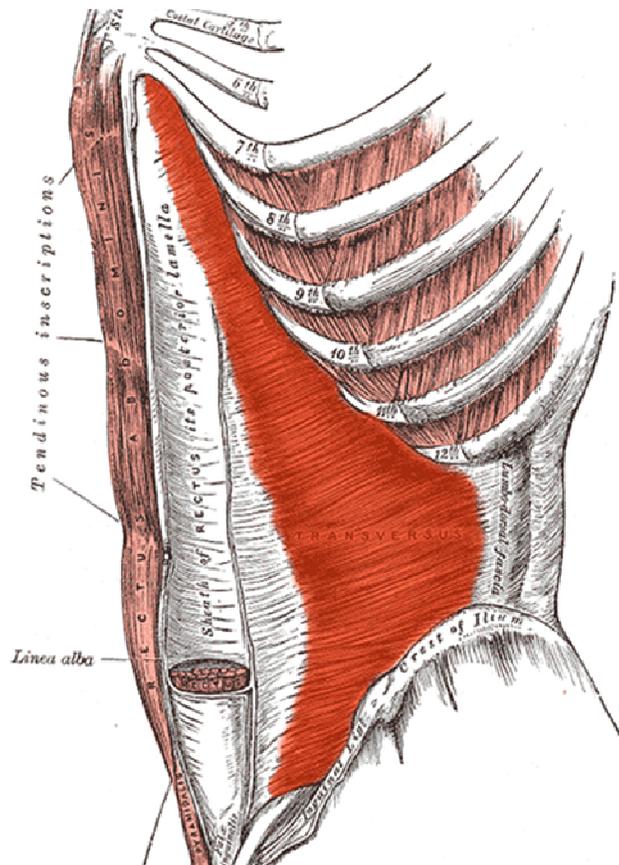
Holy Yoga Instructor Training Anatomy



Lateral Wall

Transverse Abdominis

This muscle lies deep to the obliques and does not create any significant movement of the trunk. Its primary function is compression of the abdomen which aids in breathing and gut function.

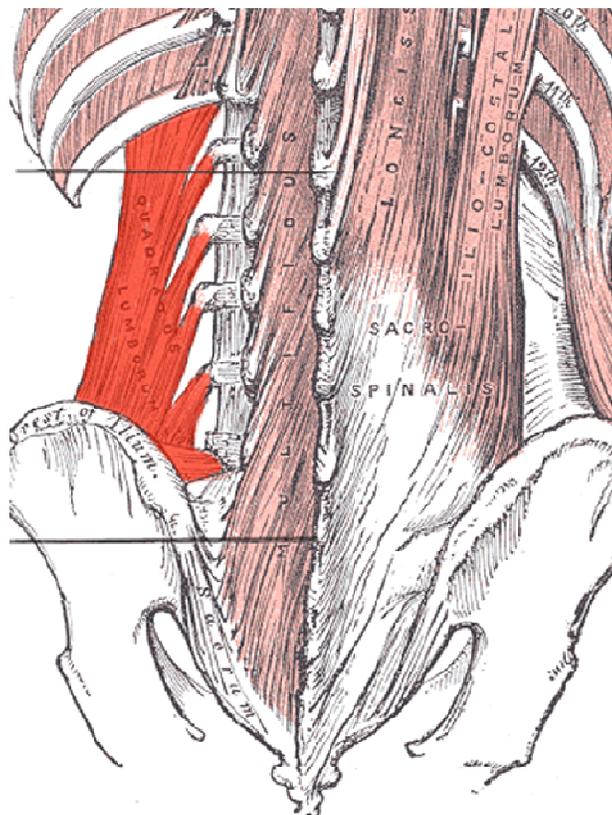


Quadratus Lumborum

While part of the lateral abdominal wall, this muscle shares little with its 3 muscles of the group. Sitting just behind the kidneys between the 12th rib and the iliac crest, this muscle creates a significant amount of movement of the abdominal region.

Actions include extension and lateral flexion of the lumbar spine and since it has an attachment on the 12th rib, it plays an important roll in breathing.

Chronic Holding Pattern:
Anterior/Posterior Tilt in the pelvis
Big culprit in low back pain and dysfunction.



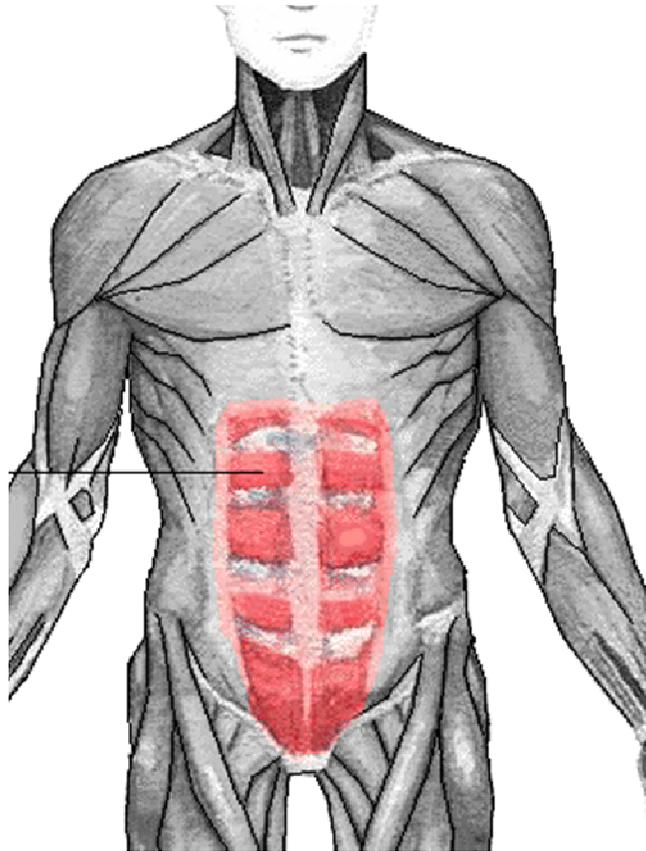
Holy Yoga Instructor Training Anatomy



Anterior Body Wall

Rectus Abdominis

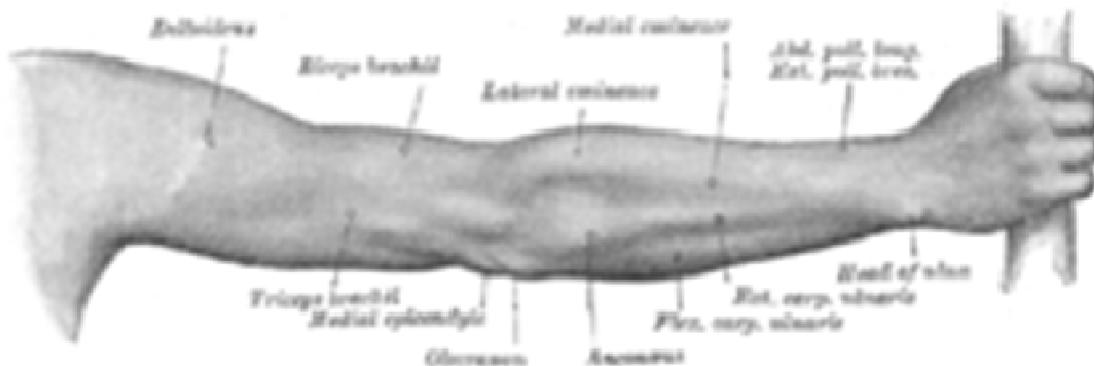
A simple strap muscle connecting the ribs to the pubic bone. The muscle with its central tendon called the linea alba also serves as an attachment site for the muscles of the lateral body wall. Flexion of the lumbar spine and compression of the abdomen are its functions.



Upper Limb

The upper limb starts where the Clavicle connects to the sternum. It is broken down into 5 segments including the smaller muscles of the hand.

The first region is called the scapular sling, followed by the Rotator Cuff, Brachial muscles, Antebrachial (forearm) and muscles of the hand. The ultimate goal of all of these muscles is to put the fingers in the proper place to manipulate the environment around you.



Holy Yoga Instructor Training Anatomy



Scapular Sling

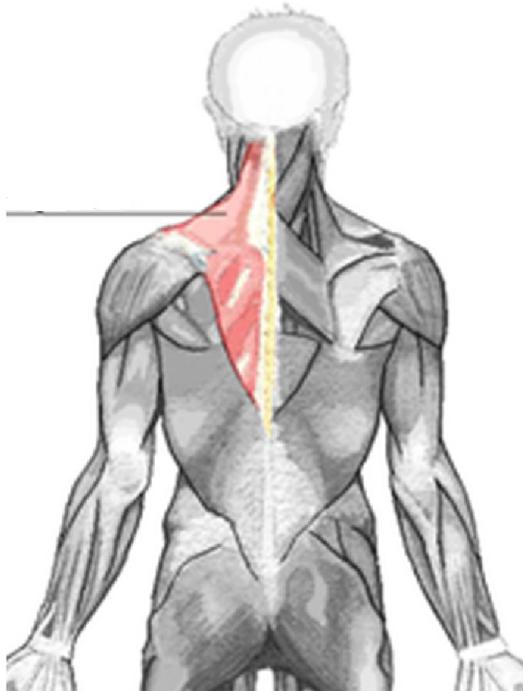
This group includes seven muscles that surround the scapula and clavicle. The purpose beyond movement of these two bones is to support the upper limb and provide stability to another wise, overly mobile set of joints.

Chronic Holding Pattern:

Poor posture

Slumped shoulders

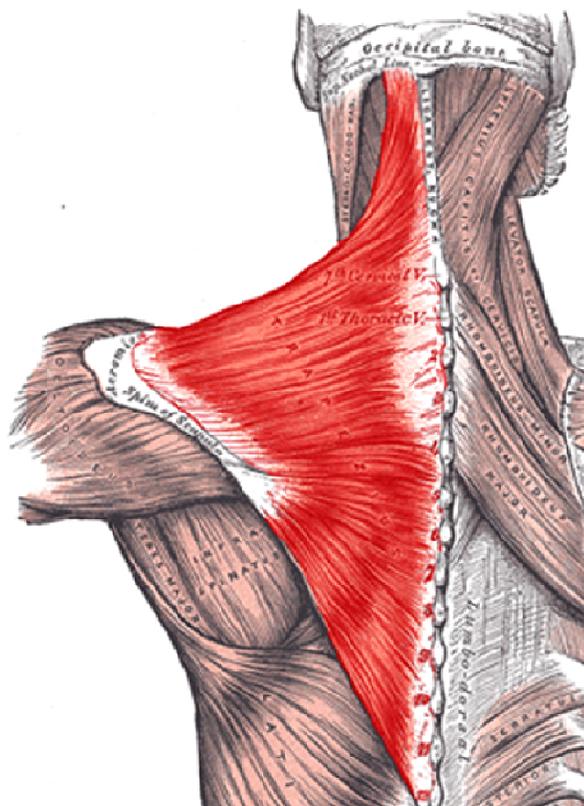
Emotions seriously affect these



Trapezius

This is the most superficial muscle of the back and makes up what most people call the “shoulder” muscle. Part of it forms the large mass of muscle just lateral to the neck. Connecting the spine and head to the scapula and clavicle, it plays an important role in posture and shoulder stability.

- Origin: Occipital ridge of the skull, Ligamentum nuchae of the cervicals, Spinous process of all thoracic vertebrae.
- Insertion: Lateral most 1/3 of the clavicle, the acromion process, and spine of the scapula.
- Function: Extends the head, elevates, upward rotation and retraction of the scapula.



Holy Yoga Instructor Training Anatomy

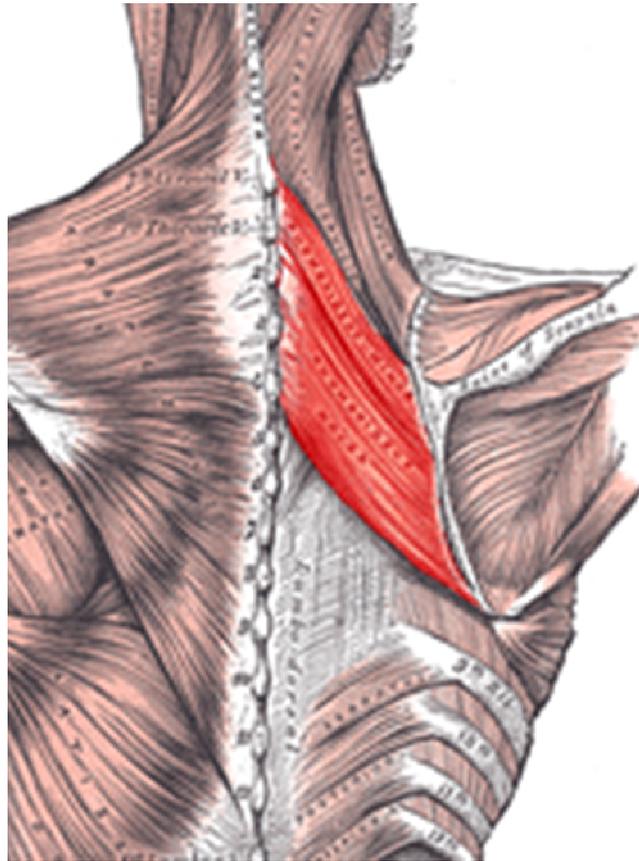


Rhomboids Major and Minor

These two muscles sit deep to the trapezius and, like it, play a major role in posture, stabilizing the scapula and controlling its movements. Working against the stronger pectoral muscles on the anterior side of the body, it commonly develops chronic pain.

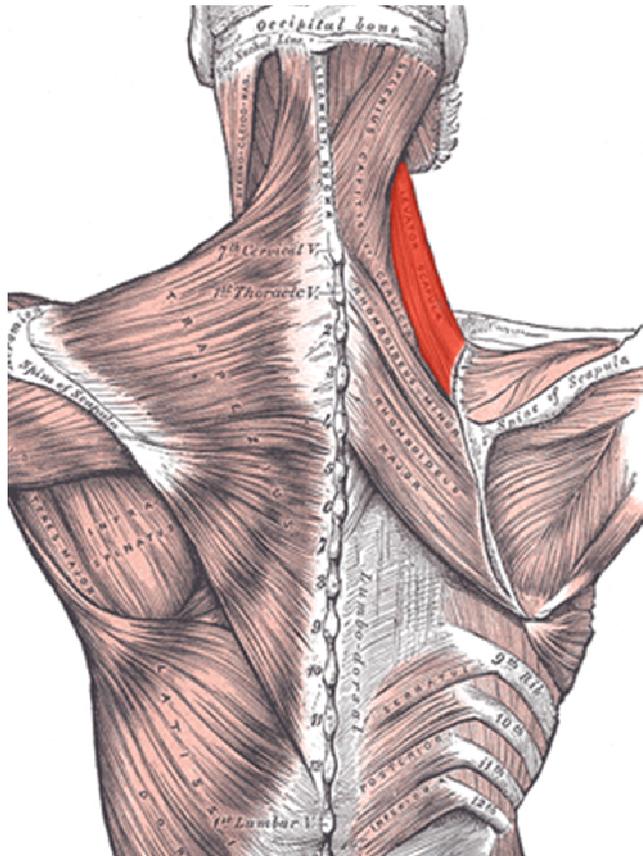
- Origin: Spinous processes of the upper 5 thoracic vertebrae.
- Insertion: Medial margin of the scapula.
- Function: Retraction and downward rotation of the scapula.

“Shoulder draw” is initiated here.



Levator Scapula

This muscle, as its name implies, elevates the scapula. Originating in the neck region, it travels inferior to the upper edge of the scapula. If the scapula is fixed, it will laterally flex the neck.



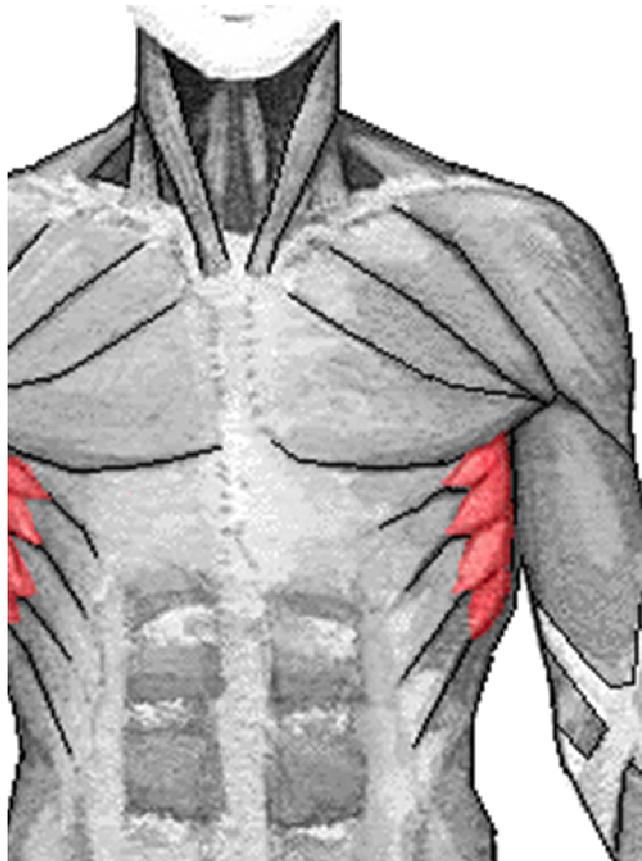
Holy Yoga Instructor Training Anatomy



Serratus Anterior

This muscle originates on the lateral wall of the first 9 ribs, travels posterior and medial where it attaches to the medial margin of the scapula. In doing so, it passes deep to the scapula.

Function: Protraction and upward rotation of the scapula and aids in breathing.

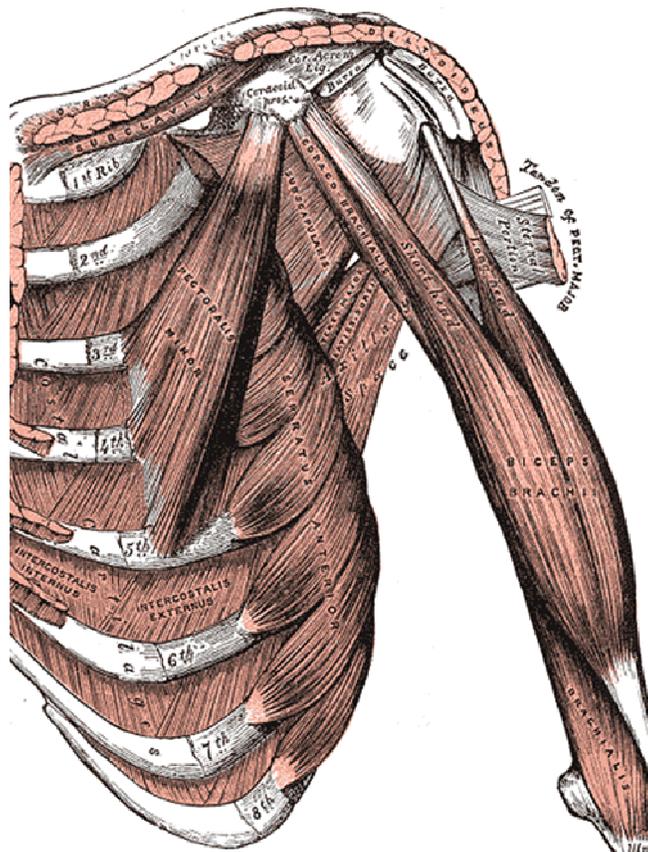


Pectoralis Minor

While much smaller than the pectoralis major, pectoralis minor plays a much more direct role in movement of the scapula.

Originating off of the anterior of ribs 3, 4 and 5 and inserting into the coracoid process of the scapula.

Function: Protracts and downwardly rotates the scapula. It also aids in forced breathing due to its attachment on the ribs. This muscle can play a role in breathing exercises, too.

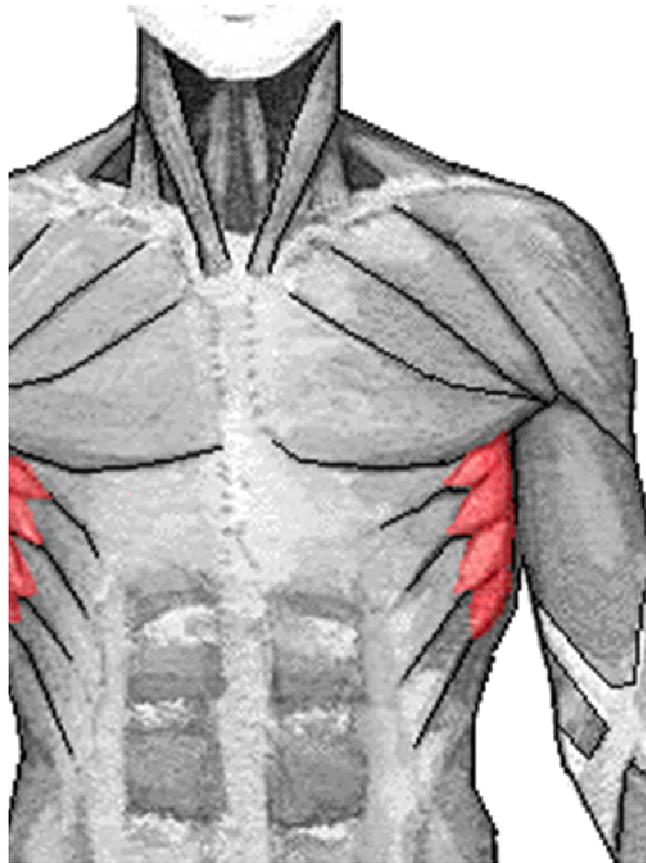


Holy Yoga Instructor Training Anatomy



Serratus Anterior Anterior View

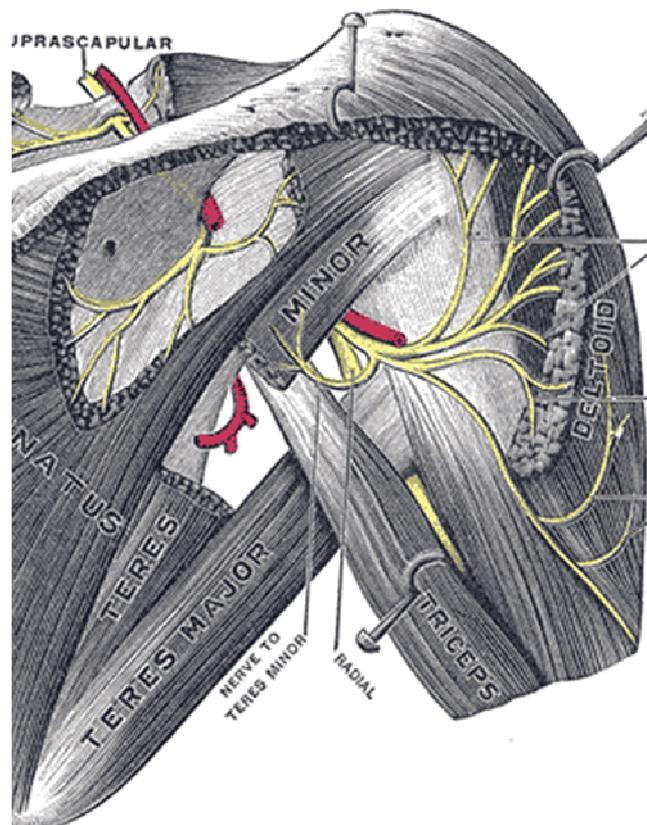
Serratus helps to fire and pull the scapula into protraction. It helps in poses like cat.



Rotator Cuff and Deltoid

This group of 5 muscles plays the role of shoulder stabilizers and create all of the amazing movements the shoulder joint possesses.

Chronic Holding Pattern:
Poor posture over time, along with no shoulder draw in daily life, puts more pressure on this small group than the group can handle. The result: torn muscles and being prone to injury.



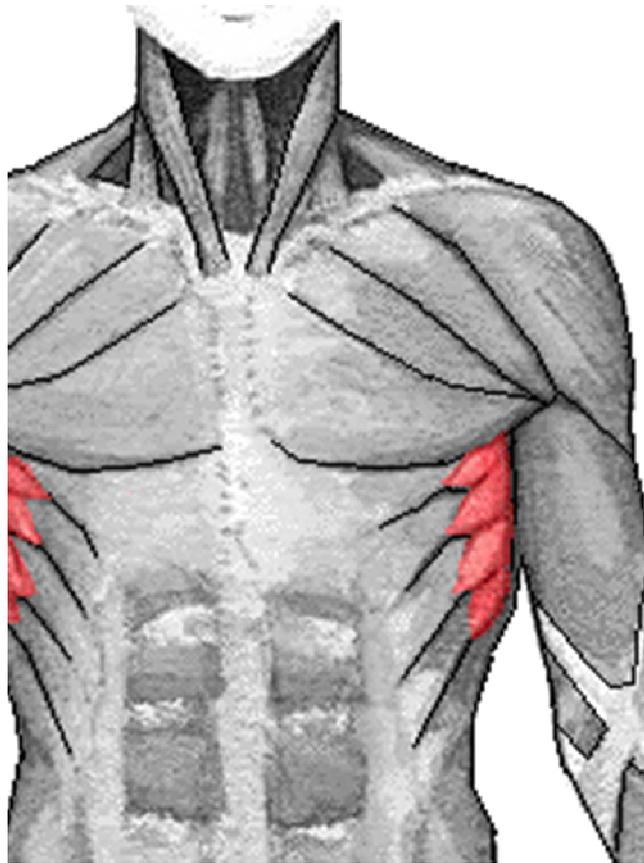
Holy Yoga Instructor Training Anatomy



Supraspinatus

Supraspinatus gets its name from its origin in the supraspinous fossa of the scapula. It inserts like many of the rotator cuff into the greater tubercle of the humerus.

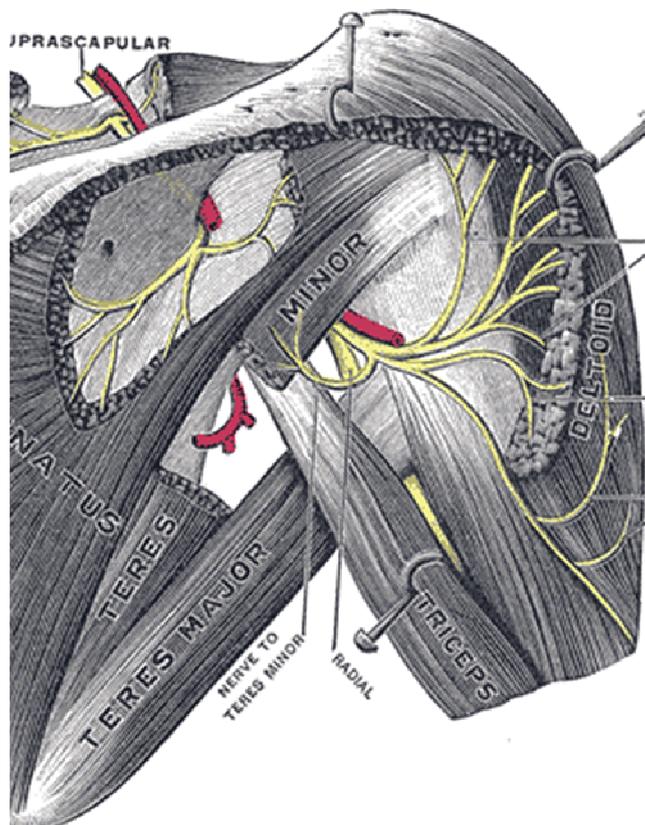
Function: Initiates abduction of the shoulder.



Infraspinatus

Like supraspinatus, this muscle gets its name from its location, the infraspinous fossa of the scapula and also inserts into the greater tubercle of the humerus.

Function: Lateral rotation of the shoulder.



Holy Yoga Instructor Training Anatomy

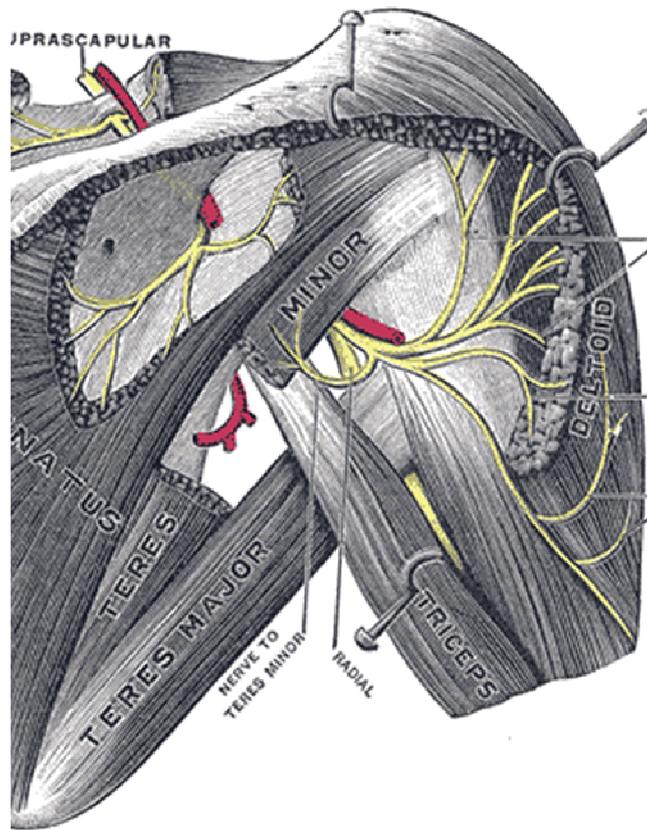


Teres Minor

Looks somewhat like a branch of infraspinatus, teres minor also rotates the shoulder laterally.

- Origin: Off the lateral edge of the scapula and inserting into the greater tubercle of the humerus.
- Function: Lateral rotation of the shoulder.

Chronic Holding Pattern-Slouching
Injury-Lack of mobility, Rotator Cuff
tears, Trigger Points in Shoulder



Subscapularis

The only muscle of the rotator cuff that originates on the anterior surface of the scapula and inserts into the lesser tubercle of the humerus.

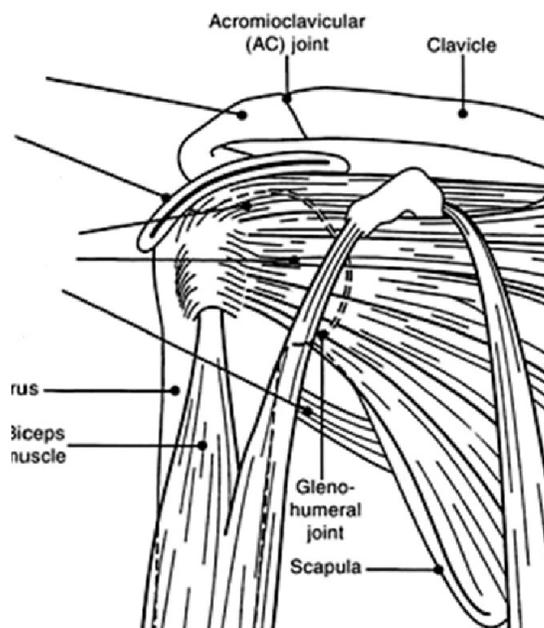
Function: Medial rotation of the shoulder.

Chronic Holding Pattern:

Rolled forward shoulder

Injury-Frozen Shoulder

The Shoulder Joint



Holy Yoga Instructor Training Anatomy

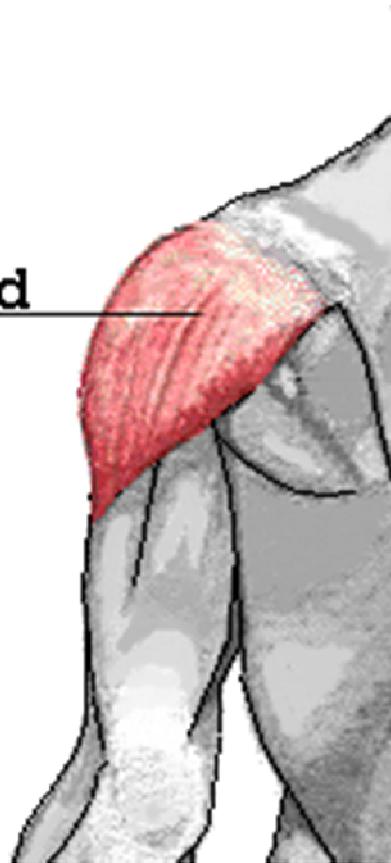


Deltoid

The shoulder cap. This muscle completely covers the shoulder on the anterior, lateral, and posterior sides. Because of this, it plays a huge role in shoulder movement. Originating on the lateral clavicle and scapula, it inserts into the Deltoid tuberosity of the humerus.

Function: Flexion, extension, medial rotation, lateral rotation and abduction of the shoulder.

Deltoid



Intertubercular Groove

Three muscles that attach at the intertubercular groove of the humerus and all share the same actions of medial rotation and adduction of the shoulder.



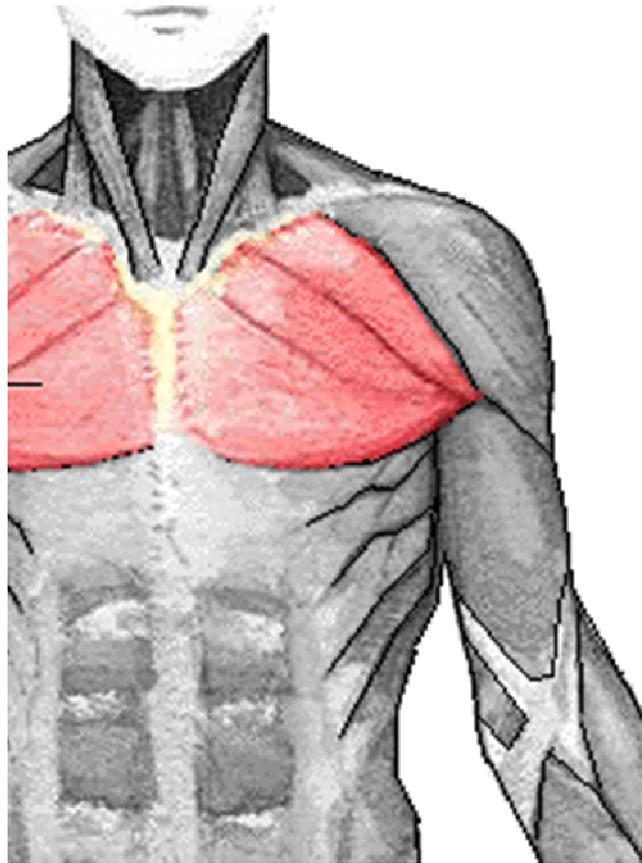
Holy Yoga Instructor Training Anatomy



Pectoralis Major

The large muscle on the anterior chest.

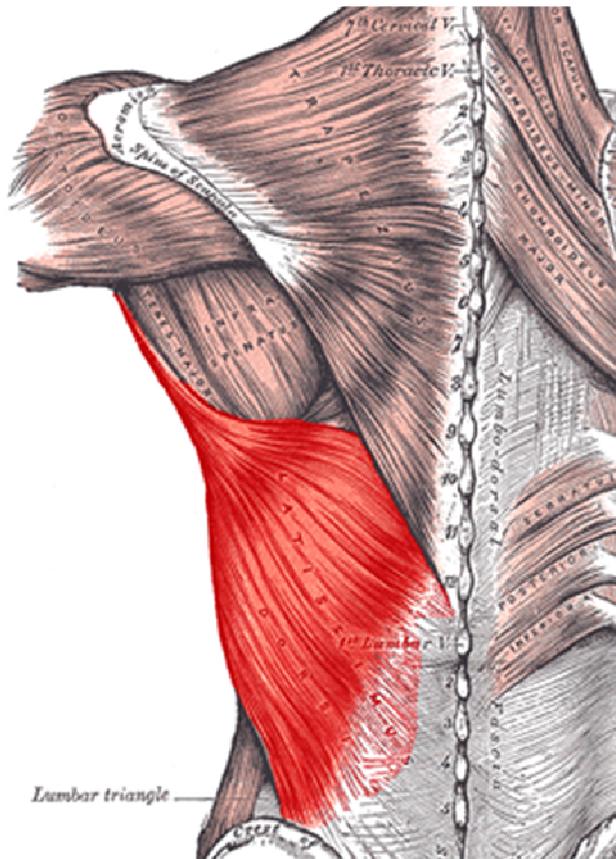
- Origin: Sternum and clavicle.
- Insertion: Intertubercular groove of the humerus.
- Function: Medial rotation, adduction and flexion of the shoulder.



Latissimus Dorsi

The broad muscle of the back.

- Origin: Starting on the spinous processes of the lower thoracic spine and continuing through all of the lumbar and sacral spinous processes it inserts in the intertubercular groove. Traveling from the posterior side of the trunk to the anterior side of the humerus.
- Function: Medial rotation, adduction and extension of the shoulder.



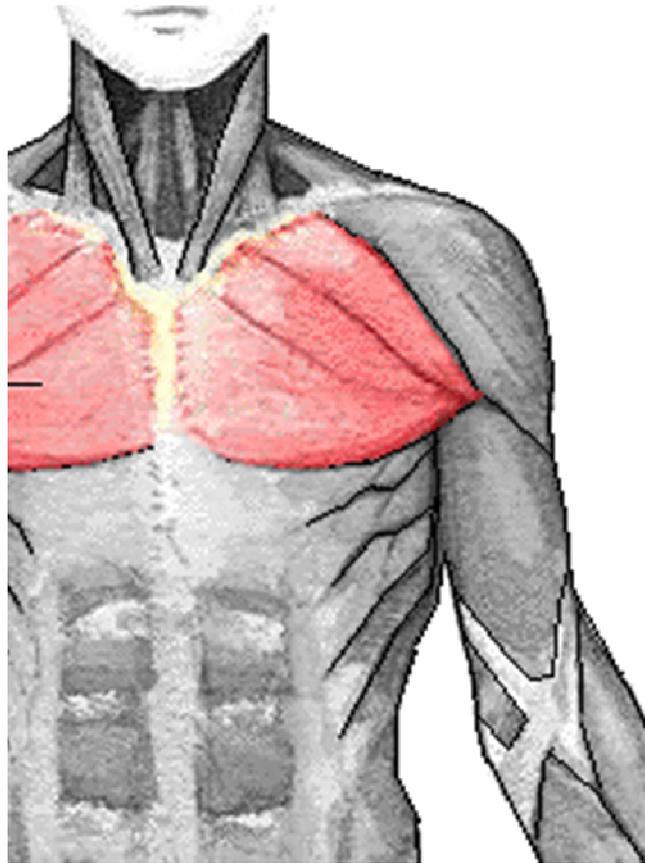
Holy Yoga Instructor Training Anatomy



Teres Major

The smallest of the groove muscles, it also crosses from posterior to anterior. Muscle pictured is the Pectoralis Major here. The Teres Major runs just below the Teres Minor on the posterior side.

- Origin: Lateral margin of the scapula and inserting into the intertubercular groove.
- Function: Medial rotation, adduction and extension of the shoulder.





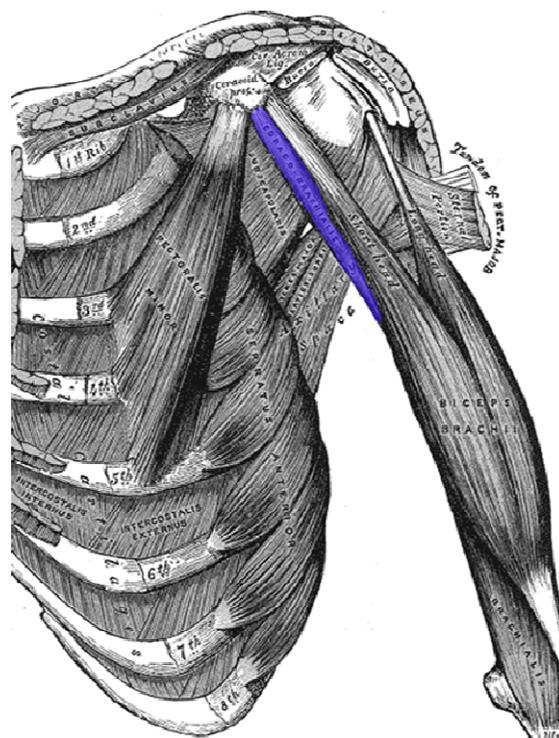
Brachial Muscles



Coracobrachialis

This small muscle crosses the shoulder joint only.

- Origin: Coracoid process of the scapula
- Insertion: Anterior middle humerus. This muscle lies posterior to biceps brachii.
- Function: Flexion of the shoulder.



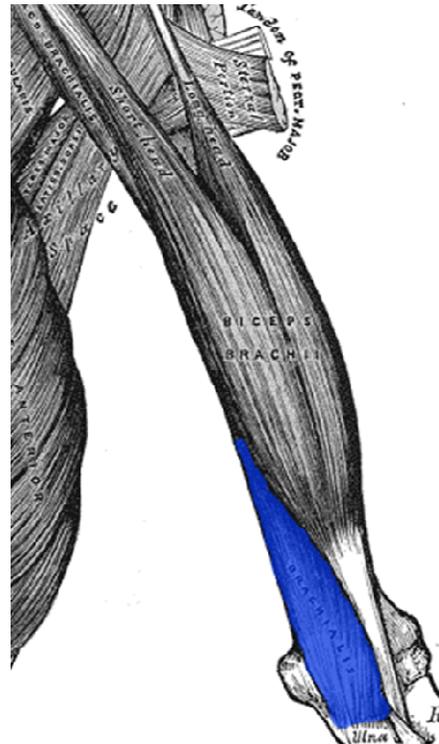
Holy Yoga Instructor Training Anatomy



Brachialis

Crossing only the elbow.

- Origin: Anterior humerus.
- Insertion: Ulnar bone. This muscle lies posterior to biceps brachii.
- Function: Flexion of the elbow.

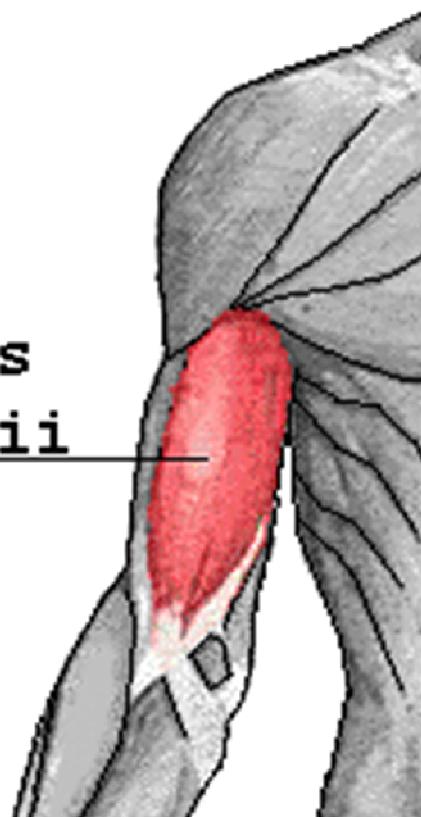


Bicep Brachii

The most anterior of the brachial muscles. Its name comes from it having 2 bellies.

- Origin: Scapula.
- Insertion: Radius and in doing so, crosses 3 joints. The shoulder, the elbow and the radio-ulnar joints. This muscle covers the 2 previous muscles.
- Function: Flexion of the shoulder and elbow as well as supination of the forearm.

**Biceps
brachii**



Holy Yoga Instructor Training Anatomy

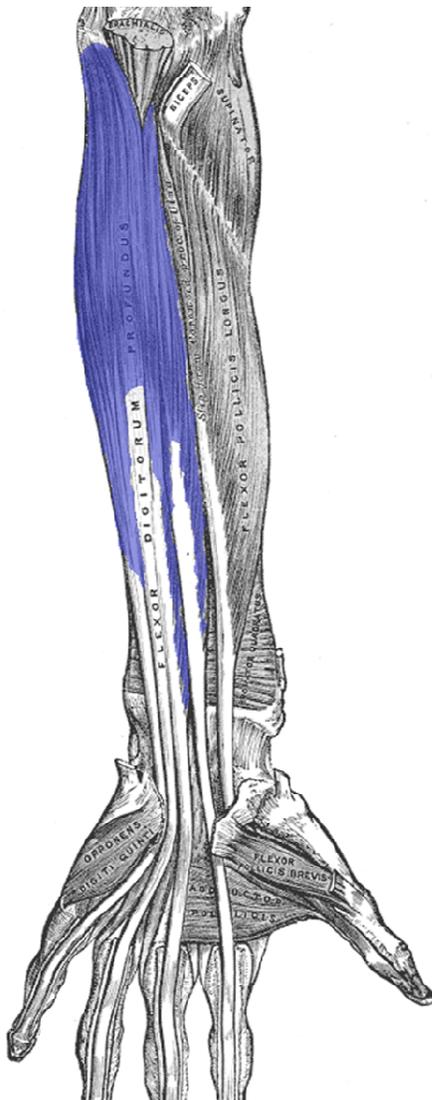
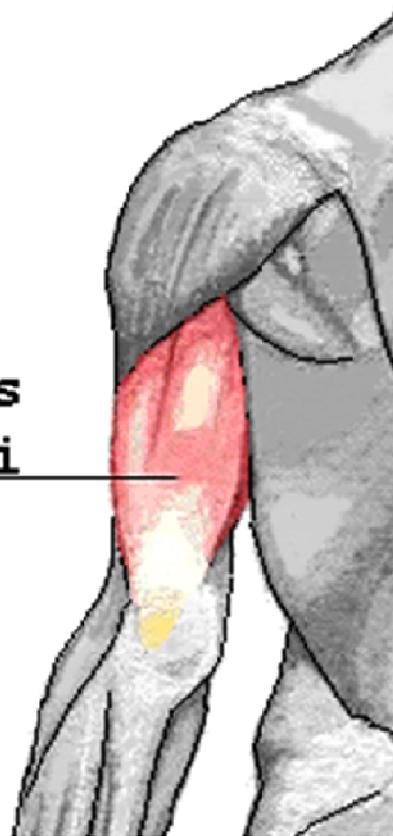


Tricep Brachii

Crossing only the elbow.

- Origin: Anterior humerus.
- Insertion: Ulnar bone. This muscle lies posterior to biceps brachii.
- Function: Flexion of the elbow.

**Triceps
brachii**



Antebrachial Muscle and Hand

Anterior antibrachium.

- Origin: Medial epicondyle.
- Insertion: Wrist and digits. The major role of this group is to flex the wrist and fingers. Nine of the muscles have tendons that pass through the carpal tunnel. Inflammation of these tendons may cause a condition called carpal tunnel syndrome.

Chronic Holding Pattern:

More and more, we are seeing wrist injuries in yoga due to lifestyle and computer issues.

Holy Yoga Instructor Training Anatomy



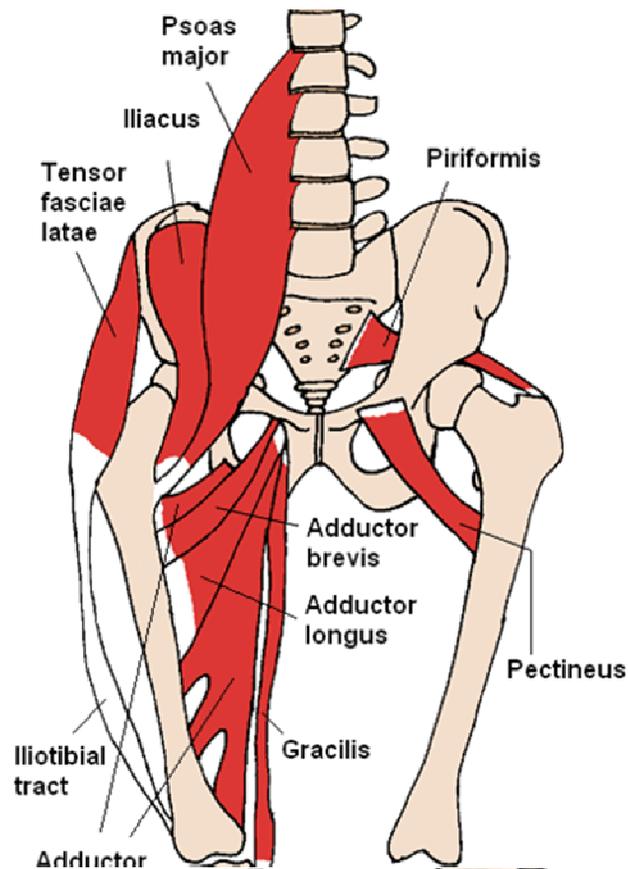
Hip Flexors

Chronic Holding Pattern-

Anterior/Posterior Tilts

Injuries-Low back and Knee

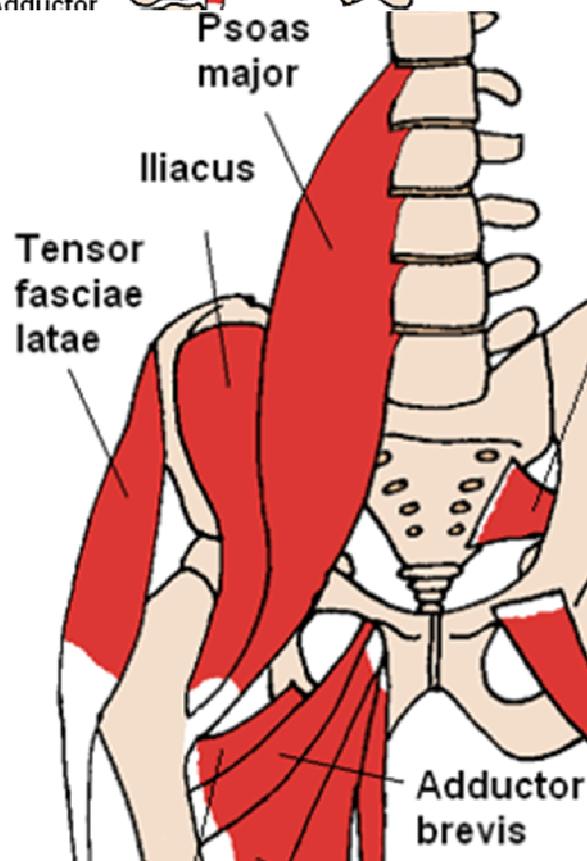
A lot of knee projects come from hip issues.



Psoas

Originating off of the lumbar spine, this muscle travels inferiorly through the pelvis to insert on the lesser trochanter of the femur.

Function: A powerful hip flexor and weak lateral rotator, it also helps to form our lumbar curve in our spine.



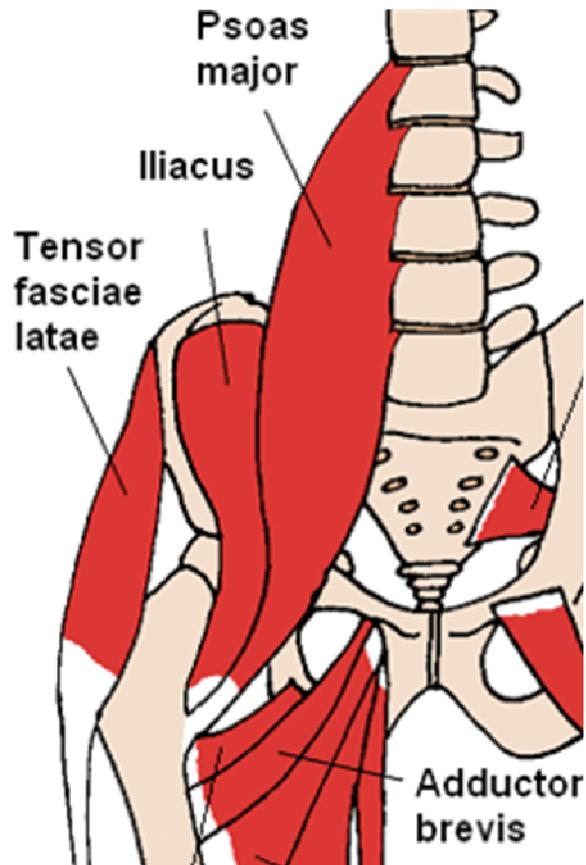
Holy Yoga Instructor Training Anatomy



Iliacus

Originating off of the Iliac fossa of the pelvis, this muscle merges with the psoas and attaches to the lesser trochanter of the femur.

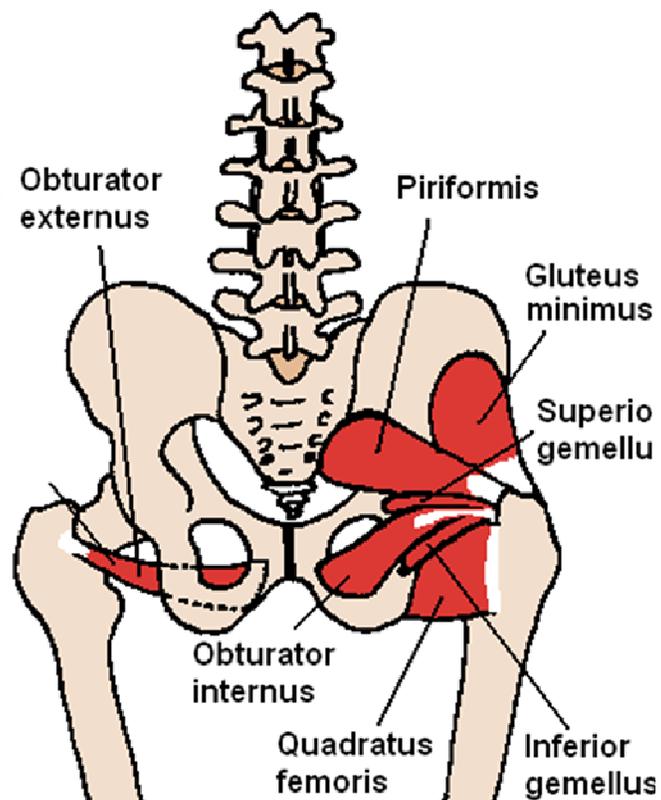
Function: Powerful hip flexor and weak lateral rotator.



Deep Hip Rotators

A group of small muscles originating from the pelvis and inserting into the greater trochanter of the femur. As their name implies, they laterally rotate the hip joint.

The sciatic nerve runs between the 2 most superior of these muscles and is commonly impinged leading to Sciatica-like symptoms.



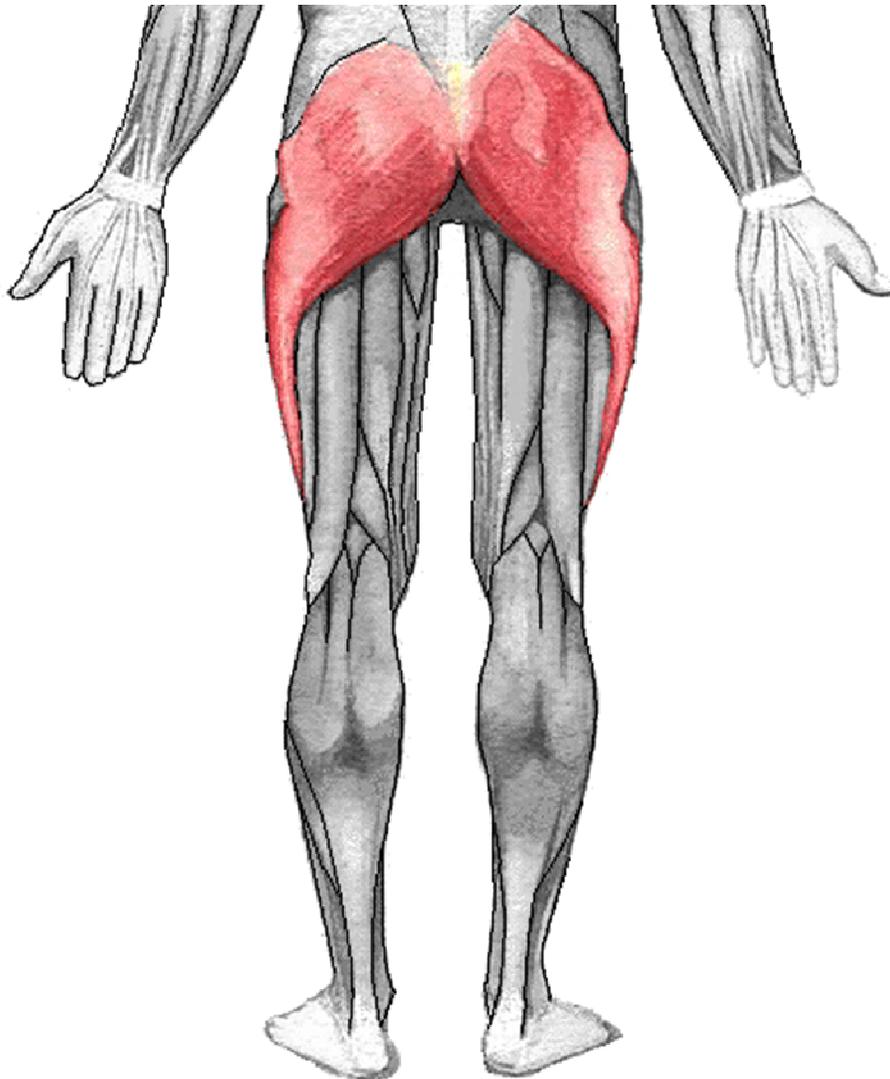
Holy Yoga Instructor Training Anatomy



Gluteals

The next 4 muscles play a major role in hip movement. While most tend to think the gluteals are only on the posterior of our pelvis, they actually wrap around to the anterior and lateral sides as well.

The IT Band (ilio-tibial band) attaches into glute maximus, so the IT and muscular projects in the glutes are directly correlated.



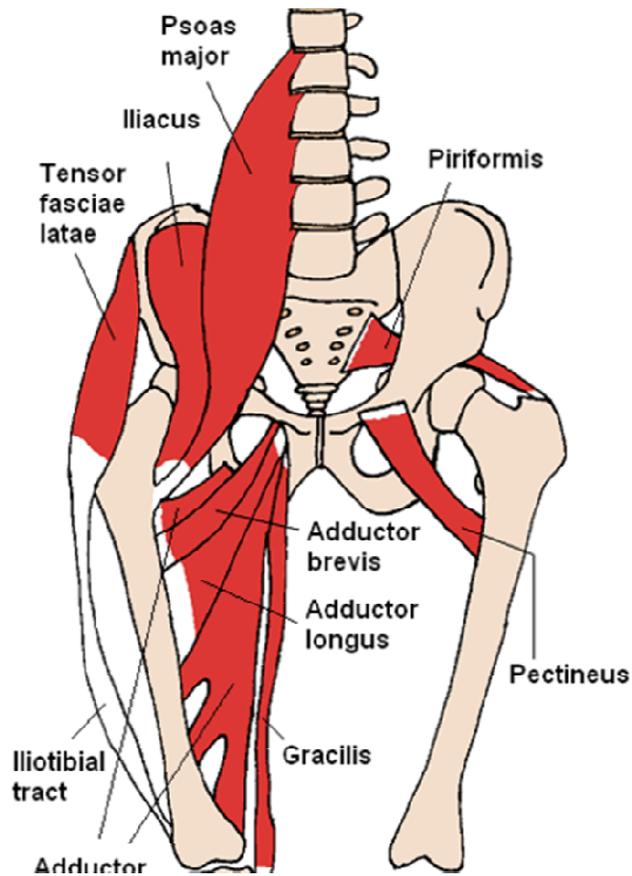
Holy Yoga Instructor Training Anatomy



Tensor Fascia Latae

The most anterior of the gluteal muscles, it originates off the anterior iliac crest. This is one of the few muscles that does not have a bony insertion, instead it inserts into the IT band on the lateral thigh.

Function: Hip flexion and medial rotation as well as abduction of the hip.



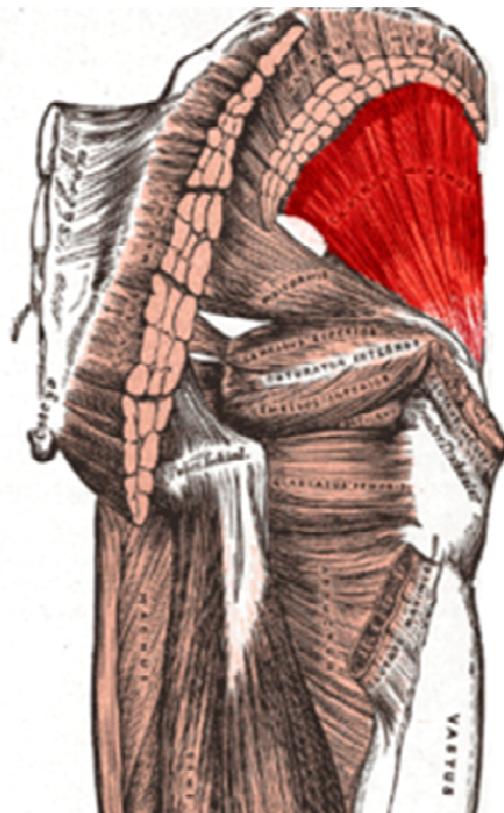
Gluteus Minimus

The deepest of the gluteals, it originates from the lateral surface of the ilium and inserts into the greater trochanter of the femur.

Function: Abduction and medial rotation of the hip.

Chronic Holding Pattern:

Hips not being aligned cause trigger points.



Holy Yoga Instructor Training Anatomy

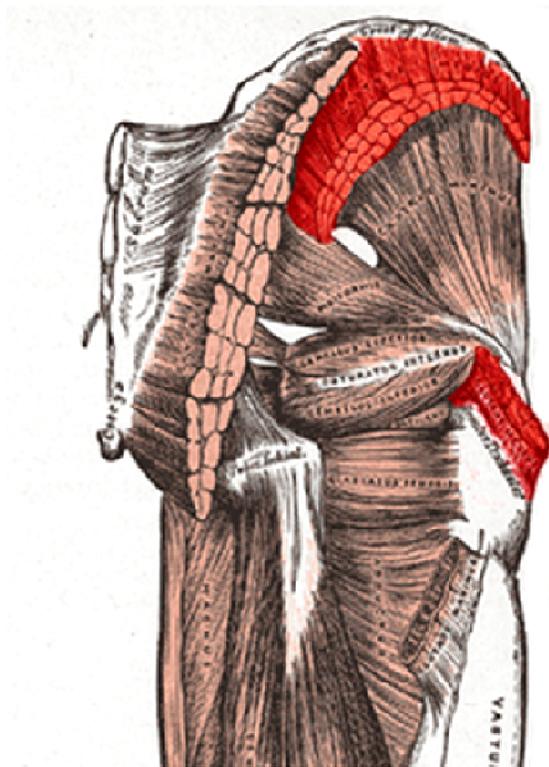


Gluteus Medius

The most lateral of the gluteals, it plays a major role in human gait. Originating just below the crest of the ilium and inserting into the greater trochanter.

Function: Powerful abductor and lateral rotator of the hip.

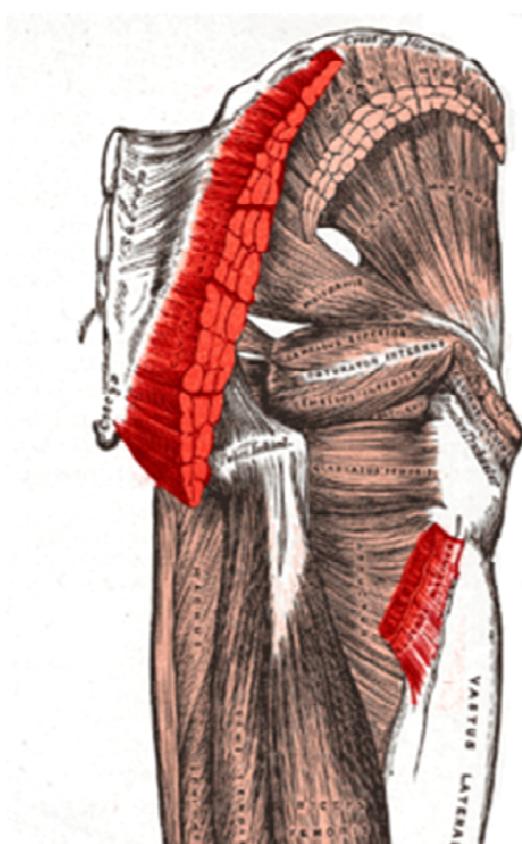
Hips not being aligned cause trigger points in this muscle.



Gluteus Maximus

The largest and most posterior gluteal muscle, it originates off of the iliac crest, the posterior sacrum and the tailbone. There are 2 insertions: one on the greater trochanter and the other into the IT band of the thigh.

Function: Powerful hip extender as well as lateral rotation and abduction of the hip.

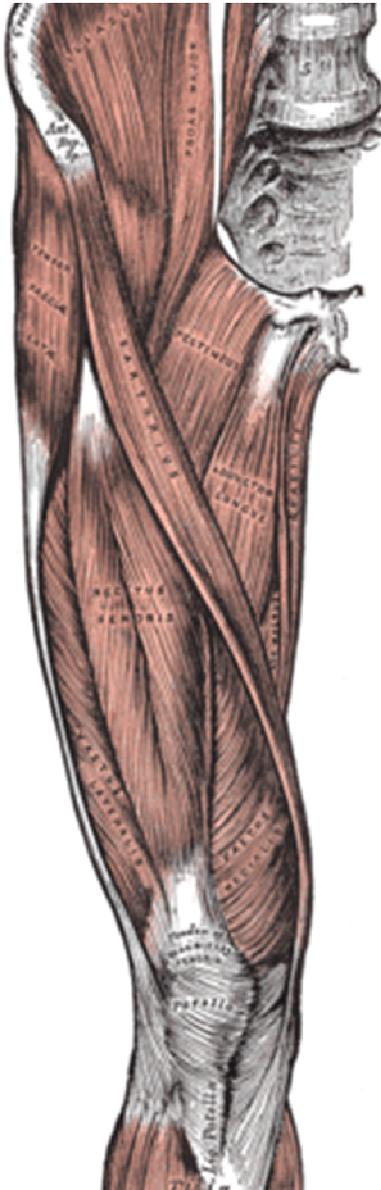


Holy Yoga Instructor Training Anatomy



Thigh

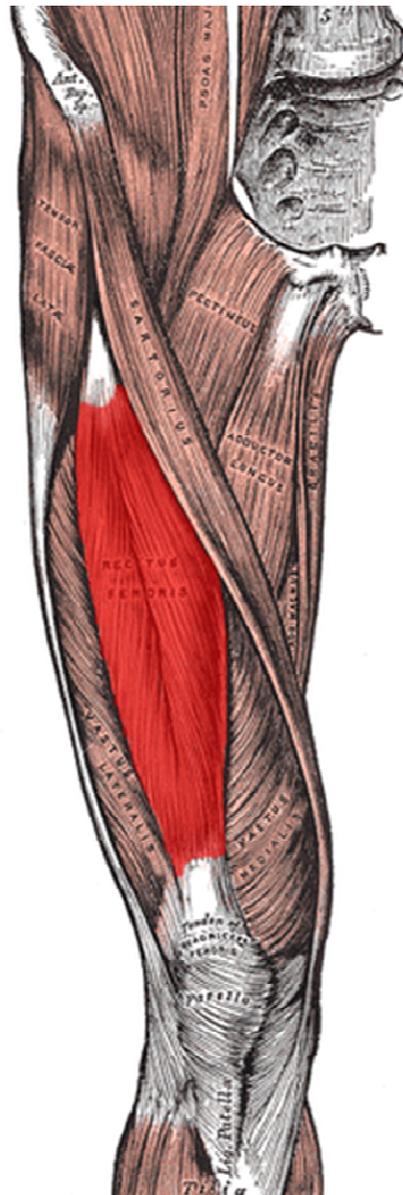
The thigh is the large part of the lower limb between the hip and knee. It houses the powerful muscles of locomotion



Quadriceps

Four muscles that all insert into the tibial tuberosity via the patellar tendon. The rectus femoris is the only muscle of this group that crosses while the other 3 originate off of the femur.

Function: Rectus femoris can flex the hip as well as knee extension and the other 3 are powerful knee extenders.



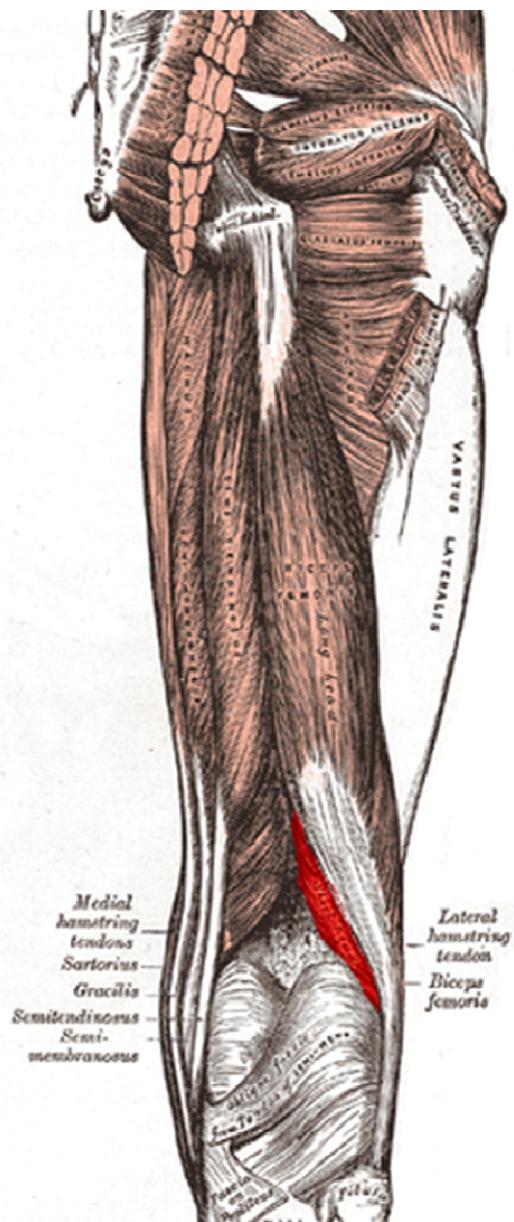
Holy Yoga Instructor Training Anatomy



Hamstrings

The hamstrings are 3 separate muscles on the posterior thigh that all have a common origin from the ischium of the pelvis and cross the hip and the knee. On the lateral side is Biceps Femoris, which is the only hamstring that attaches to the femur. On the medial side is 2 muscles, the semitendinosus and semimembranosus, which do not contact the femur.

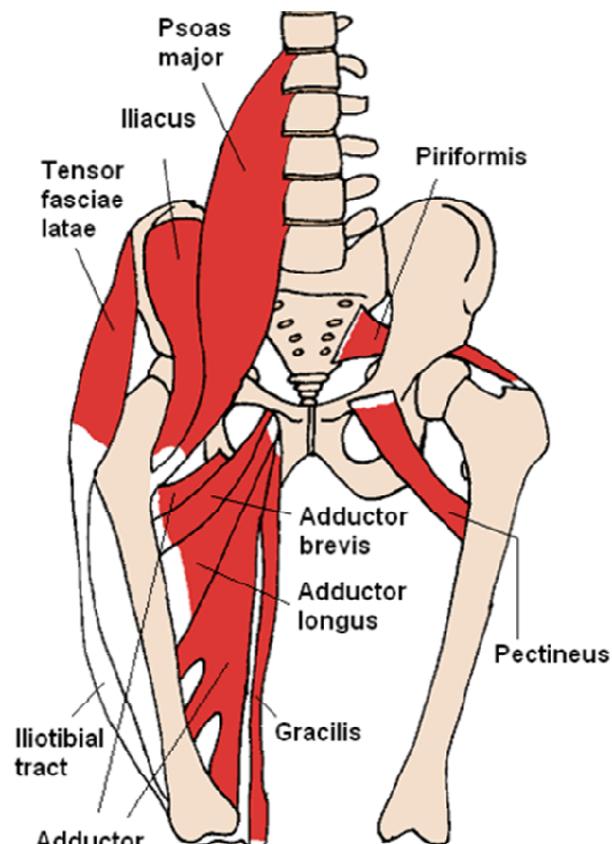
Function: Extension of the hip and flexion of the knee.



Adductors

A vast group of muscles originating off of the pubic bone and inserting into the posterior of the femur.

Function: Adduction and lateral rotation of the thigh.

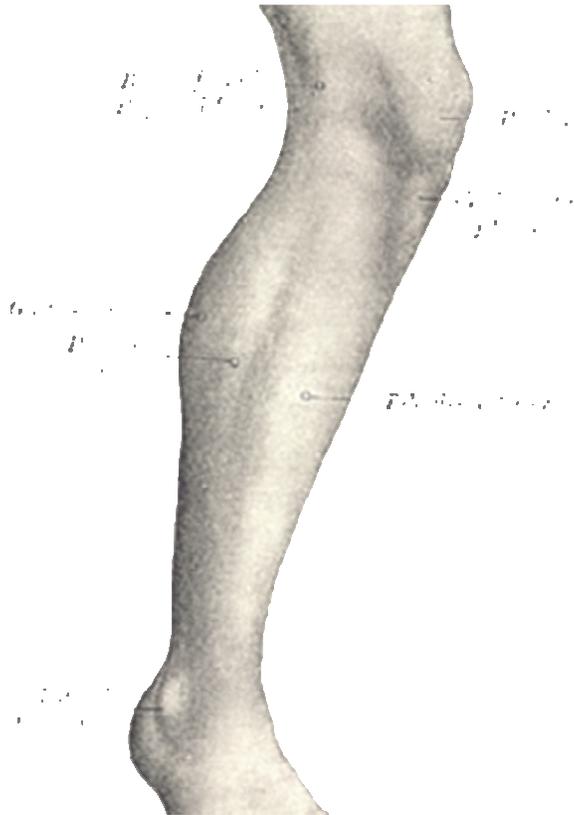


Holy Yoga Instructor Training Anatomy



The Leg

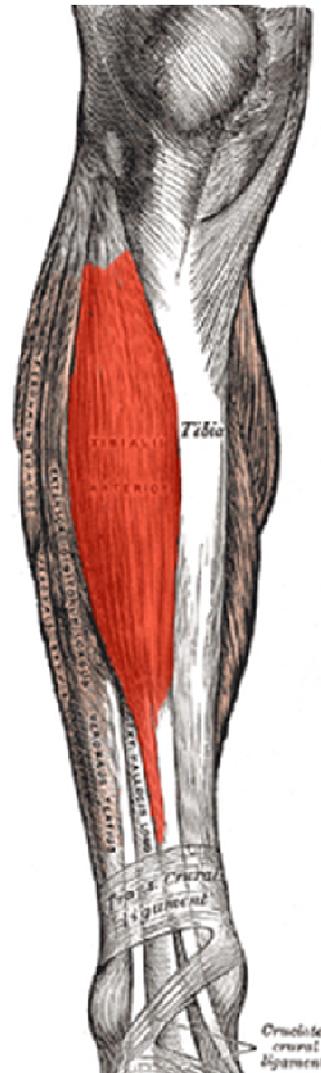
This is the portion of the lower limb between the knee and ankle. Ankle collapsing.



Anterior Calf

These muscles dorsal flex the foot and, in doing so, have a major role in the human gait. This group gets its name from their origin off of the anterior of the tibia and fibular bones of the leg and insert into the various bones of the foot.

Function: Dorsal flexion and inversion of the foot and extension of the toes.



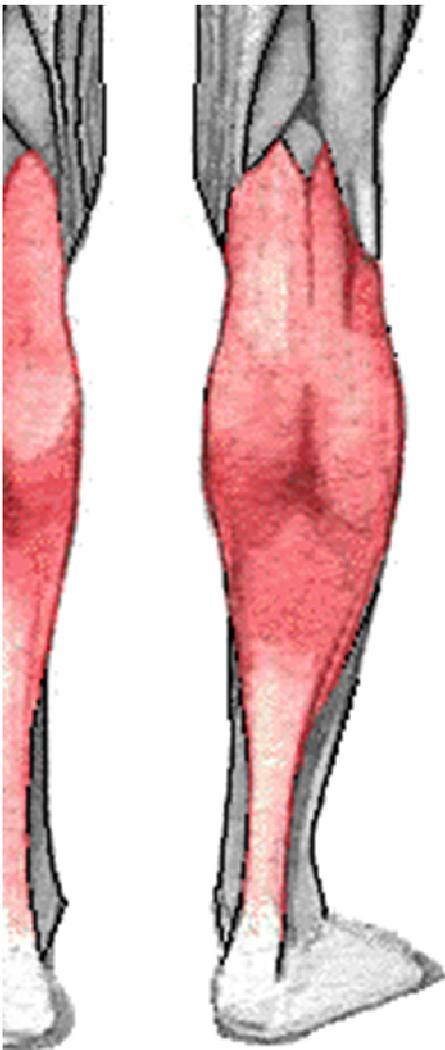
Holy Yoga Instructor Training Anatomy



Gastrocnemius

One of the most powerful muscles in the body, gastrocnemius crosses both the knee and ankle joints. It is the most posterior muscle of the leg and is clearly visible with its two bellies blending into the achilles tendon.

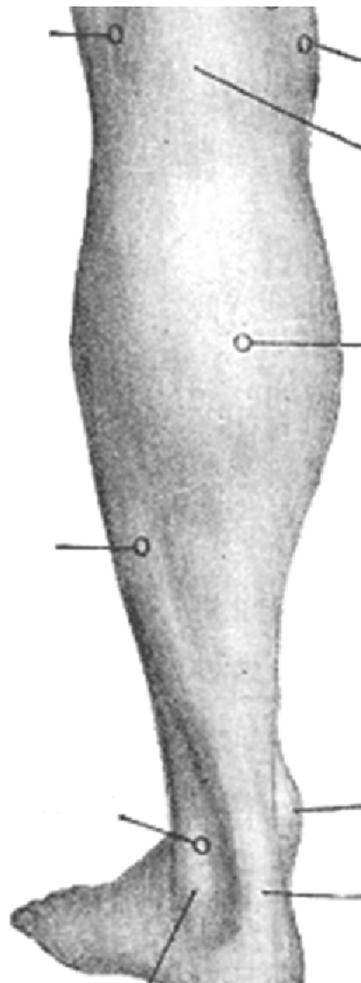
Function: Plantar flexion of the foot.



Soleus

Sitting just deep to gastrocnemius, soleus only crosses the ankle joint through the achilles tendon. This muscle makes up the largest portion of the posterior muscle.

Function: Plantar flexion of the ankle



Holy Yoga Instructor Training Anatomy



Simple Sitting-primary line musculature is represented here and continues throughout each pose.



**Spirals: outer/outer, allows inner thigh and groin to stretch by softening knees to the floor.
Agonist: pelvic floor muscles in Mula Bandha, this fires the iliopsoas and supports the core to allow for an aligned primary line. In standing postures the Bandhas can be strengthened through recruitment. Udyana Bandha, transverse abdominis, obliques. Rhomboids draw the shoulder to the midline, trapezius draws the shoulders down, and finally, the chin drawing parallel to the floor allows for proper alignment of the head.**

Double Pigeon



Primary line is always of the utmost importance of all poses. This picture is a common example a leaning forward motion that compromises the primary line when one lacks core strength and flexibility in the hips.

In a correct simple seated posture, the inner thigh and upper shoulders surrender down allowing for softening while the student is engaged in the primary line and posterior shoulders. A modification for this is cow face legs if one lacks this flexibility.

Holy Yoga Instructor Training Anatomy



Cow Face



Lower arm:

Agonist: Latissimus, Pec Minor, subscapularis, teres major.

Antagonists: rotator cuff, posterior deltoid shoulder is extended.

Upper Arm:

Agonist: shoulder is flexed rotator cuff, anterior deltoid.

Antagonist: teres major, latissimus, pec major and subscapularis.

Legs: the majority of the strength of this pose comes from abdominal engagement and holds the core of the body while the adductors draw the thighs toward the midline. Legs outwardly rotate through surrender, not muscular tension. The upper leg will struggle with this the most.

Cow Face



Example of loss of primary line focus to get hands together in cow face. Once aligned, it is the shoulder joint that needs mobility here.

In any pose, compromising the primary line to allow for further expression is not full expression of a posture. Only if the primary line is in alignment is the posture “correct.”

Students may be able to attain this on one side and not the other; this is totally normal with any posture. As our form follows our functions of daily life, we will often be a little more flexible from one side to another. Yoga creates equanimity from one side to another.

Holy Yoga Instructor Training Anatomy



Kneeling or Cobbler's



Spirals: inner/inner

Agonists: primary line, rhomboids in shoulder draw, this will align the elbows with the waist.

Antagonists: flex in knees allows for a stretch in the quadriceps. Shoulder draw of rhomboids allows for heart to gently open.

Joint Mobility needed: Knee. If mobility in the knee is lacking or the students' feet start to tingle, a block can be used to prop the thighs a little higher, opening up the popliteal space (the space created by the hamstrings attachment behind the knee).

Lateral movement in Kneeling



Spirals: inner/inner

Agonists: obliques on the left side, flexed neck on the right side. Quadratus lumborum, longissimus, iliocostalis on the left.

Antagonists: obliques, QL and back muscles on the right side, left side of the neck including scalenes and sternocleidomastoid.

Joint mobility needed: Side body, low back, rotator cuff.

Holy Yoga Instructor Training Anatomy



Hero's—very similar in alignment to kneeling.



Spirals: inner/inner

Agonists: primary line, rhomboids in shoulder draw. Flex in feet allows gastrocnemius to protect the knee.

Antagonists: flex in knees allows for a stretch in the quadriceps. Shoulder draw of rhomboids allows for heart to gently open.

Joint Mobility needed: Knee, reclining here opens quads more. This pose requires a little twisting motion in the knee, which can be painful if a student has experienced knee dysfunction in the past. To aid with slow progress over time in this pose they can sit on a block while working their way to sitting in between the calves.

Staff—more engagement than stretch in this pose. This is a reset pose for seated sequences.



Spirals: inner/inner

Agonists: primary line, adductors inwardly rotate thighs and quads extend the knee. Spine extensors, QL and psoas form the stabilizers for low back. Trapezius and rhomboids open the heart. Tricep extends the arms, tibialis anterior pulls the toes into extension.

Antagonists: psoas, pectineus, and rectus femorus flex the hip.

Holy Yoga Instructor Training Anatomy



Mountain-foundational standing pose reset pose for standing sequences



Spirals: inner/inner, this helps to activate primary line muscles.

Agonists: psoas and glutes balance here to keep pelvis neutral. Transverse abdominis helps to soften sacrum while TFL brings feet neutral. Erectors and abdominals work to keep torso in line. Trapezius and rhomboids open heart, while pec minor lowers ribs.

Infraspinatus and teres minor together help to rotate arm laterally.

Joint Mobility needed: due to poor posture, the lower ribs area tends to be compressed and breathing suffers. This posture helps to “retrain” the correct muscles that have not been contracting as they should for correct posture. This takes pressure of all of our joints.

Mountain



Example of not honoring a proper shoulder draw in Mountain Pose. This causes that shortening of the space in the lower rib area. The lower ribs are crushed and not allowing for proper breathing during practice.

The power of Mountain Pose as a reset button during a standing sequence is that a student can re-align before moving further into their practice.

I often use Mountain as a frame of reference in a class, helping my students to understand this is “correct” posture.

Holding our bodies the way were designed by God takes tension of all of the major joints.

Holy Yoga Instructor Training Anatomy



Downward Facing Dog



Spirals: inner/inner

Agonists: Erector Spinae arches back while QL and psoas deepen the lumbar curve. Abdominals flex the trunk. Psoas, pectineus, Sartorius and rectus femoris flex the hip while the quads straighten the knee and the adductors inwardly rotate the thighs. In the shoulders, the deltoid lift the biceps by the ears while the infraspinatus and teres minor outwardly rotate the arm. The rhomboids draw shoulder blades towards the spine while the trapezius draw the shoulders away from the ears. Stomach lock takes the majority of the weight of this pose.

Antagonists: hamstrings, gastrocnemius and soleus in the bottom body, in the upper body, neck releases and latissimus dorsi lengthens.

Downward Facing Dog



Example of a Downward Facing Dog that “dumps” into the shoulder. It is imperative that your students understand that Downward Facing Dog is a bottom body pose and its foundation is in the legs.

When the inner thigh helps to engage the abdominals, it allows the bottom body to take the weight of this pose. Proper rhomboid engagement (shoulder draw) takes all the pressure of the neck. Taking the weight off the neck helps to prevent injuries not only in the neck but in the shoulder area as well.

Holy Yoga Instructor Training Anatomy



Triangle



Spirals: outer/outer

Agonists: erector spinae bilaterally active with the upper erectors helping the lower obliques rotate the torso. The quadriceps extend the knee. Rhomboids (shoulder draw), deltoid and triceps.
Front leg: psoas flexes hip and tilts pelvis forward, peroneus longus and brevis press ball of the foot into the floor.

Back leg: glute max extends the hip, tibialis anterior dorsiflexes the ankle.

Antagonists: upper obliques get a stretch, hamstrings release on the front leg due to tilt in the pelvis, posterior leg glute medius and IT band stretches. Peronials release in the back crus due to the blading of the back foot.

Striving Triangle



Example of the desire to touch the floor overcoming the need for a firm foundation in the pose. Teaching your students to stack the shoulders and hips in this pose requires one to pull back from the floor. Once there, if a student can reach to the floor without compromising the primary line then they can begin to deepen into the pose.

Holy Yoga Instructor Training Anatomy



Side Angle



Spirals: outer/outer

Agonists: lower abdominals and obliques, lower erectors and QL laterally flexes the spine toward the front leg. In the legs, glute max extends and rotates the hips (this is balanced by the glute medius and tensor fascia lata inwardly rotating), adductors help to extend and stabilize back foot on the floor. In the front hip, psoas and pectineus help to flex the hip. The quads of the front leg help to support the weight of the body not held by Urdhva Dhanurasana.

In the upper body, triceps extend the elbow, allowing for length in radiance with the organic line. Shoulder draw allows for opening of the heart and its forward movement.

Antagonists: upper abdominals and obliques, upper erectors and QL, both sides groin area.

Warrior I



Spirals: inner/outer

Agonists: erectors and QL allow for spinal alignment and a slight backbend. In the arms, the rhomboids draw the shoulders together while the trapezius draws the shoulders away from the ears. Deltoid flexes the arms while infraspinatus and teres minor outwardly rotate the arms.

Front leg: psoas and pectineus flex the hip, Sartorius assists and outwardly rotates.

Back leg: glute max outward rotation, glute medius and TFL abduct, adductor inwardly draws.

Antagonists: the outward rotation of the arm allows for the opening of the chest, front flexors of the neck.

Holy Yoga Instructor Training Anatomy



Warrrior I



Example of not honoring the softening of the sacrum to protect the low back. Causes compression and knee pain in the pose.

It is the goal of Warrior I to align the shoulders with the hips so the primary line can be honored and all pressure can be taken of the low back.

Warrrior I



**See previous page for full anatomical description of Warrior I.
This picture gives an alternate view of Warrior I.**

Holy Yoga Instructor Training Anatomy



Warrior II-Open heart



Spirals: outer/outer

Agonists: trunk mimics Warrior I, supraspinatus initiates then deltoid completes abduction while rhomboids and middle trapezius hug shoulders to the midline, these activate pec minor to raise the ribs. Triceps extend the elbows.

Front leg: pectineus, psoas and sartorius flex the hip, front leg takes the weight of the body, peroneus longus and brevis help to evert the foot.

Back leg: glute max and hamstrings extend and laterally rotate the hip, adductor magnus helps as well as stabilizes foot to floor.

Antagonists: chest opens, adductor tendons on both legs, gastroc and soleus on back leg.

Warrior II



Example of anterior tilt in motion. Causes low back compression and knee pain.

Also note, the improper shoulder draw that allows the student to bring the shoulders up around the ears. Deltoids do not engage for a shoulder draw, the rhomboids do. This leads to decreased shoulder tension and pain in your practice and daily life.

A simple reminder to the student can help them to soften the shoulder (trapezius) and release the neck.

Holy Yoga Instructor Training Anatomy



Crescent lunge



Spirals: inner/outer

Agonists: erectors and QL allow for spinal alignment and a slight backbend. In the arms, the rhomboids draw the shoulder together while the trapezius draws the shoulder away from the ears. Deltoid flexes the arms while infraspinatus and teres minor outwardly rotate the arms.
Front leg: psoas and pectineus flex the hip, Sartorius assists and outwardly rotates. Hamstrings help to draw the knee over the pinky toe side of the foot.
Back leg: Glute max and hamstrings extend the hip, glute medius and TFL inwardly rotates. Quadriceps extend the knee
Antagonists: Quads of the back leg release, lateral hip, infraspinatus and teres minor release.

Improper Crescent Lunge



This is another example of an anterior tilt in the pelvis, drawing the body forward. Note that lack of firing through the back heel affects the stabilization of the pose.

Holy Yoga Instructor Training Anatomy



Chair



Spirals: inner/inner

Agonists: QL and erectors extend the back, rectus abdominus helps to knit the ribs together. Psoas, pectineus, rectus femoris, and Sartorius flex the hip. Glute max contracts as well to balance the pelvis. Quads flex the knee, Adductors draw knees together, whole crus works to ground feet. Rhomboids and traps draw shoulders together and down, while the infraspinatus outwardly rotate the shoulders. Deltoid flexes the biceps up by the ears and tricep extends the elbow.

Antagonists: the superficial abdominals and chest open in response to the back bend and outward rotation of the arm. The lateral rotators of the hips open in response to the adduction in hip

Improper Chair



The depth of chair is less important than the correct lift in the chest. Chair is a standing posture yet is also a back bend. This back bend is what provides the heart opening aspect of this pose.

Chair is a full body pose that is very active. This pose works to build strength, balance, and stamina.

Holy Yoga Instructor Training Anatomy



Standing open A



Spirals: outer/outer

Agonists: erectors extend the back and neck. Transverse abdominis contracts to soften the sacrum down. Glute max, and medius help to abduct the hip and the quadriceps engage to extend the knee. Tibialis anterior draws the toes inwardly toward the midline. In the arms the deltoids abduct the arms while the rhomboids draw the shoulders together. Finally, the trapezius draws the shoulders down.

Antagonists: the pecs open in the chest due to the shoulder draw, while the adductors of thigh release in response to the abduction action of the glutes. When folding forward in this pose, this stretch in the thigh intensifies.

Improper Standing Open A



Note the locked knees in this example of an improper standing open A. The body is always trying to find balance. Counter balance tries to take place here, so the locked knees don't make the body fall backward. The effect is the torso moving forward and the hips moving back to try to find this balance.

Holy Yoga Instructor Training Anatomy



Humble Warrior



Spirals: inner/outer

Agonists: The foundation of this pose allows for surrender in the upper body with the abdominals flexing the trunk. In the arms the rhomboids draw the shoulder together while the trapezius draws the shoulder away from the ears. Triceps extend the arms while infraspinatus and teres minor outwardly rotate the arms.

Front leg: psoas and pectineus flex the hip, Sartorius assists and outwardly rotates.

Back leg: glute max outward rotation, glute medius and TFL abduct, adductor inwardly draws.

Antagonists: the outward rotation of the arm allows for the opening of the chest, front flexors of the neck. Peronials release in the back crus due to the blading of the back foot.

Improper Humble Warrior



The pelvis is not stable in this pose and the student here moves the hip of the flexed leg out so there is more room to bow forward. This compromises the primary line to get deeper into the pose. Drawing the hips back into alignment allows the body to move forward more in the pose and the bowing will simply happen.

Holy Yoga Instructor Training Anatomy



Pyramid



Spirals: inner/inner

Agonists: rectus abdominis flexes trunk forward, trapezius works with rhomboids to draw shoulders back and down. As you root and draw back with the hands, deltoid and bicep helps to draw the torso down.

Front leg: psoas helps to flex hip, quads straighten the leg.

Back leg: psoas stabilizes the hips, glutes extend the hip, quads straighten the leg, tibialis anterior flexes the foot and helps to anchor the heel.

Antagonists: hamstrings of both legs. Gastroc, soleus of back leg stretch comes from the tibialis anterior engagement of the front of the ankle.

Improper Pyramid



As in crescent lunge, pushing the forward hip out helps the torso come down further. Helping your students to understand it is the primary line that is to be honored, not how deep you can stretch, helps them to understand the need to align the hips to honor the primary line. You can align the hips by surrendering the contraction of the side body, the obliques, on the forward hip. This softens the hip back to where it belongs and allows for a firm foundation in your pose.

Holy Yoga Instructor Training Anatomy



Eagle



Spirals: inner/inner

Agonists: erector spinae and QL extend the back. Psoas flexes the hip. Adductors draw legs medially while glute medius and tensor fascia lata internally rotates the femur. Eversion of the wrapped ankle allows for the “catching” of the foot around the standing calf muscles. Pec major adducts the arms and serratus anterior abducts the scapula.

Antagonists: serratus anterior contracting allows the rhomboids and trapezius a stretch.

Tree



Spirals: inner/outer

Agonists: erectors and QL keep the spine erect. Standing leg roots the pose and helps to stabilize the pelvis (glutes, psoas, adductors, and glute medius). Glute max laterally rotates the hip of the bent leg while the hamstrings pull the foot toward the inner thigh. Deltoids flex to lift the biceps by the ears while infraspinatus and teres minor rotate the shoulders outwardly.

Antagonists: adductor of the bent leg releases in response to the lateral rotation of the bent leg.

Holy Yoga Instructor Training Anatomy



Tip Toe



Spirals: inner/outer

Agonists: primary line engagement -pelvic floor muscles in Mula Bandha, this fires the iliopsoas and supports the core to allow for an aligned primary line. Udyana Bandha-transverse abdominis, obliques. Rooted leg psoas and pectineus flex hip, hamstrings flex the knee. Bent leg glute max and deep hip rotators outwardly rotates the hip. Rhomboids draw the shoulder to the midline, trapezius draws shoulders down, and finally, the chin drawing parallel to the floor allows for proper alignment of the head.

Antagonists: adductors of the bent leg really have to surrender here in response to breath to experience the full benefit of this pose.

Extended Leg



Spirals: inner/inner

Agonists: pelvic floor muscles in Mula Bandha, this fires the iliopsoas and supports the core to allow for an aligned primary line. Udyana Bandha-transverse abdominis, obliques. Pecs of extended arm adduct to stabilize shoulder while rhomboids draw the shoulder to the midline, trapezius draws shoulders down, and finally the chin drawing parallel to the floor allows for proper alignment of the head. Rooted leg acts to stabilize the pose with glute medius working to stabilize pelvis. Extended leg adductors draw toes toward ceiling while quads extend knee.

Antagonists: hamstrings of extended leg.

Holy Yoga Instructor Training Anatomy



Half Moon



Spirals: inner/outer

Agonists: primary line engagement as described on page 1 allows this pose stability and ease. Here right side body erectors and obliques allow for lateral bend. Rooting leg psoas and pectineus tilt the hip, rectus femoris and sartorius stabilize the leg while the quads extend the knee. On the organic leg glute medius, minimus, and tensor fascia lata abduct the hip while the quads extend the knee. Tibialis anterior of organic leg flexes toes towards the nose. Deltoids abduct the arms while rhomboids and trapezius draw shoulders back and down.

Antagonists: left side erectors and obliques release in response to right side body working. Front side of the neck is able to relax when a correct skull draw finishes this pose.

Revolved Half Moon



Spirals: inner/inner

Agonists: primary line engagement here allows for the twist, both internal and external obliques work in concert with the transverse abdominis to allow this twist motion in the torso and the intercostals of the ribs allow it to continue in the thoracic region. The lower arm serratus anterior draws arm to floor while deltoid engagement helps to deepen the twist. An adequate shoulder draw frees the neck to an adequate skull draw. Rooted leg psoas and pectineus flex the hip and adductors draw the leg in. In both legs quads extend the knee. The organic leg Glute max and hamstrings extend the hip (glutes work to turn it outward). Tibialis anterior flexes both feet to keep the feet engaged.

Holy Yoga Instructor Training Anatomy



Warrior III



Spirals: inner/inner

Agonists: erectors and QL engage for the engagement of the back. Latissimus dorsi adducts the arms to the side while rhomboids work with trapezius to draw shoulders back and down. The rooted leg psoas and pectineus flex the hip while quads extend the knee, and tibialis anterior help to keep the medial arch from collapsing. On the organic leg the glutes max and medius extend the leg while tensor fascia lata works with glute medius (anterior fibers) to rotate the hip inward. Erector spinae and QL help to lift the hip of the organic leg.

Antagonists: the hamstrings of the rooted leg release in response to the stabilizing eccentric contraction of the quadriceps. Heart opens and softens towards the feet.

Dancer



Spirals: inner/inner

Agonists: primary line engagement is still active though soft in the abdomen which allows the erectors to work with QL to create this backbend. Extended arm deltoid flexes arm while rhomboids, posterior deltoid, and rotator cuff help the opposite arm reach for the foot. Thumb up allows for the shoulder to outwardly rotate (infraspinatus and teres minor). The rooted leg psoas and pectineus flex the hip while quads extend the knee, and tibialis anterior help to keep the medial arch from collapsing. On the lifted leg glute max and hamstrings work to extend the hip while the quadriceps extend the knee to create the lift in the torso. Tibialis anterior flexes lifted foot.

Antagonists: front body abdominals are what is allowed to release in back bends.

Holy Yoga Instructor Training Anatomy



Inclined Plane



Spirals: inner/inner

Agonists: whole back body is working in this pose: erectors and QL arch the back while rhomboids and trapezius draw shoulders down and back (this is your rooting). Posterior deltoid extends the shoulders. Infraspinatus and teres minor outwardly rotate the arms. The glute max work with the hamstrings concentrically to extend the hips, and the quads work to extend the knees. Gastrocnemius and soleus plantar flex the feet to keep them flat.

Antagonists: whole front side body softens because of the reciprocal muscles' work. Front of the neck releases, allowing for a traction that works to deepen the lordotic curve of the neck. Posterior deltoid contractions allows for anterior deltoid, pec major, and bicep to release.

Crow



Spirals: inner/inner

Agonists: primary line engagement as discussed earlier is the only way this pose is possible. You are not resting on your triceps but lifting the weight with your core. The counter balance of extending the neck allows you to shift weight forward. Pec major adducts the arms and deltoid works with it to keep shoulders stable. Triceps extend shoulder and flexors of the wrist flex to create the foundation with serratus anterior allowing the shoulder to bring the scapula forward. Adductors squeeze the legs to the midline, hamstrings flex the knee, peroneus longus and brevis pull the great toes toward one another.

Antagonists: the rhomboids and trapezius get a stretch due to serratus anterior.

Holy Yoga Instructor Training Anatomy



Side Plank



Spirals: inner/inner

Agonists: primary line engagement works with the obliques on the under side of the body to create a lift of the upper hip toward the ceiling. Deltoids flex the shoulders and rhomboids draw the shoulders together toward the midline. Triceps work to straighten the elbows. Glutes and TFL on under side of the body press to the floor to isometric contraction assisting the lift in the side body. Tibialis anterior helps to flex the feet and protect the knee.

Antagonists: upper side body can release due to under side body contracting to create lift. Chest can open due to shoulder and skull draw done by the work of the erectors of the spine.

Modified Side Plank



This version of the pose allows the bottom leg to do the work the core on the under side of the body would do. This is known as shortening the lever; this makes a pose more stable if the student does not yet have the strength to hold the pose with integrity.

It is far more important to do a pose well that you can surrender into, than to push yourself too hard and not be able to honor your body.

Holy Yoga Instructor Training Anatomy



Bottom of a proper push up



Spirals: inner/inner

Agonists: primary line engagement holds the bulk of your body weight so your arms are not taking the weight. Shoulder draw via rhomboids and trapezius; this action with serratus anterior stabilizes the shoulder. Bicep and tricep hold the arms in the angle shape. A skull draw by the erector spinae of the neck allows for head to stay in line for primary line alignment. Just as the bicep and tricep work to balance the elbow, the psoas and glutes work together to balance the pelvis. The quadriceps straighten the knees while gastrocnemius and soleus plantar flex the ankle.

Antagonists: this pose is a full body pose much like staff.

Improper bottom of a push up



Never compromise your body for a pose; this puts strain and pressure on the shoulders, neck, and wrists as you can see pictured here. Dropping the elbows below the shoulders can compromise the integrity of the shoulders and lead to injury.

Holy Yoga Instructor Training Anatomy



Shoulder Stand



Spirals: inner/inner

Agonists: this pose is all about balance. Erector spinae and rectus abdominis balance the back while QL and psoas balance the low back. Glute max and psoas balance the pelvis. Glute medius and TFL inwardly rotate while the adductors draw the legs together. Quadriceps straighten the knee, and the tibialis anterior dorsiflex the foot. The sole opening happens through the peroneal muscles of the foot. As seen in previous poses, where the arm presses to the floor (bridge, plow), the deltoid extends the arm, tricep straightens the elbow, rhomboids and trapezius draw the shoulders back and down. That shoulder draw allows a deeper pose. Extensors of the neck press into the mat to protect the natural lordotic curve of the neck.

Plow



Spirals: inner/inner

Agonists: plow is for the flexors of the body what inclined plane is for the extensors of the body. Psoas works with the QL to allow a stable low back. Psoas and pectineus flex the hip while adductors draw legs in. Quadriceps straighten the knee while tibialis anterior dorsiflexes the ankle. Eversion of the foot opens the sole through the contraction of peroneus longus and brevis. Deltoid extends the shoulders while the tricep assists and extends the elbow.

Antagonists: the back body muscles (erectors, QL, hamstrings, glutes) can let go due to the flexion of the abdominals and quadriceps in this pose.

Holy Yoga Instructor Training Anatomy



Head Stand



Spirals: inner/inner

Agonists: this pose is all about balance. Erector spinae and rectus abdominis balance the back while QL and psoas balance the low back. Glute max and psoas balance the pelvis. Glute medius and TFL inwardly rotate while the adductors draw the legs together. Quadriceps straighten the knee, and the tibialis anterior dorsiflex the foot. The sole opening happens through the peroneal muscles of the foot. The triceps press the arms into the mat while the bicep allows for the flexion of the elbow. Deltoid draws biceps by the ears, and the trapezius lowers the shoulders away from the ears.

Shoulder Stand



You can see by the slight forward movement of the legs the imbalance that can happen in headstand if the pelvic stabilization is not addressed in a pose. You can see by the void in the abdomen that she is not fully engaged so she cannot extend the legs to bring balance.

Holy Yoga Instructor Training Anatomy



Sphinx



Spirals: inner/inner

Agonists: erectors and QL lift the back, and erectors help to extend the neck for a skull draw. The adductors of the shoulders work concentrically to lift the upper body. Rhomboids and trapezius work to draw shoulders back and down, which is what allows the heart to move forward. Quadriceps work to straighten the knee, which presses the tops of the feet into the mat. Finally, the adductors work to draw the legs together, which is one of the mechanisms that protect the low back in this pose.

Antagonists: upper part of the front body. Abdominals and the front of the neck release due to the back body engagement.

Improper Sphinx



The three primary muscles that contract to protect the low back in back bends are: quadratus lumborum, psoas major, and rectus abdominis. Once the low back is protected, the student can then lift into the full expression and use the rhomboids to draw the shoulders together. This retraction of the scapula is what allows the heart to move forward in a back bend. Drawing the legs together (adductors) helps to recruit more muscles to keep the core stable and not compensate for a compromised low back as pictured here. Elbows will optimally align with the shoulders. In the bottom body, the legs will draw together to protect the low back.

Holy Yoga Instructor Training Anatomy



Improper Supine Back Bend



You'll find many students feeling that a back bend comes from upper body or arm strength. Proper education helps them to understand it is the muscles of the posterior spinal column that lift the back, and not the pressing motion of the arms into the mat, that creates a healthy back bend.

Improper Supine Back Bend

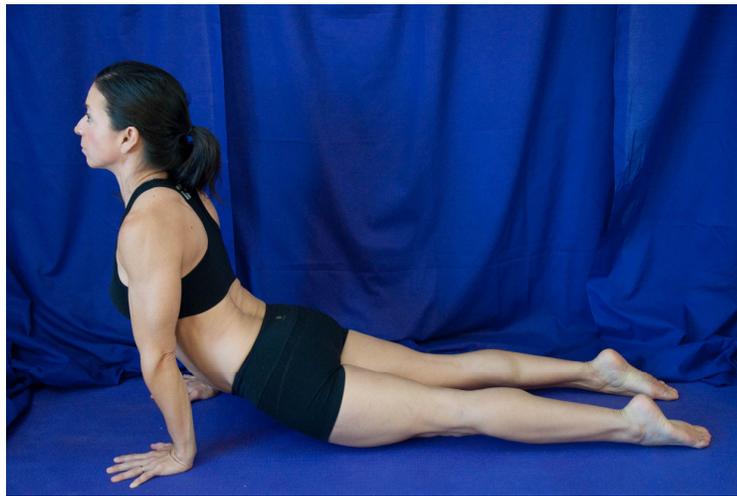


Example of compromising your primary line and injuring your shoulders in the process. A poor foundation is set here and above by compromising the low back and causing compression in the lumbar and sacral areas. This foundation applies to all prone back bends. Examples being: sphinx, cobra, upward facing dog, and bow.

Holy Yoga Instructor Training Anatomy

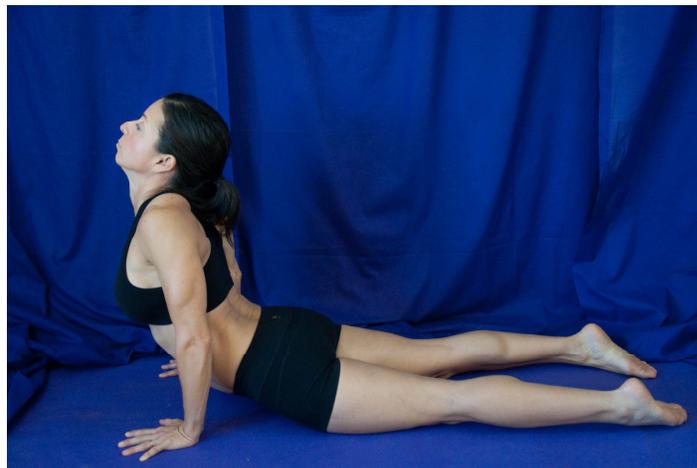


Improper Upward Facing Dog



Example of locked and hyperextended elbows, a common mistake among new practitioners or those lacking core strength. Elbows drawing in fixes the humerus and allows latissimus dorsi to draw the chest forward; this allows for the chest to open. Shoulders drawing back enhances this action.

Improper Upward Facing Dog



Example of a “hiccup” in the primary line-hyper extension of the neck. Also note, the legs drawing together will further support the low back and reduce the chances of injury.

Holy Yoga Instructor Training Anatomy



Camel



Spirals: inner/inner

Agonists: another example of a full body extension (heart opener) that uses almost the whole back body. Erectors and QL allow for extension of the spine and low back. Rhomboids and trapezius work to draw shoulder back and down while the posterior deltoid extend the arm. The triceps extend, and on the front of the body, the pectoralis minor helps to lift the rib cage. Glute max and hamstrings extend the hips (to keep them straight) and adductors draw thighs together. The glute medius and TFL inwardly rotate the thigh. Tibialis anterior dorsiflexes the ankle (if ankles were flat it would be gastrocnemius and soleus plantar flexing).

Antagonists: abdominals in front, as well as the quads, can release due to extension of the back.

Camel



Example of hips falling back-compromises the low back by adding extra compression to the lower lumbar vertebrae.

Holy Yoga Instructor Training Anatomy



Bridge



Spirals: inner/inner

Agonists: erectors and QL arch the back, glutes and hamstrings extend the hips while hamstrings flex the knees. Glute medius and TFL inwardly rotate the leg. Adductors draw the thighs toward the midline. In the quadriceps an isometric contract assists the pose. Gastrocnemius and soleus press the feet into the floor. In the arms, the deltoid extends the shoulder and the tricep extends the elbow. Extensors of the neck contract, lifting the chin, so the lordotic curve is protected.

Antagonists: the contracting of the back body allows the front of the heart a great stretch.

Bridge Variation



Spirals: inner/inner

Agonists: erectors and QL arch the back, glutes and hamstrings extend the hips while hamstrings flex the knees. Glute medius and TFL inwardly rotate the leg. Adductors draw the thighs toward the midline. In the quadriceps an isometric contract assists the pose. Gastrocnemius and soleus press the feet into the floor. In the arms, the deltoid extends the shoulder and the tricep extends the elbow. Extensors of the neck contract, lifting the chin, so the lordotic curve is protected.

Antagonists: the contracting of the back body allows the front body to get a great stretch.

Holy Yoga Instructor Training Anatomy

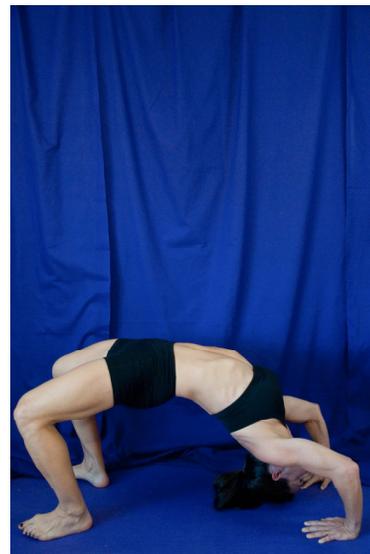


Improper Bridge



The improper foundation of the knees so far apart puts pressure on the low back to do the job the glutes should be doing. Teaching your students to keep the legs drawn together, which can be illustrated with a block between the thighs, will help to eliminate this potential imbalance.

Prep for Wheel



The prep for a wheel pose allows a student to get the shoulders drawn and heart forward which allows them the strength to lift into this posture and not have to thrust themselves. To thrust yourself into this posture is hard on your shoulders and puts stress on muscles that were not meant to take the weight of the pose.

Notice in this prep pose, her arms are a little further from her face, making the lift much harder and her foundation is not directly under the pose.

Holy Yoga Instructor Training Anatomy



Prep for Wheel



Wheel



Spirals: inner/inner

Agonists: erectors and QL arch the back, glutes and hamstrings extend the hips while hamstrings flex the knees. Glute medius and TFL inwardly rotate the leg. Adductors draw the thighs toward the midline. In the quadriceps an isometric contract assists the pose. Gastrocnemius and soleus press the feet into the floor. In the arms, the deltoid flexes the shoulder and the tricep extends the elbow. Rhomboids and trapezius draw the scapula to the midline and lower it. Extensors of the neck contract, lifting the chin, so the lordotic curve is protected.

Antagonists: the contracting of the back body allows the front body to get a great stretch.

Holy Yoga Instructor Training Anatomy



Bow



Spirals: inner/inner

Agonists: erectors and QL contract to extend the back, glute max extends the hip, quadriceps extend the knee (this actions allows for the opening of the heart), and tibialis anterior dorsiflex the feet. The posterior deltoid extends the shoulders to reach for the feet while the bicep flexes the arm. Rhomboids and trapezius draw shoulder back and down to allow the heart to open more.

Antagonists: another great example of the stretch that is created in the front body, including the pecs, abdominals, and deltoid (anterior side) because of the contraction of the back body in extension.

Improper Bow



Example of knees moving too far lateral. Creates compression in the low back space. Pulling the knees apart in this way also makes it difficult to press the shins back; pressing the shins back in this pose is what lifts the back and helps to open the heart.

Holy Yoga Instructor Training Anatomy



Locust



Spirals: inner/inner

Agonists: erectors and QL arch the back while rhomboids draw the scapulae together, and the trapezius draw the scapulae down the back. The glutes and hamstrings extend the hips, adductors draw the thighs to the midline. Quadriceps straighten the knees. The feet are plantar flexed, this is the gastrocnemius and soleus.

Antagonists: pecs and front of the neck (flexors of the neck), abdominals, tibialis anterior.

Improper Locust



Example of feet moving too far lateral. Creates compression in the low back space. Often the students will feel the lift in the legs when they separate the legs and it will feel correct. Helping them to understand the need to draw the legs together (adductors), helps them to feel the pose in the whole back body and not just the glutes (which are what takes over to lift the legs high when the legs separate).

Holy Yoga Instructor Training Anatomy



Fish



Spirals: inner/inner

Agonists: erectors and QL arch the back while the neck deepens the arch in the back. Rhomboids draw shoulder blades together while the trapezius draws the scapula down the back. Elbows press into the mat, engaging posterior deltoid. Latissimus and pec major adduct the shoulder to keep it next to the side body. Glutes and hamstrings extend the hip, and the quadriceps work to extend the knees. The adductors draw the thighs together. Finally, gastrocnemius and soleus plantar flex the foot, which points the toes.

Antagonists: abdominals, intercostal muscles (in between the ribs), anterior deltoid, and anterior flexors of the neck.

Improper Fish



Example of a poor bottom body foundation in a supine back bend. The inward rotation and drawing together of the inner thighs help to create the foundation of a good heart opener (the bottom body).

Holy Yoga Instructor Training Anatomy



Cat



Spirals: inner/inner

Agonists: abdominals are fully engaged, transverse abdominis, obliques, rectus abdominus, intercostal muscles draw ribs together while the flexors of the neck draw the chin to the chest. Pectoralis major adducts the arms while deltoid flexes the shoulder. Serratus anterior abducts the scapula, and the Tricep extends the elbow. Adductors draw the thighs together, and pressing the tops of the feet into the floor (quadriceps) helps to further engage the abs and deepen the pose.

Antagonists: erectors and QL, rhomboids, middle and lower fibers of trapezius. Extensors of the neck including the suboccipitals release due to flexion in the neck.

Cow



Spirals: inner/inner

Agonists: erectors and QL work to extend the back body and neck. Rhomboids draw scapulae together, and the trapezius draws the scapulae down the back. Pressing into the floor and back happens through the deltoid, extending the shoulder (helping to move the heart forward), and triceps work to extend the elbow. Adductors draw the thighs together.

Antagonists: abdominals can fully release due to the extension in the back body. Hamstrings get a small release due to pulling the SITS bone toward the ceiling (anterior tilt in the pelvis).

Holy Yoga Instructor Training Anatomy



Lying Spinal Twist



Spirals: inner/outer

Agonists: Right hip and shoulder attempting to anchor back to the mat to achieve twist in the abdomen, and deep hip rotator and glute stretch. On the right shoulder the deltoid, rhomboid and trapezius work the shoulder back to the mat while the left side sternocleidomastoid contracts to help look over the right shoulder. In the abdomen the obliques allow for the twist working bilaterally. Adductors of the right leg draw the leg across the body.

Antagonists: Right side glutes, deep hip rotators, and QL get a release due to the adductors and twisting motion. If the twist is intense enough, the intercostals can also benefit and open the lower aspect of the ribs.

Revolved Triangle



Spirals: inner/inner

Agonists: serratus anterior draws the arm down, and the deltoid extends, deepening the pose. Rhomboids and traps draw shoulders back and down, and deltoid helps extend the top shoulder in place. In the front hip the psoas, pectineus, and adductors flex the hip and draw the front leg toward the midline. In the back leg glute max extends the hip and outwardly rotates it. Adductors of the back leg (magnus) draw the leg toward the midline. The tibialis anterior blades the outside edge of the foot, helping the adductors. The quadriceps extend both knees.

Antagonists: the whole posterior hip and sacral area release due to the flexion in front body.

Holy Yoga Instructor Training Anatomy



Revolved Side Angle



Spirals: inner/outer

Agonists: serratus anterior draws the arm down, and the deltoid extends deepening the pose. Rhomboids and traps draw shoulders back and down, and deltoid helps extend the top shoulder in place. In the front hip the psoas, pectineus, and adductors flex the hip and draw the front leg toward the midline. The hamstrings of the front leg flex the knee. In the back leg glute max extends the hip and outwardly rotates it. Adductors of the back leg (magnus) draw the leg toward the midline. The tibialis anterior blades the outside edge of the foot helping the adductors. The quadriceps extend the knees on the back leg.

Antagonists: the whole posterior hip and sacral area release due to the flexion in front body.

Improper Revolved Side Angle



This is an example of a poor bottom body and an improper shoulder draw in a twist. Note the shoulders drawing up toward the ears.

Holy Yoga Instructor Training Anatomy



Seated Forward Fold



Spirals: inner/inner

Agonists: rectus abdominis flexes the trunk, and iliopsoas, pectineus, rectus femoris flex the hip while the adductors draw the thighs toward the midline. Quadriceps extend both knees, and tibialis anterior dorsii flexes the feet. The lateral foot muscles (peronials) turn to open the soles of the feet. The rhomboids draw shoulder in toward midline while trapezius draw shoulders down. The biceps flex the elbow to deepen the stretch in the back body.

Antagonists: extensors of the spine, glutes, hamstrings, and calves can all release in this pose due to the intense forward movement.

Improper Forward Fold



Example of a “hiccup” in the primary line. The line optimally is aligned throughout the forward fold.

Holy Yoga Instructor Training Anatomy



Improper Seated Forward Fold



Additional example of a poor foundation in forward fold. Also note, the lack of inward draw of the thighs, which encourages the arms to not draw back in an appropriate shoulder draw. To relieve this, the student would first engage the belly (stomach lock) and the other muscles can fall inline.

Standing Forward Fold



Spirals: inner/inner

Agonists: rectus abdominis flexes the trunk, and iliopsoas, pectineus, rectus femoris flex the hip while the adductors draw the thighs toward the midline. Quadriceps extend both knees, and tibialis anterior dorsi flexes the feet. The rhomboids draw shoulder in toward midline while trapezius draw shoulders down. The hands press into the floor and back by the deltoid extending the shoulder.

Antagonists: extensors of the spine, glutes, hamstrings, and calves can all release in this pose due to the intense forward movement.

Holy Yoga Instructor Training Anatomy

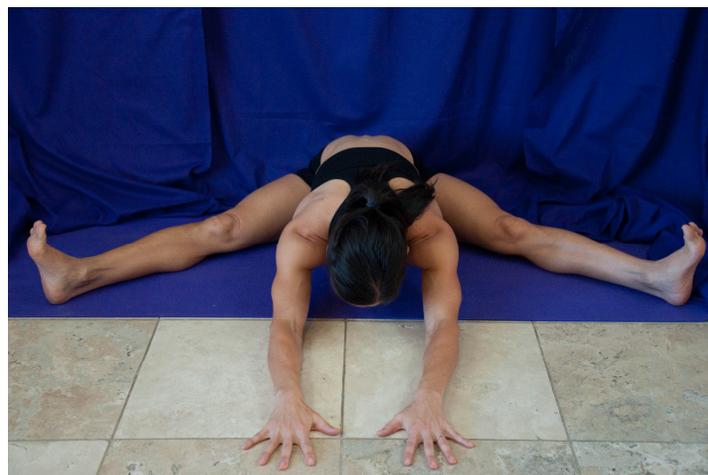


Improper Standing Forward Fold



Just like a seated forward fold when the belly is not properly engaged, you can see the same “hiccup” in the primary line which hinders the flexibility. The moment you engage stomach lock, the hamstrings release and allow for a more intense forward fold.

Seated Open A Forward Fold



Spirals: outer/outer

Agonists: rectus abdominis flexes the trunk, and iliopsoas, pectineus, rectus femorus flex the hip while the glutes draw the thighs away from the midline. Quadriceps extend both knees, and tibialis anterior dorsi flexes the feet. The lateral feet muscles (peronials) turn to open the soles of the feet. The rhomboids draw shoulder in toward midline while trapezius draw shoulders down. The deltoid allows the flex of the arms to bring biceps by the ears.

Antagonists: extensors of the spine, hamstrings, and calves can all release in this pose due to the intense forward movement.

Holy Yoga Instructor Training Anatomy



Improper Seated Open A Forward Fold



Additional example of not honoring the primary line in a forward fold.

Reclined Hero



Spirals: inner/inner

Agonists: deltoids flex the arms, and biceps flex the elbow to frame the face. Infraspinatus and teres minor outwardly rotate the shoulder. Extensors of the neck lift the chin to protect the lordotic curve in the neck. QL and psoas work to protect the curve of the low back, and the transverse abdominis works to protect the low back as well. Hamstrings flex the knees, and the tibialis posterior inverts the feet. Adductors work to keep the thighs drawn toward the midline in this pose.

Antagonists: the quadriceps and abdominals open due to the reclining pull of this pose.

Holy Yoga Instructor Training Anatomy

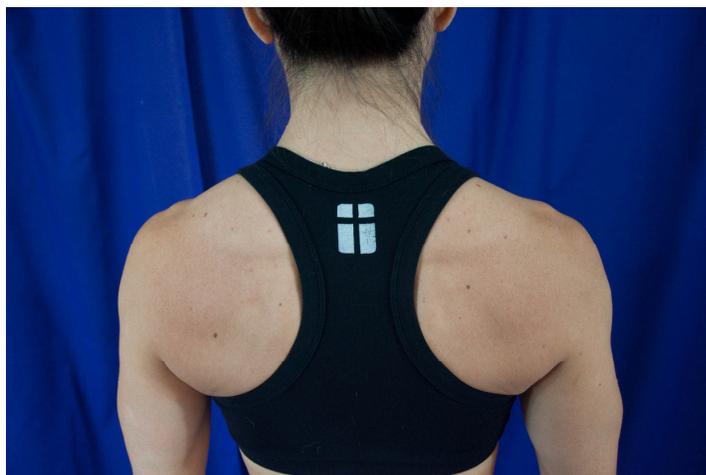


Improper Reclined Hero



**Example of compression caused in low back due to knees moving too far lateral in a supine back bend.
Often if you let the legs separate, you can get closer to the floor; this causes stress in the low back by intensifying the lordotic curve in an unhealthy way.**

Rhomboids Major and Minor

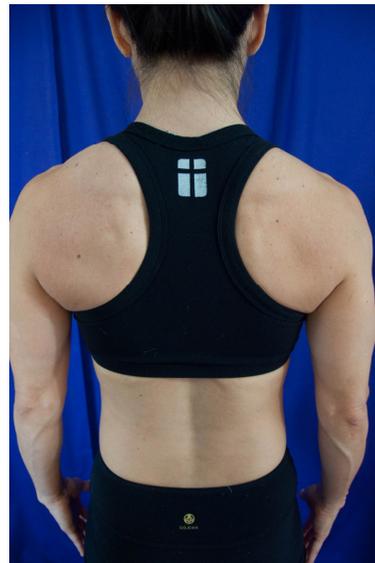


Anatomy of a Shoulder Draw-your deltoids do not a shoulder draw make!

Holy Yoga Instructor Training Anatomy



Proper pelvic position



Anterior Tilt

Pelvis is tilted too far forward, shortening the quadriceps and over lengthening the hamstrings, leaving them open to strains. Causes low back pain.

Posterior Tilt

Pelvis tilted backward, hamstrings tight and quadriceps get overstretched. Can cause many shoulder and neck injuries.

Side body in yoga postures



Managing the Side Body-Keeping a neutral pelvis

Holy Yoga Instructor Training Anatomy

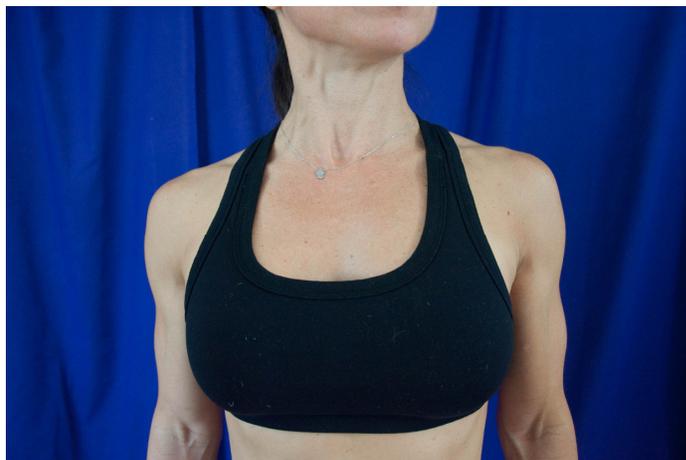


A healthy Open Heart



An open heart allows for breathing to be full and deep. The muscles of breathing are covered in latter pages.

Position of the chin in Standing.



A chin parallel to the floor allows for opening of the front side of the neck and a protection of the lordotic curve in the neck. Often, daily life causes this curve to begin to straighten out and cause dysfunction and pain. Contracting the cervical erectors, splenius capitis, splenius cervicis, and trapezius allows for the antagonists on the front of the neck to release and relax.

Holy Yoga Instructor Training Anatomy



Muscles of breathing

Breathing techniques allow a bridged connection between the instinctual function of the brain stem and the conscious mind. Yoking this with the truth of God creates the mind that is transformed and wholly focused on Jesus. The breath allows for calm, as it is the deep receptors in the lungs that allow for parasympathetic functions to calm the function of our fight or flight or sympathetic, nervous system.

Job 32:8 (Message) tells us, “But I see I was wrong-it’s God’s spirit in a person, the breath of the Almighty One, that makes human insight possible.” We need to think from His truth, the truth, not ours if we are to be healthy and whole.

Muscles of breathing:

The diaphragm is a muscle that separates the cervical and thoracic cavities; we can think about controlling this muscle but we don’t have to.

First priority is the primary line; this with a shoulder draw allows for the space needed to bring in large volumes of breath.

What is the core?

The muscles lining the vertebral column on the front, back, and sides all work to stabilize the trunk when you move your arms and legs. Even the muscles on the side body, the obliques, play a role in stabilizing the spine. A strong core allows for smooth and fluid movement; this allows for pressure to be taken off your joints and prevention of many musculoskeletal aches and pains.

Spinal stabilizers:

Erector Spinae groups on the posterior side of the spine, Iliopsoas on the anterior side of the spine. Psoas and QL work together to keep a healthy lumbar curve in the back. When movement does take place, often it is the multifidus and Transverse Abdominis that are first to contract and “root down” so you can rise up.

Holy Yoga Instructor Training Anatomy



Recommended reading for further study of anatomy:

The Key Muscles of Yoga, Ray Long, MD, FRCSC

The Key Poses of Yoga, Ray Long, MD, FRCSC

Anatomy Trains, Thomas Meyers, MD