

5b Kinesiology: AOIs - Posterior Upper Body





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Activity Timing

10 minutes	Break Announce the return time and write it on the board.
5 minutes	Attendance Also project the “Class Reminders” slide.
25 minutes	Cadaver Video: Acland’s Atlas of Human Anatomy
60 minutes	Active study: Coloring, self study, breakout rooms
20 minutes	Break Announce the return time and write it on the board.
35 minutes	Active study: Skeletons and clay, self study
30 minutes	Palpation Video: Trail Guide palpation videos with palpation
10 minutes	<u>Break down, clean up, and circle up</u>
3h 15m	Total Class Time plus 15 flex minutes



5b Kinesiology:

AOIs - Posterior Upper Body

Class Reminders

Assignments:

- 7a Review Questions (A: 119-130)

Quizzes and Exams:

- 6a Kinesiology Quiz (A: 73, and 75-80)
 - AOIs of deltoid, traps, lats, teres major, triceps, rhomboids, and erectors
 - Also definitions on A-51: anterior, posterior, lateral, medial, belly, tendon, action, origin, and insertion

Preparation for upcoming classes:

- 6a A&P: Introduction to the Human Body - Tissues
 - Trail Guide: gluteals
 - Salvo: pages 391-398
 - Packet E: 7-10
 - RQ Packet A-129
- 6b Swedish: Technique Review and Practice - Posterior Upper Body
 - Packet F: 29-30



Classroom Rules

Punctuality - everybody's time is precious

- Be ready to learn at the start of class; we'll have you out of here on time
- Tardiness: arriving late, returning late after breaks, leaving during class, leaving early

The following are not allowed:

- Bare feet
- Side talking
- Lying down
- Inappropriate clothing
- Food or drink except water
- Phones that are visible in the classroom, bathrooms, or internship

You will receive one verbal warning, then you'll have to leave the room.

Classroom Rules

Cell Phones – Turn it off!



And put it away!



Cadaver Video

- Triceps Brachii
- Teres Major
- Rhomboids, Levator, and Trapezius
- Latissimus Dorsi and Deltoid
- Erector Spinae



Coloring Anatomy

Write this list on the board and turn the projector off for now:

- Deltoid
- Trapezius
- Latissimus dorsi
- Teres major
- Triceps brachii
- Rhomboid major
- Rhomboid minor
- Spinalis
- Longissimus
- Iliocostalis



Palpation

Set Up by the Students

- Students form groups of 3.
- Each group sets up a table and gets 1 face cradle, 1 bolster, and 2 chairs.
- Receivers must remain clothed.
- There will be no need of sheets except for a face cradle cover.

Demo and Practice

- All of the students come to a central table to watch a brief demonstration of how to palpate one of the focus muscles:
 - List and identify the bony landmarks, especially origins and insertions.
 - List and identify the muscle bellies and tendons.
 - List and explain the actions.
 - Demo how to palpate the muscle while simultaneously offer resistance to the action, “Contract, relax. Contract, relax.”
 - The students go back to their table to practice the palpation.
 - 2 students palpate the third student collaboratively.
 - The instructor and assistant circulate to offer guidance and touch comparisons:
- This process repeats for each muscle that will be palpated.
- Once all the focus muscles have been palpated on the first student, repeat the process so that each student will palpate twice and be palpated once.

Prone

Trapezius

- A** *Upper fibers:*
Bilaterally
Extend the head and neck
Unilaterally
Laterally flex the head and neck to the same side
Rotate the head and neck to the opposite side
Elevate the scapula (scapulothoracic joint)
Upwardly rotate the scapula (S/T joint)

Middle fibers:

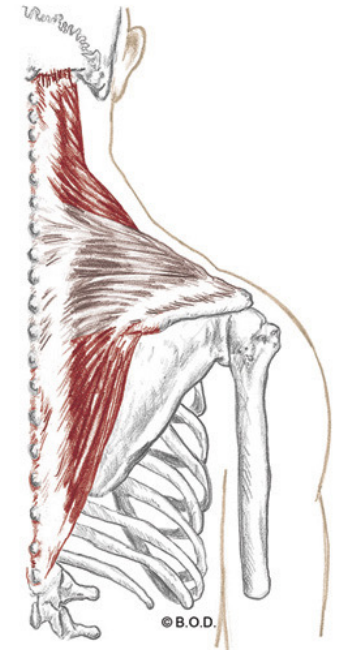
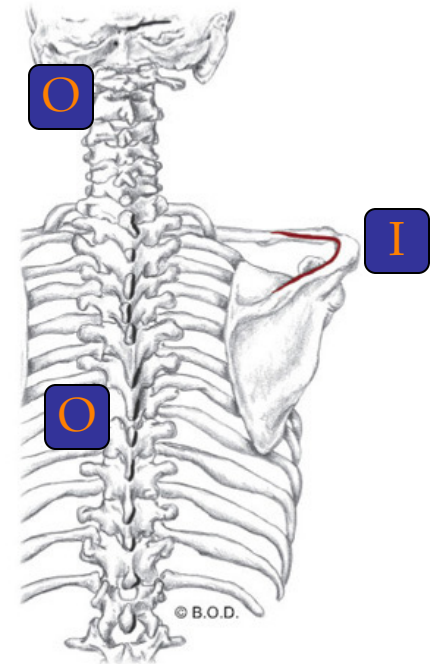
- Adduct** the scapula (S/T joint)
Stabilize the scapula (S/T joint)

Lower fibers:

- Depress** the scapula (S/T joint)
Upwardly rotate the scapula (S/T joint)

- O** External occipital protuberance
Medial portion of superior nuchal line
Ligamentum nuchae
Spinous processes of C-7 through T-12

- I** Lateral one-third of clavicle
Acromion
Spine of scapula



Rhomboid Major and Minor

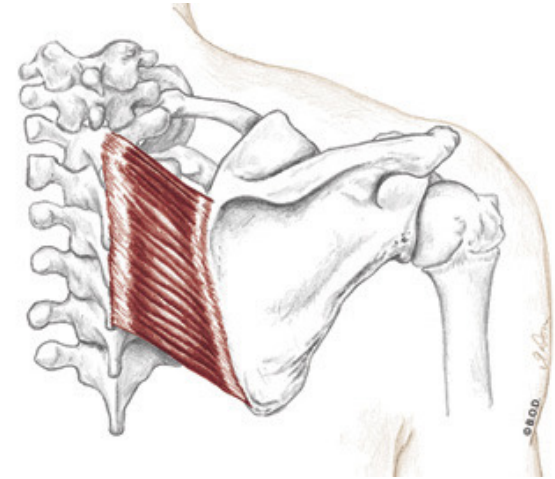
- A** **Adduct** the scapula (scapulothoracic joint)
Elevate the scapula (S/T joint)
Downwardly rotate the scapula (S/T joint)

- O** *Major:*
Spinous process of T2 to T5

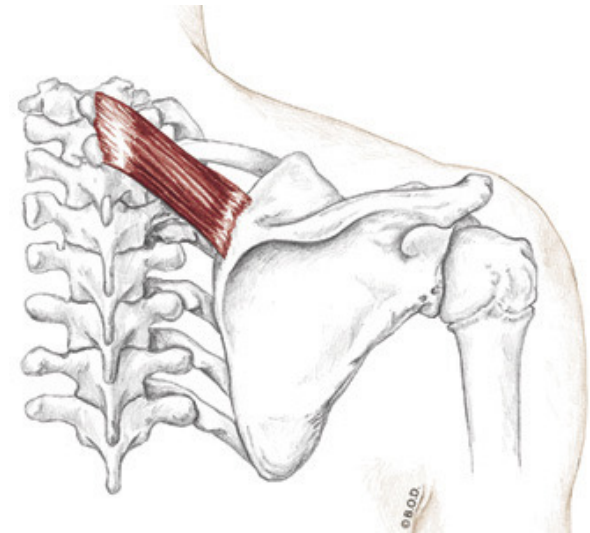
Minor:
Spinous process of C7 and T1

- I** *Major:*
Medial border of the scapula between the spine of the scapula and inferior angle

Minor:
Upper portion of medial border of the scapula, across from the spine of the scapula



Posterior View



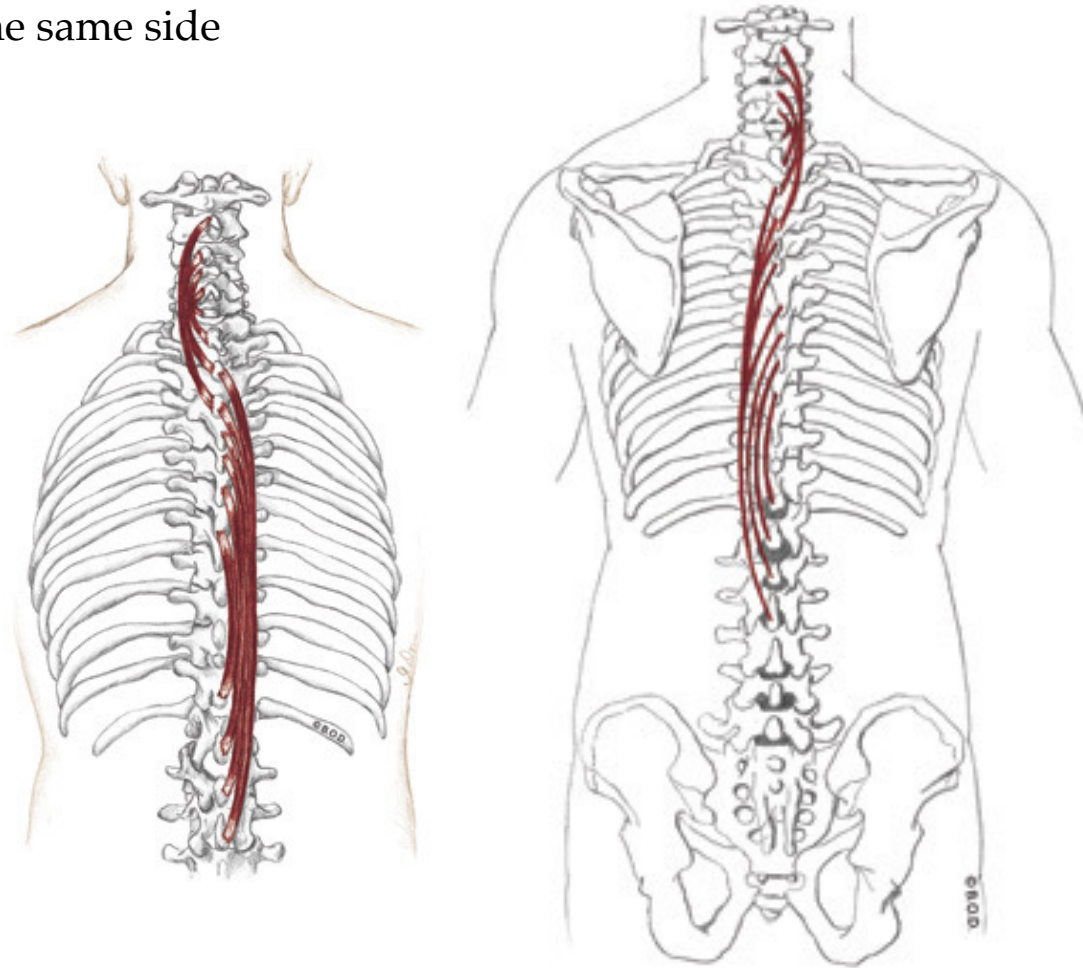
Spinalis, page 197

A *Unilaterally:*
Laterally flex vertebral column to the same side

Bilaterally:
Extend the vertebral column

O Spinous processes of:
C7 vertebrae
Upper lumbar vertebrae
Lower thoracic vertebrae
Ligamentum nuchae

I Spinous processes of:
Upper thoracic vertebrae
Cervical vertebrae



Posterior View

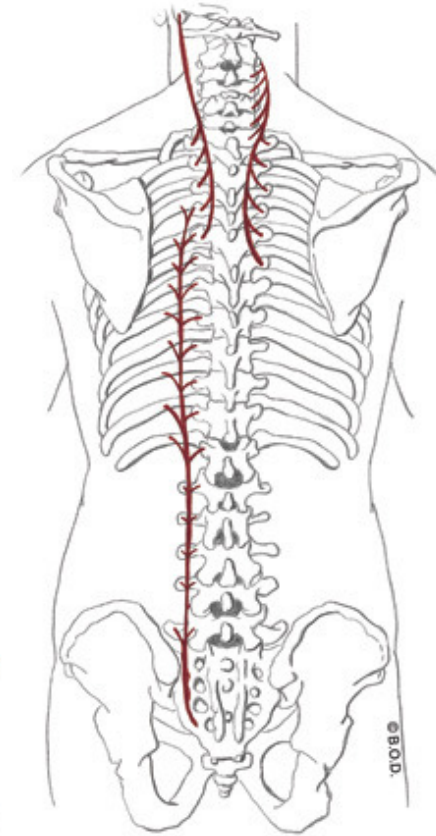
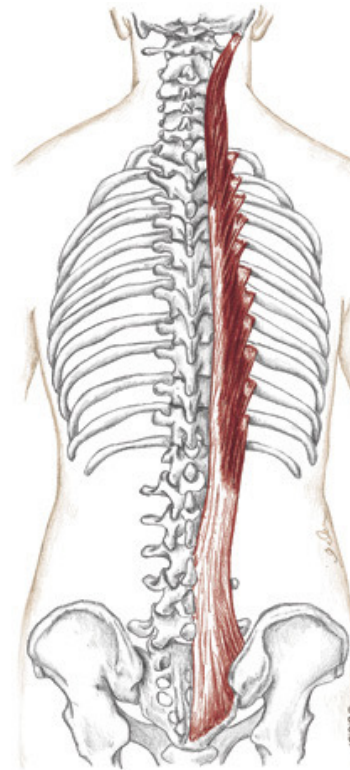
Longissimus, page 198

A *Unilaterally:*
Laterally flex vertebral column to the same side

Bilaterally:
Extend the vertebral column

O Common tendon (thoracis)
Transverse processes of upper five thoracic
vertebrae (cervicis and capitis)

I Lower nine thoracic ribs (thoracis)
Lower nine thoracic transverse processes (thoracis)
Cervical transverse processes (cervicis)
Mastoid process of temporal bone (capitis)



Posterior View

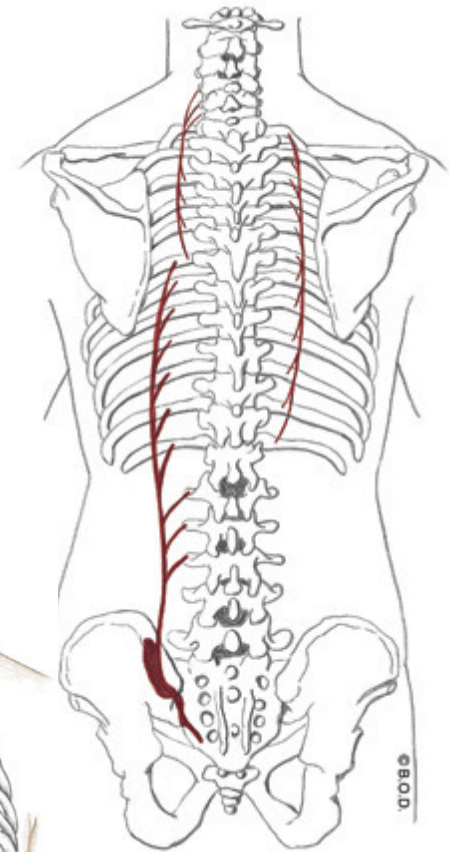
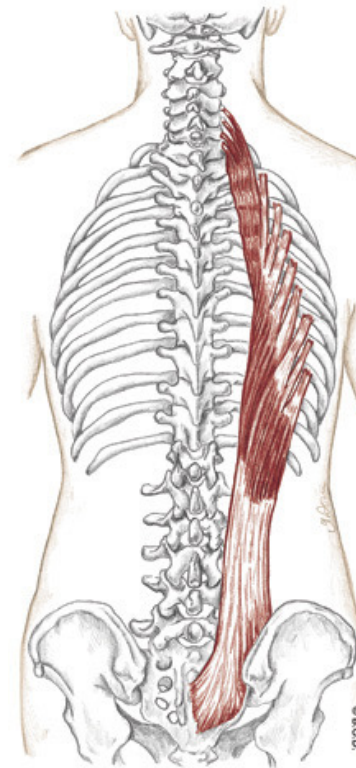
Iliocostalis, page 198

A *Unilaterally:*
Laterally flex vertebral column to the same side

Bilaterally:
Extend the vertebral column

O Common tendon (thoracis)
Posterior surface of ribs 1-12 (thoracis and cervicis)

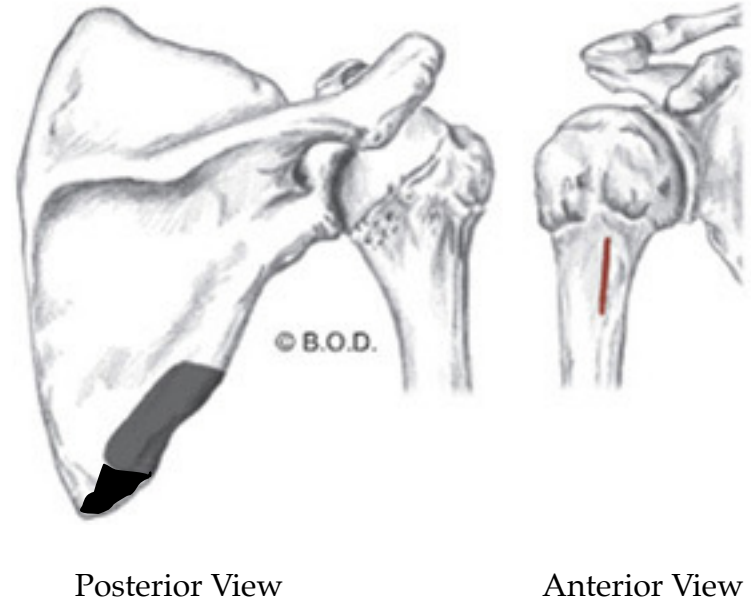
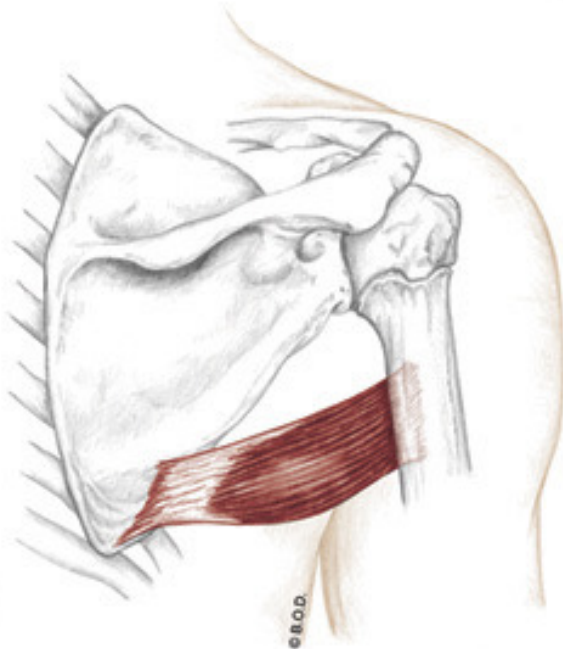
I Transverse processes of lumbar vertebrae 1-3
(thoracis)
Posterior surface of ribs 6-12 (lumborum)
Posterior surface of ribs 1-6 (thoracis)
Transverse processes of lower cervicals (cervicis)



Posterior View

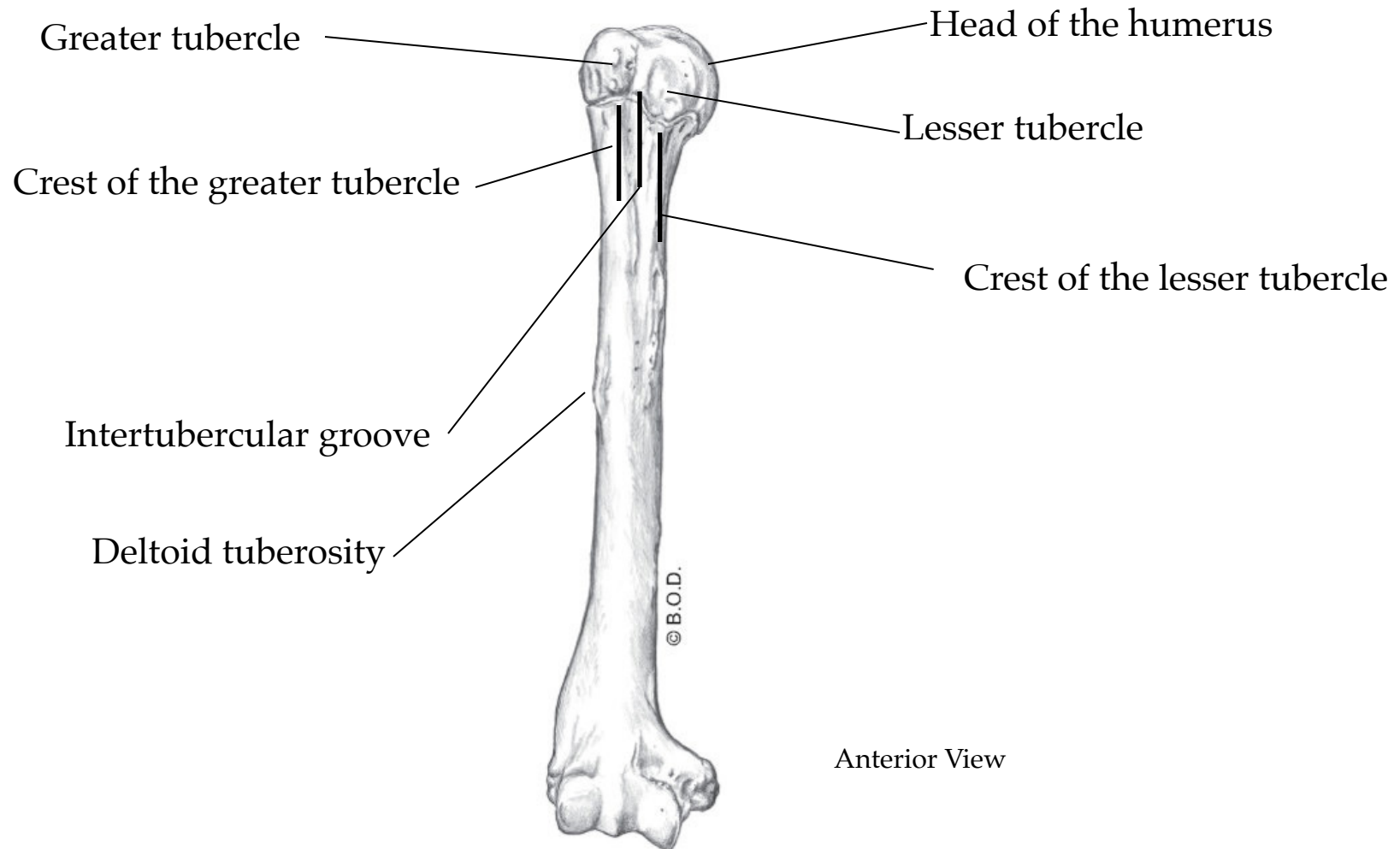
Teres major

- A** **Extend** the shoulder (glenohumeral joint)
Adduct the shoulder (G/H joint)
Medially rotate the shoulder (G/H joint)
- O** Inferior angle of scapula
Lower one-third of lateral border of the scapula
- I** Crest of the lesser tubercle of the humerus



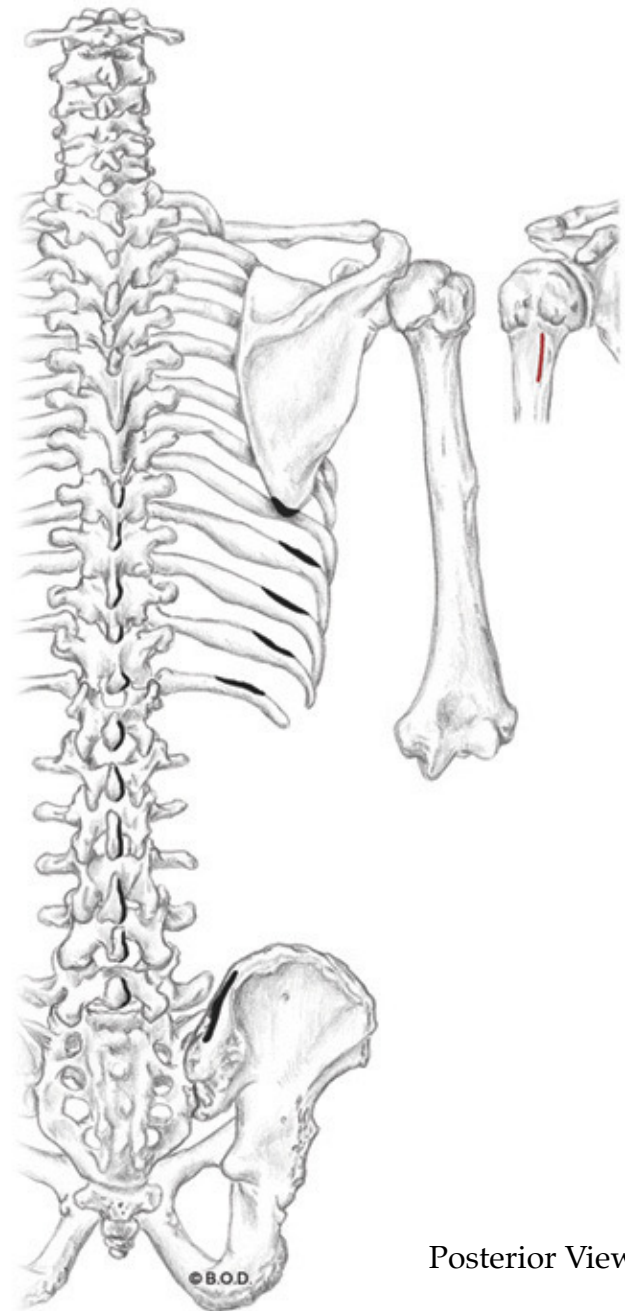
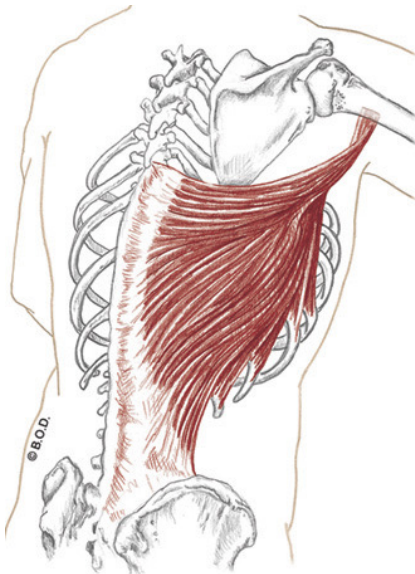
Bony Landmarks of the Humerus

Trail Guide, page 50



Latissimus dorsi

- A** **Extend** the shoulder (glenohumeral joint)
Adduct the shoulder (G/H joint)
Medially rotate the shoulder (G/H joint)
- O** Inferior angle of scapula
Spinous processes of last six thoracic vertebrae
Last three or four ribs
Thoracolumbar aponeurosis
Posterior iliac crest
- I** Intertubercular groove of the humerus



Posterior View

Triceps brachii

A All heads:
Extend the elbow (humeroulnar joint)

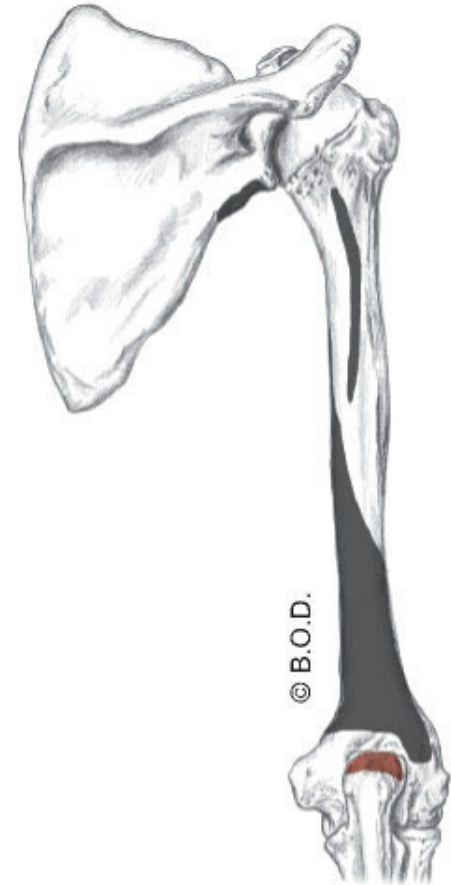
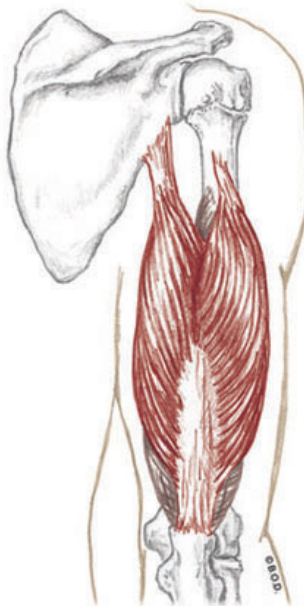
Long head:
Extend the shoulder (glenohumeral joint)
Adduct the shoulder (G/H joint)

O Long head:
Infraglenoid tubercle of the scapula

Lateral head:
Posterior surface of proximal half
of the humerus

Medial head:
Posterior surface of distal half
of the humerus

I Olecranon process of the ulna



Posterior View

Supine

Deltoid

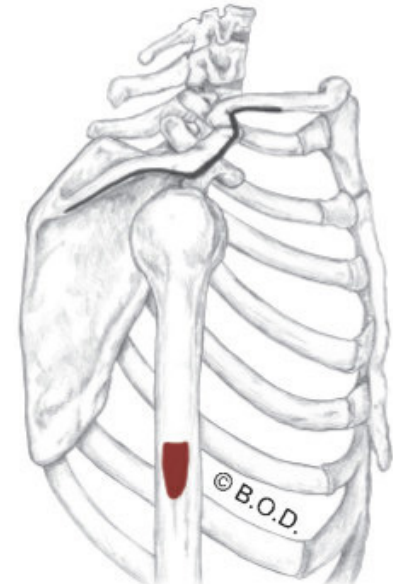
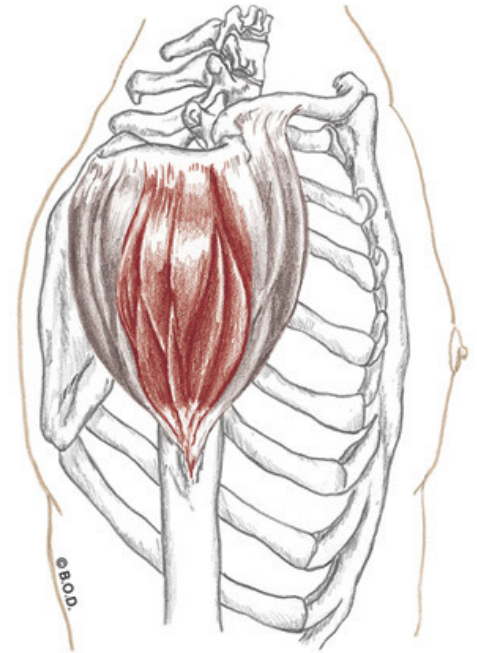
A All fibers:
Abduct the shoulder (G/H joint)

Anterior fibers:
Flex the shoulder (G/H joint)
Medially rotate the shoulder (G/H joint)
Horizontally adduct the shoulder (G/H joint)

Posterior fibers:
Extend the shoulder (G/H joint)
Laterally rotate the shoulder (G/H joint)
Horizontally abduct the shoulder (G/H joint)

O Lateral one-third of clavicle
Acromion
Spine of scapula

I Deltoid tuberosity





Active Study

Instructor will give you directions for today's active study. Options may include:

- Self Study
- Group Study
- Group quizzing
- Coloring pages
- Additional videos
- Skeletons and clay
- Stretches and self care
- Etc.

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