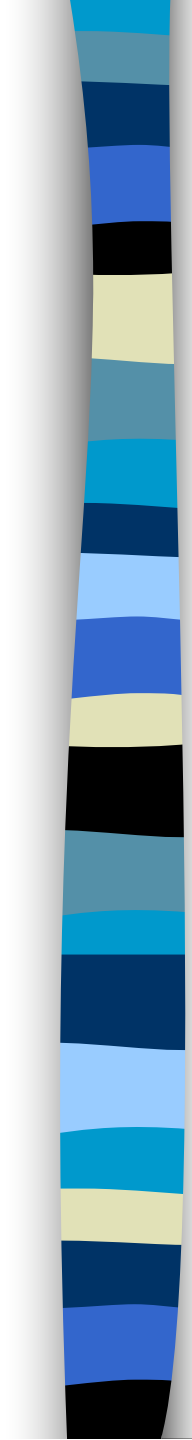


# 12a Kinesiology:

## Muscle Names and Locations



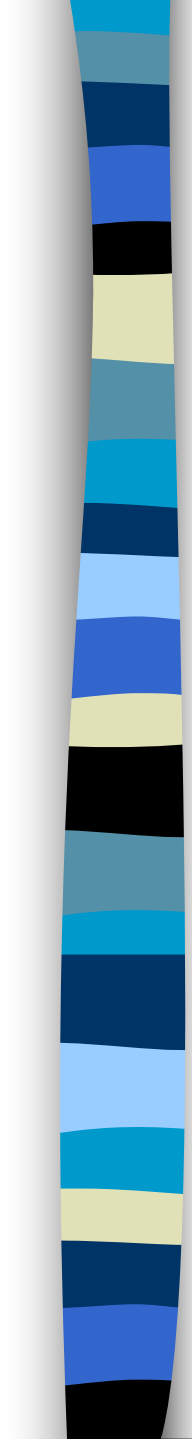


# 12a Kinesiology:

## Muscle Names and Locations

### Class Outline

|            |                                                              |
|------------|--------------------------------------------------------------|
| 5 minutes  | Attendance, Breath of Arrival, and Reminders                 |
| 15 minutes | Lecture: AOIs of the quadriceps                              |
| 15 minutes | Lecture: Muscle names and locations - Anterior               |
| 10 minutes | Active study skills for posterior muscle names and locations |
| 15 minutes | Lecture: AOIs of rectus abdominus and pectoralis major       |
| 60 minutes | Total                                                        |



# 12a Kinesiology:

## Muscle Names and Locations

### Class Reminders

#### **Quizzes and Exams:**

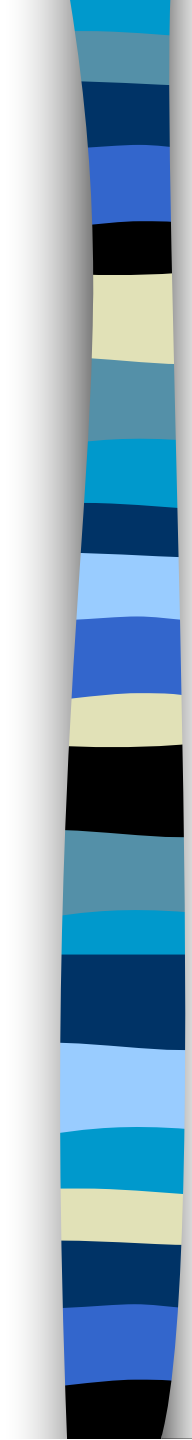
- 14a Kinesiology Quiz
  - Tibialis anterior, fibularis longus and brevis, quads, rectus abdominis, and pec. major
- 17a Quiz
- 18a Kinesiology Quiz
- 19a Quiz
- 21a Exam (100 questions in 80 minutes)

#### **Assignments:**

- 17a Review Questions (A: 131-140)

#### **Preparation for upcoming classes:**

- 13a A&P: Skeletal System - Cells, Tissues, and Bone Shapes
  - Trail Guide: pectoralis major & rectus abdominis
  - Salvo: Pages 412-415
  - Packet E: 15-16
  - RQ Packet A-135
- 13b Kinesiology: AOIs - Anterior Lower Body and Upper Torso



# 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

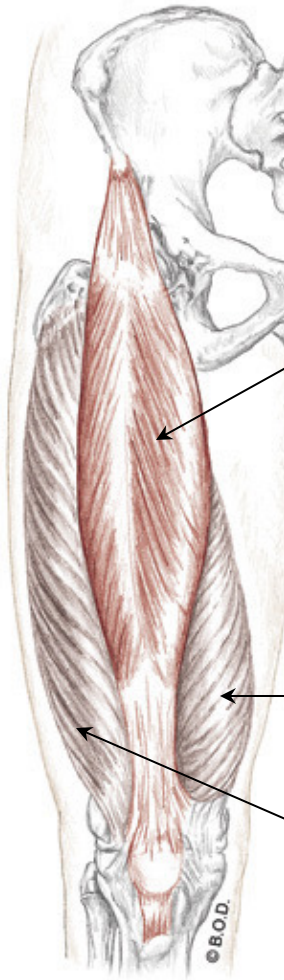
**The following are not allowed:**

- 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.*

# Quadriceps Femoris

## Trail Guide, Page 306



Anterior View

The **quads** primarily extend the tibiofemoral joint.

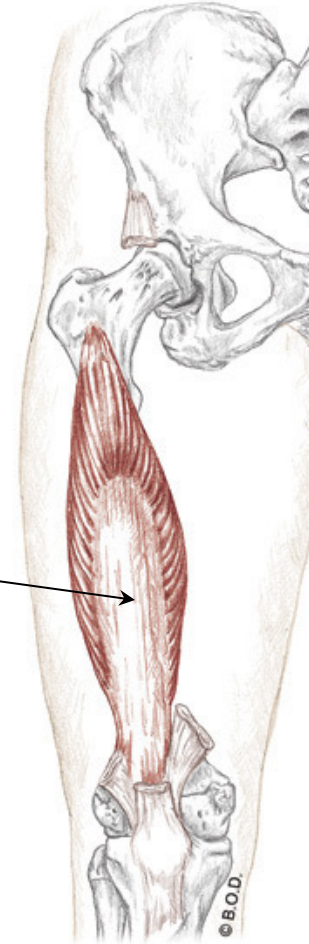
**Rectus femoris** is cylindrical, superficial, and the only quadricep muscle that also crosses the hip joint.

**Vastus intermedius** is deep to the rectus femoris.

**Vastus medialis** forms a teardrop shape at the distal portion of the medial thigh.

**Vastus lateralis** is the sole muscle of the lateral thigh.

When do you use the quads?



Anterior View

# Actions of quadriceps femoris



Knee extension



Hip flexion

# Quadriceps Femoris, page 306

**A** All:  
**Extend** the knee (tibiofemoral joint)

*Rectus femoris:*

**Flex** the hip (coxal joint)

**O** *Rectus femoris:*  
Anterior inferior iliac spine (AIIS)

*Vastus medialis:*

Medial lip of linea aspera

*Vastus lateralis:*

Lateral lip of linea aspera

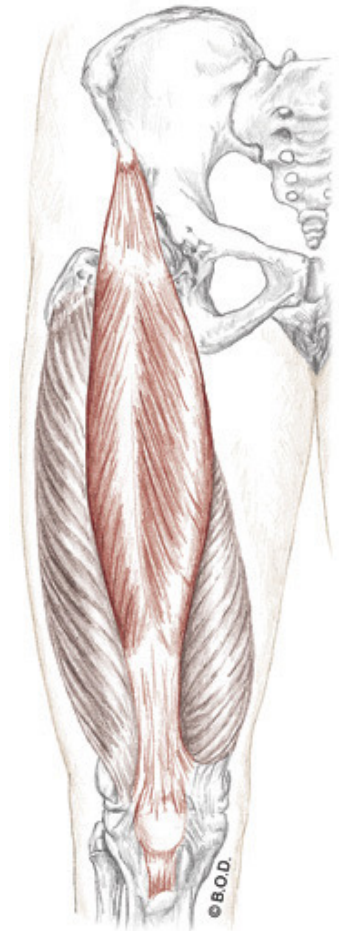
Gluteal tuberosity

Greater trochanter

*Vastus intermedius:*

Anterior and lateral shaft of the femur

**I** Tibial tuberosity  
(via the patella and patellar ligament)



Anterior View

# Quadriceps Femoris, page 306

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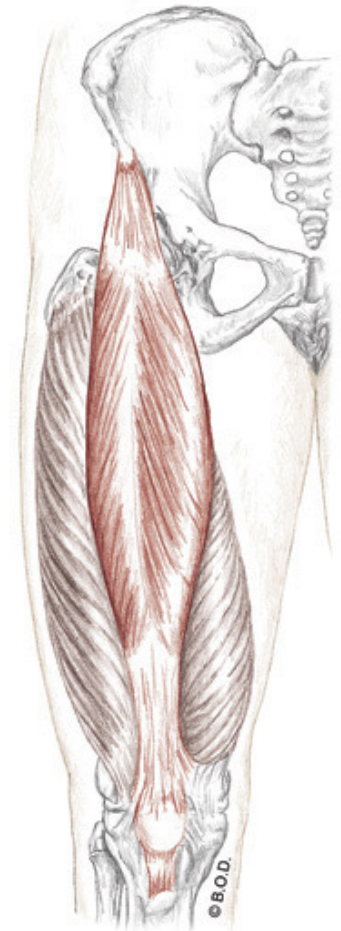
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Anterior View



# Quadriceps Femoris, page 306

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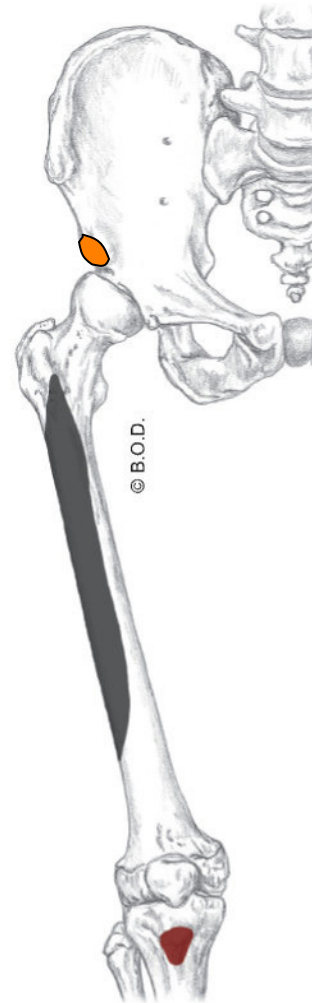
**O** *Rectus femoris:*  
Anterior inferior iliac spine (AIIS)

*Vastus medialis:*  
Medial lip of linea aspera

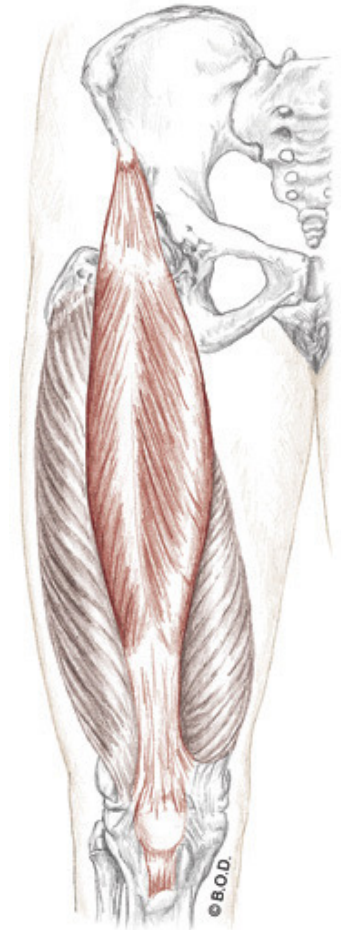
*Vastus lateralis:*  
Lateral lip of linea aspera  
Gluteal tuberosity  
Greater trochanter

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Anterior and lateral shaft of the femur

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(via the patella and patellar ligament)



Anterior View



Anterior View

# Quadriceps Femoris, page 306

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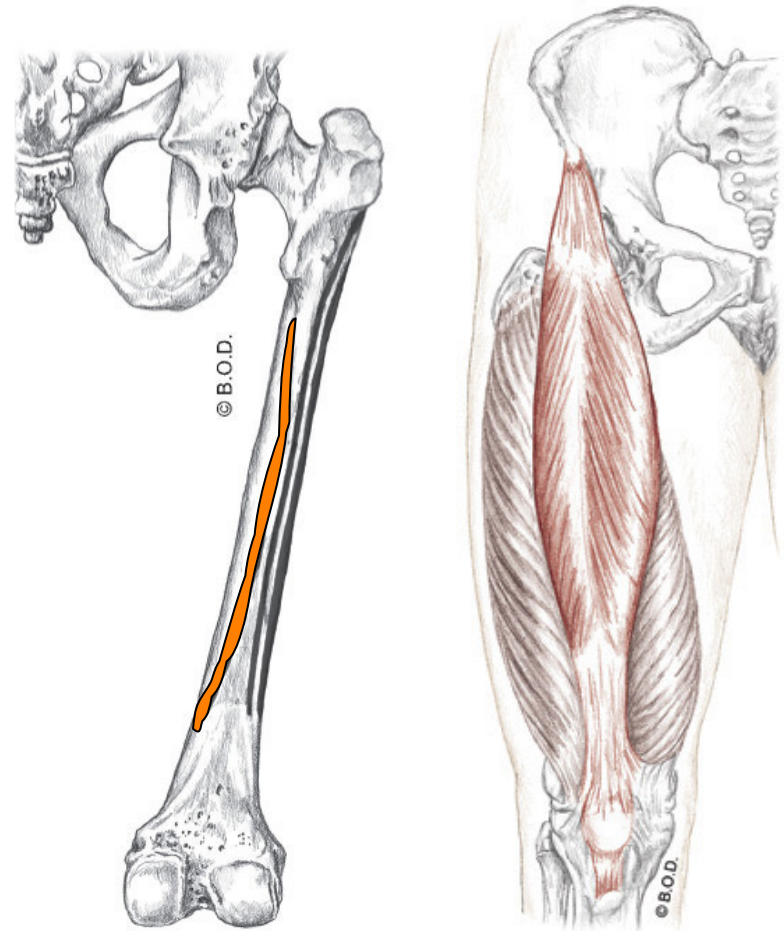
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Posterior View

Anterior View

# Quadriceps Femoris, page 306

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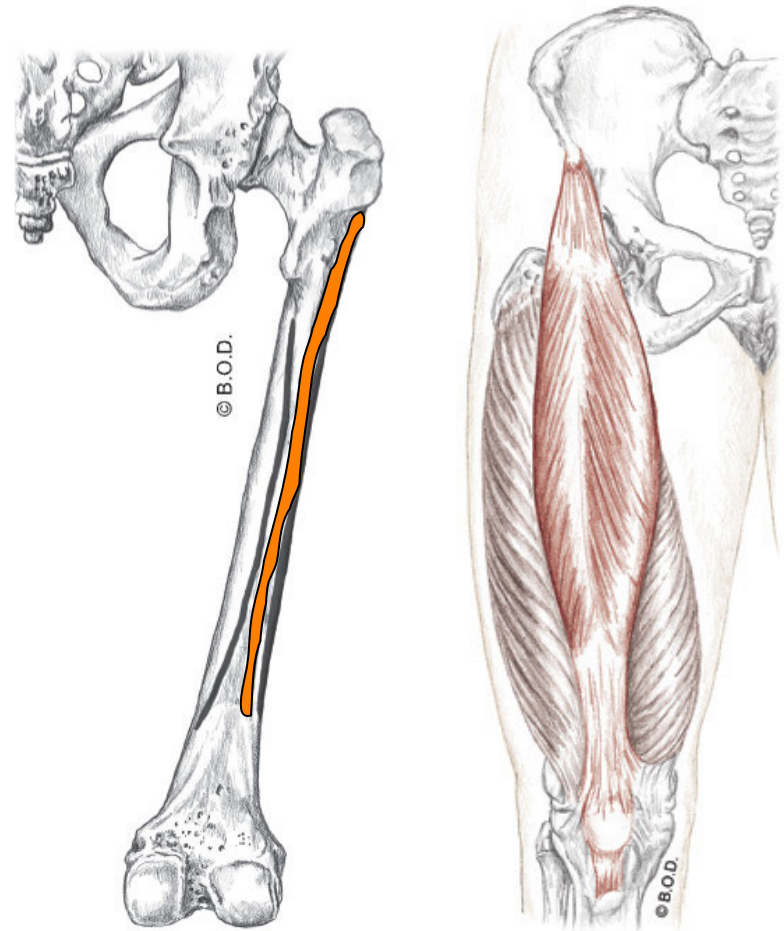
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Posterior View

Anterior View

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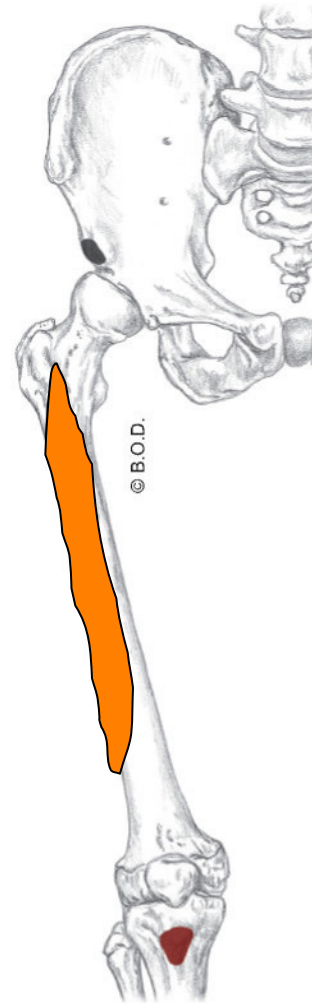
**O** *Rectus femoris:*  
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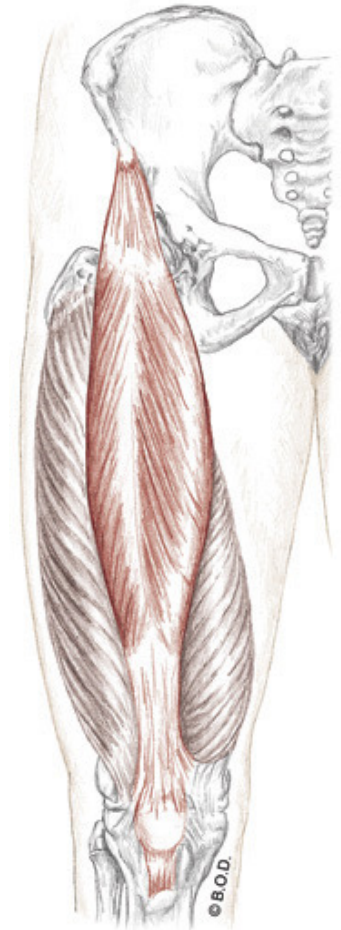
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Anterior View



Anterior View

# Quadriceps Femoris, page 306

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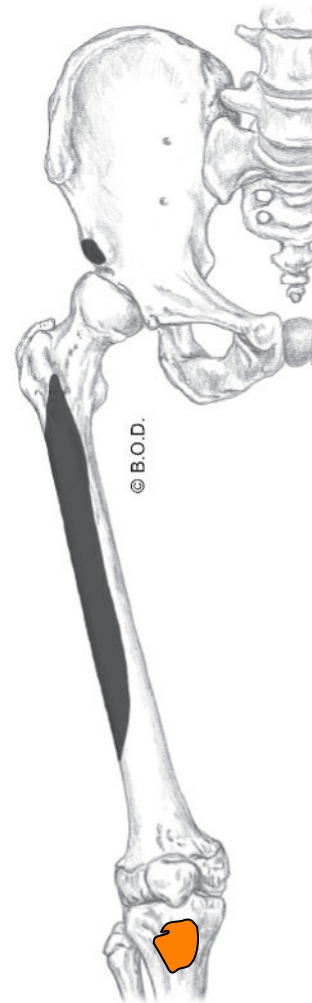
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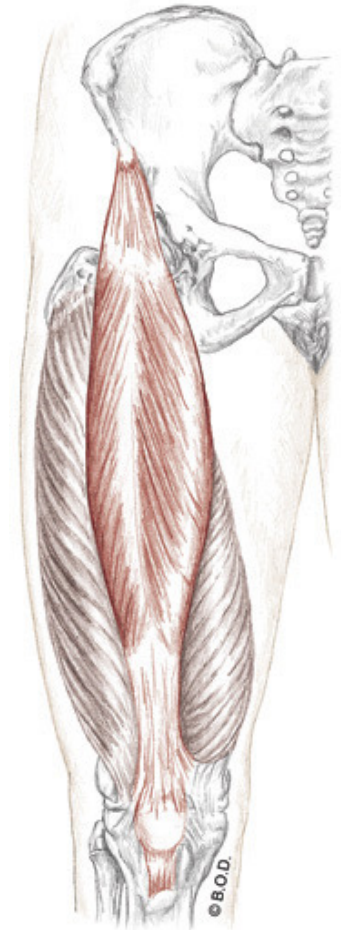
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Anterior View



Anterior View

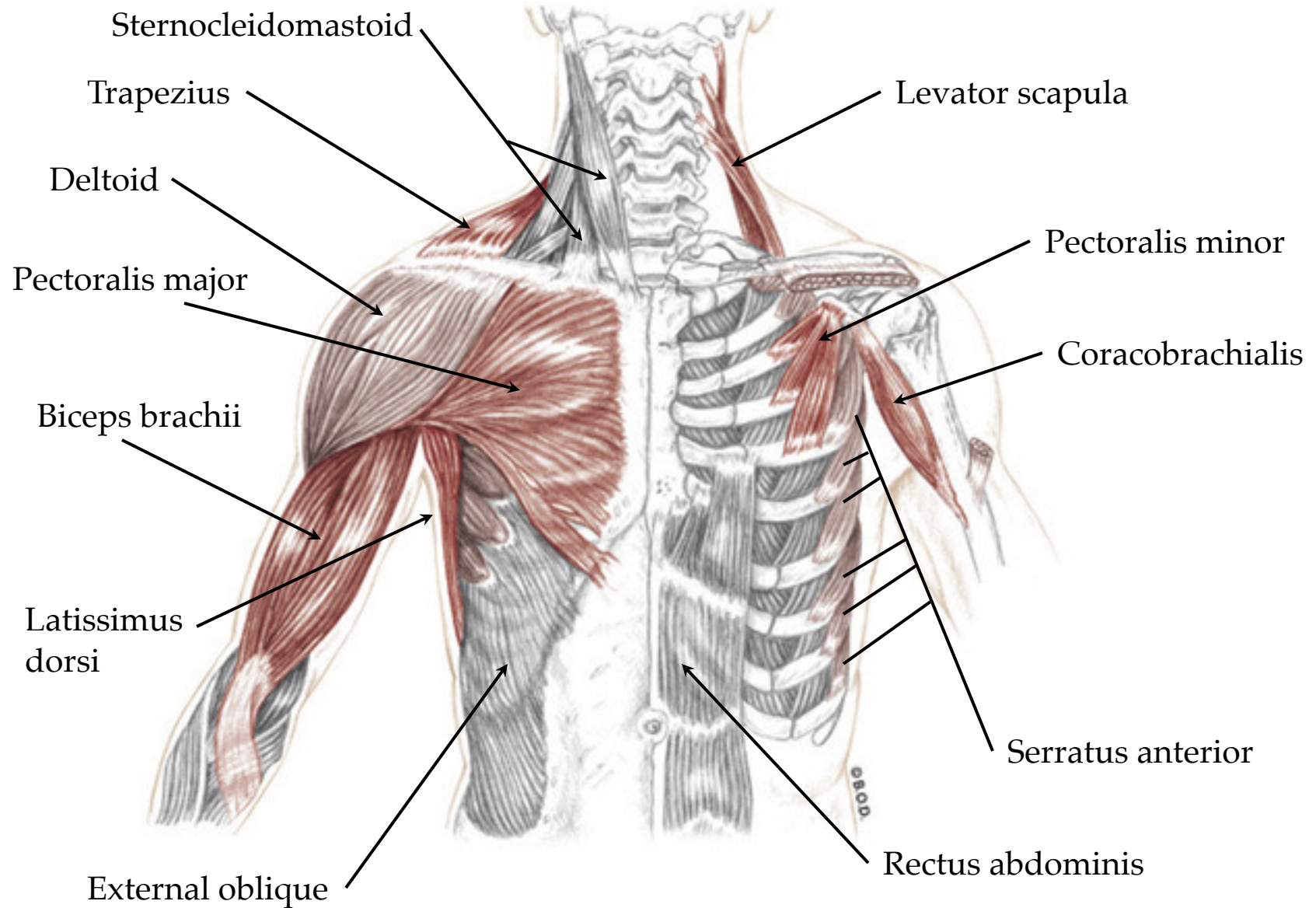


# 12a Kinesiology:

## Muscle Names and Locations

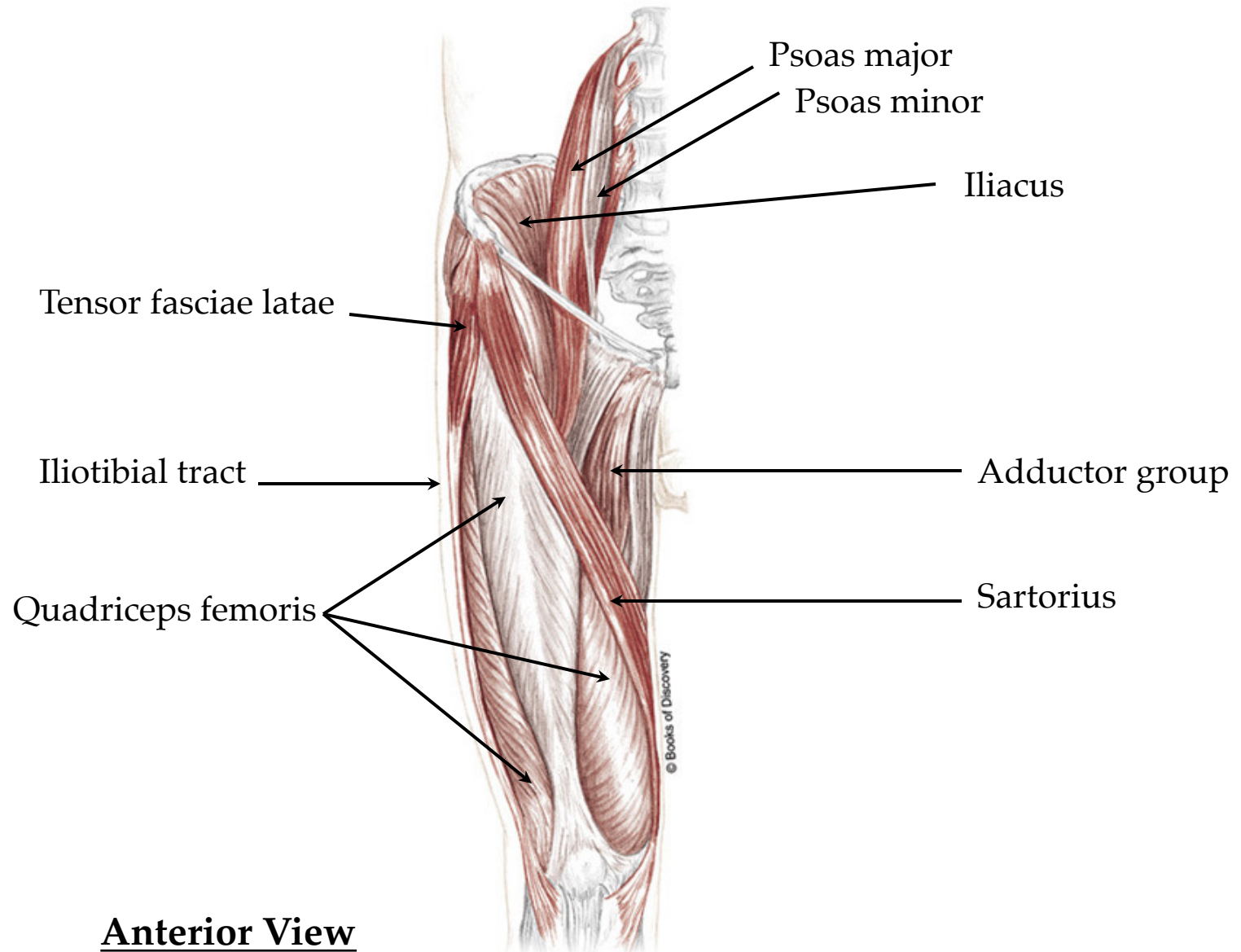


# Trail Guide, Page 62



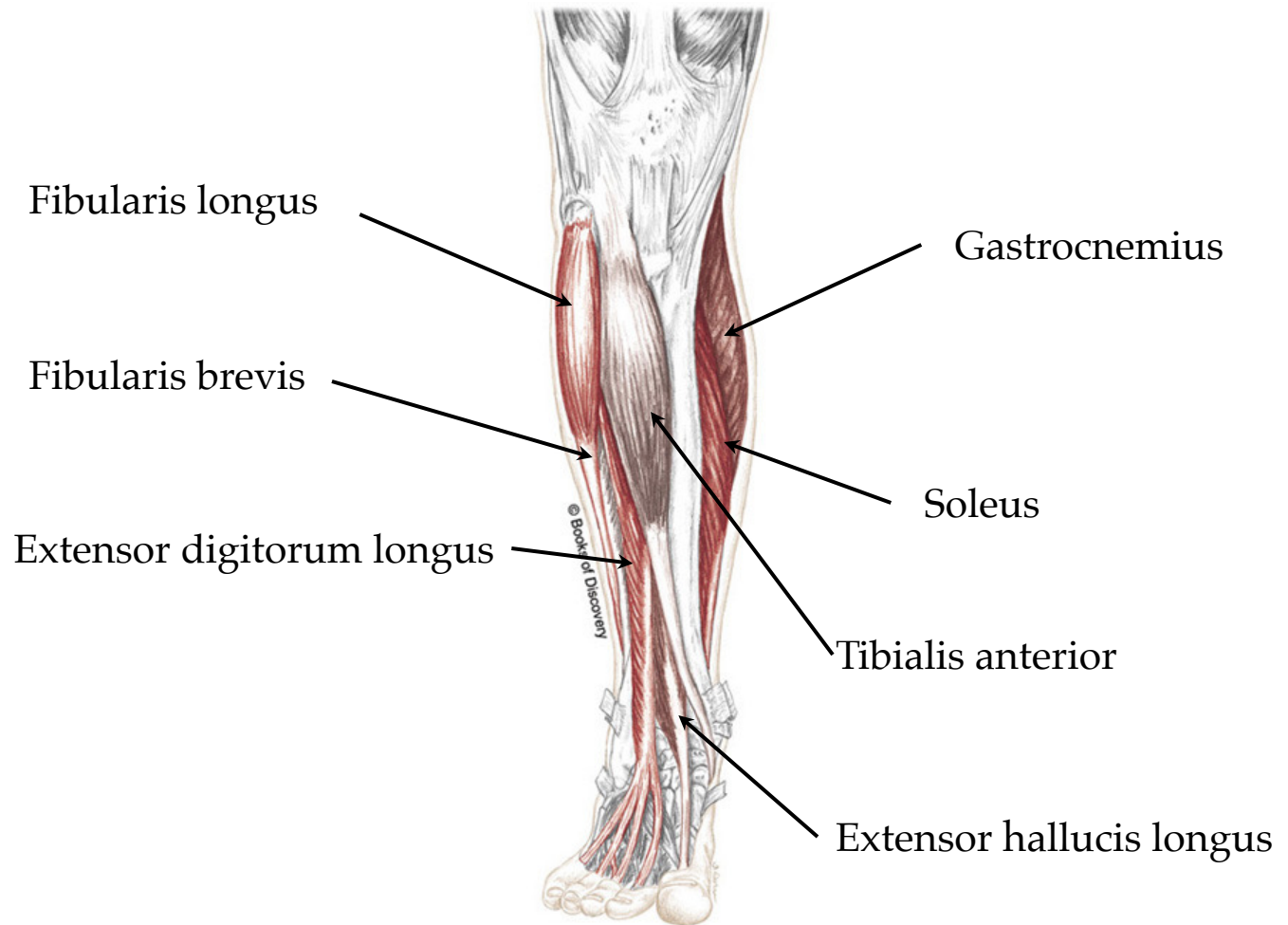
**Anterior View**

# Trail Guide, Page 296



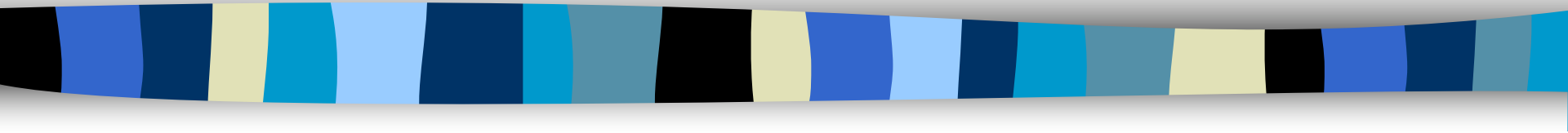


# Trail Guide, Page 367



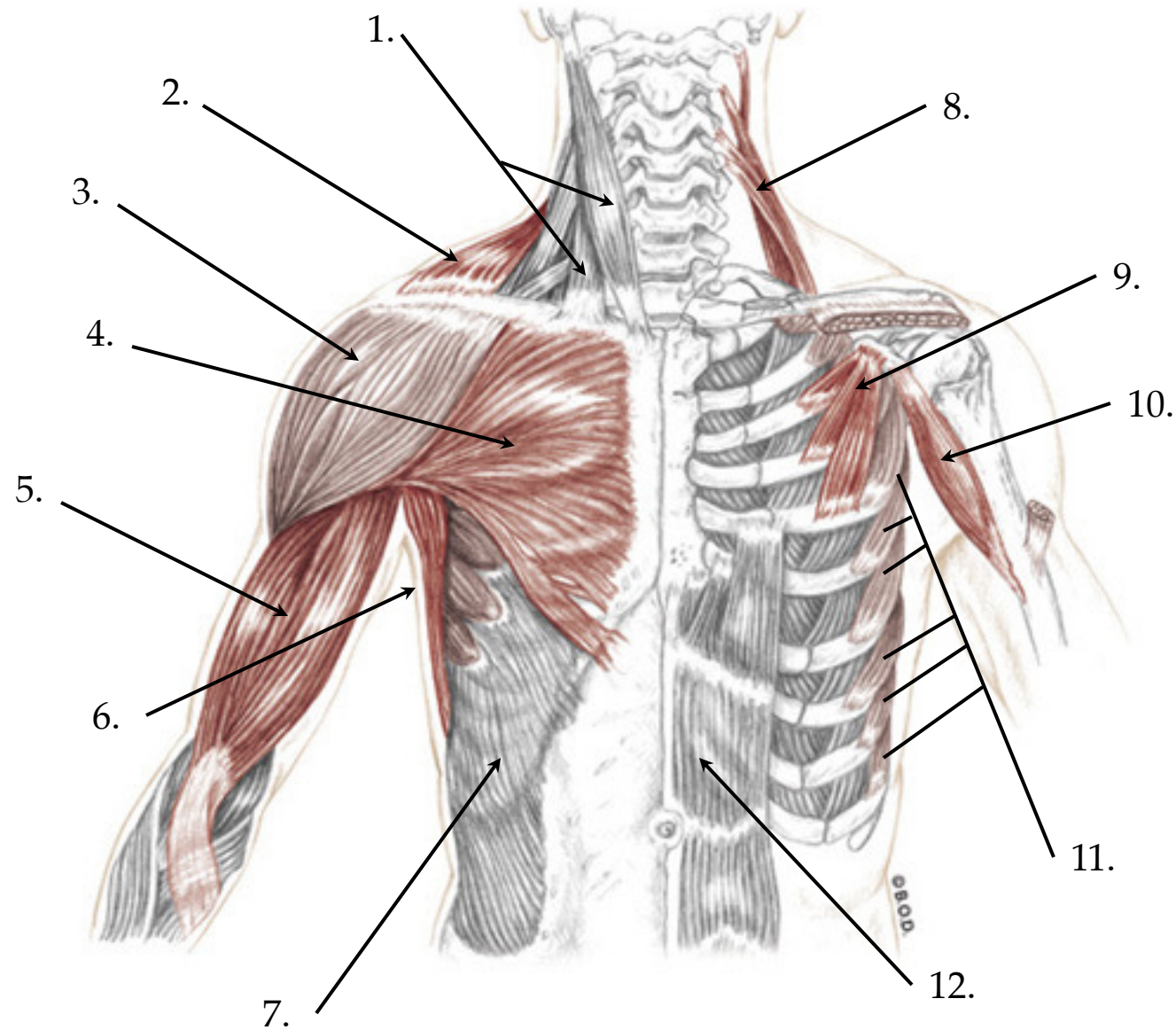
**Anterior View**

# Review



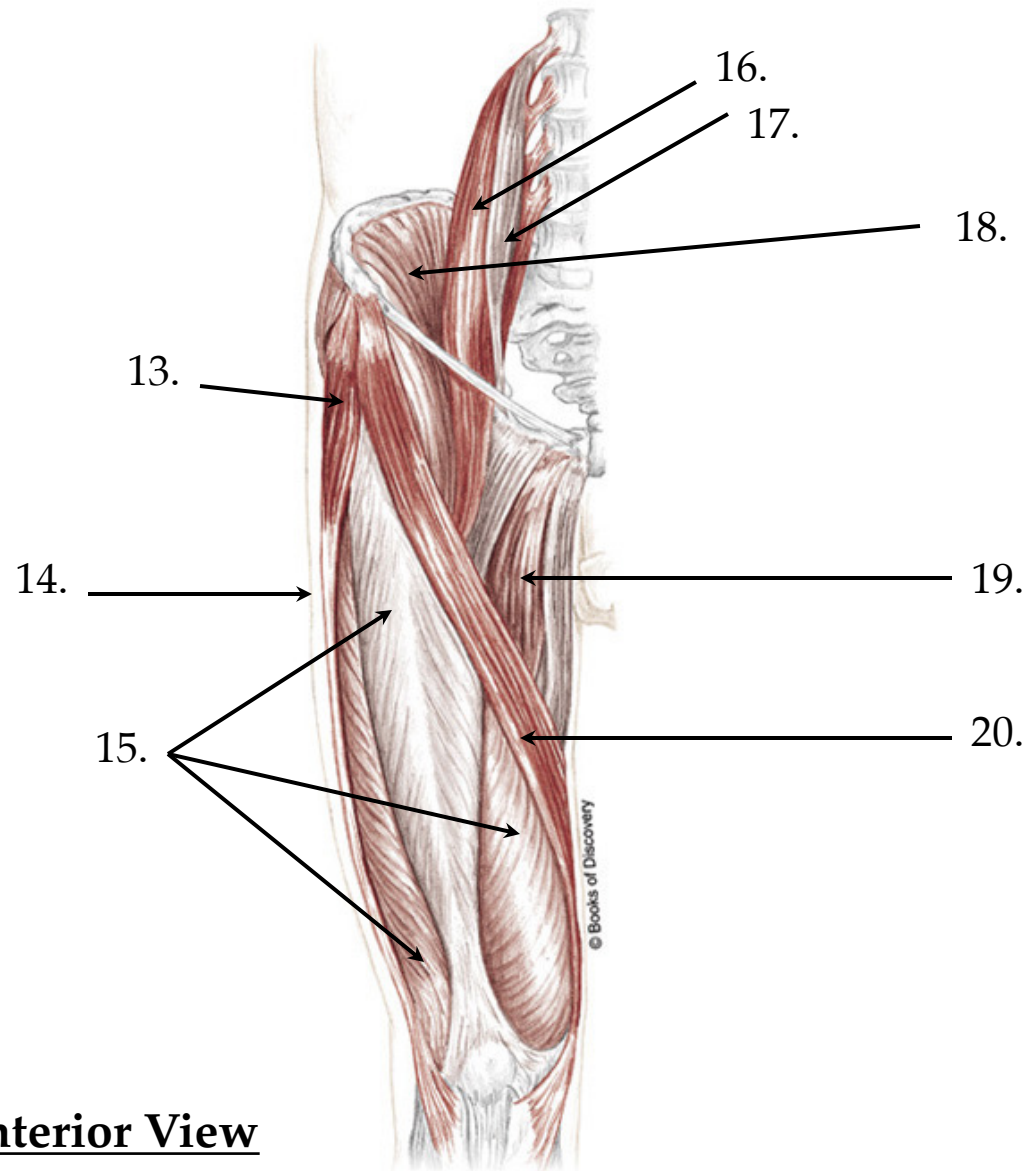
Write the name of the muscle for each number

# Trail Guide, Page 62



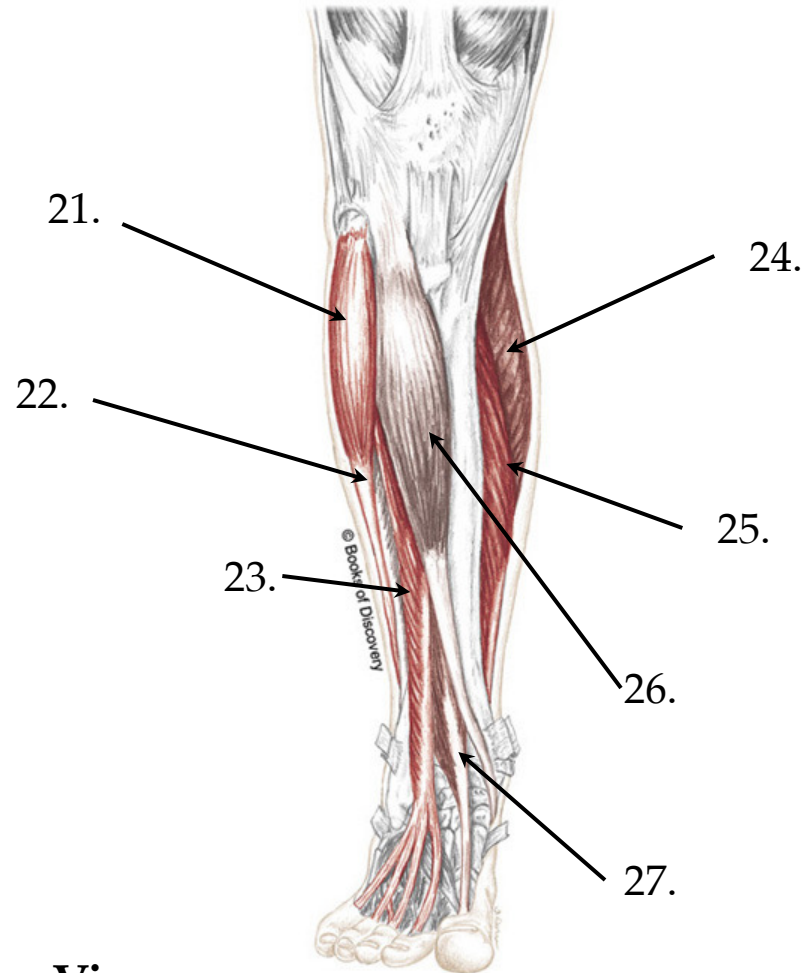
**Anterior View**

# Trail Guide, Page 296



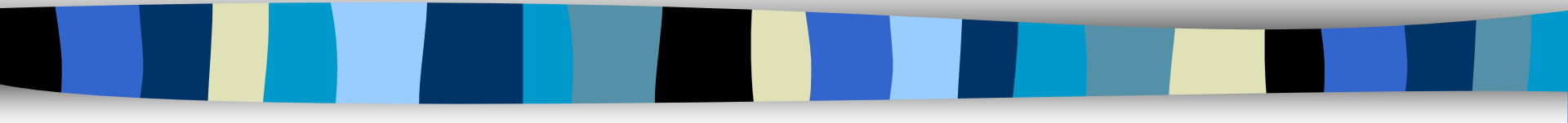
**Anterior View**

# Trail Guide, Page 367



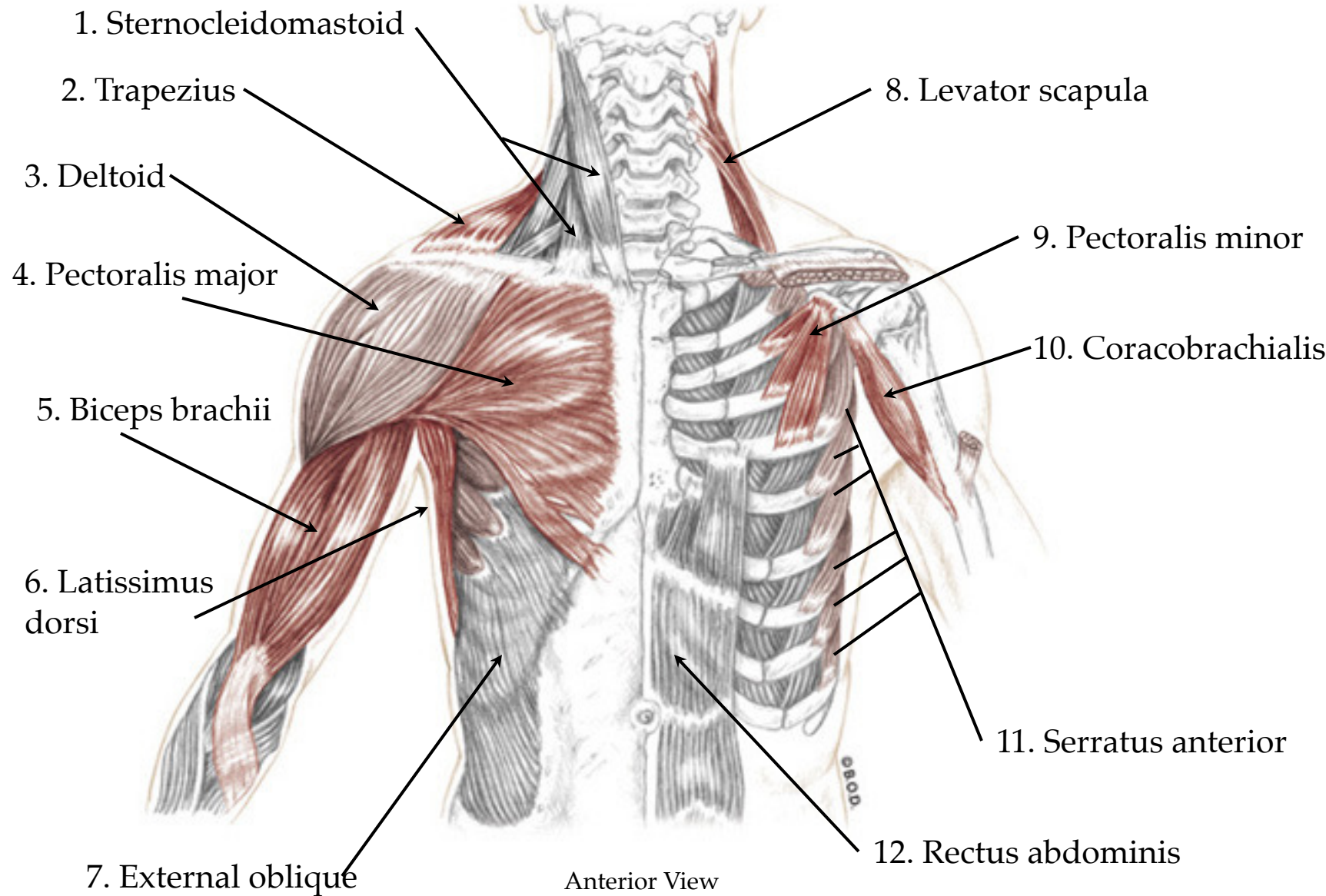
**Anterior View**

# Check your answers

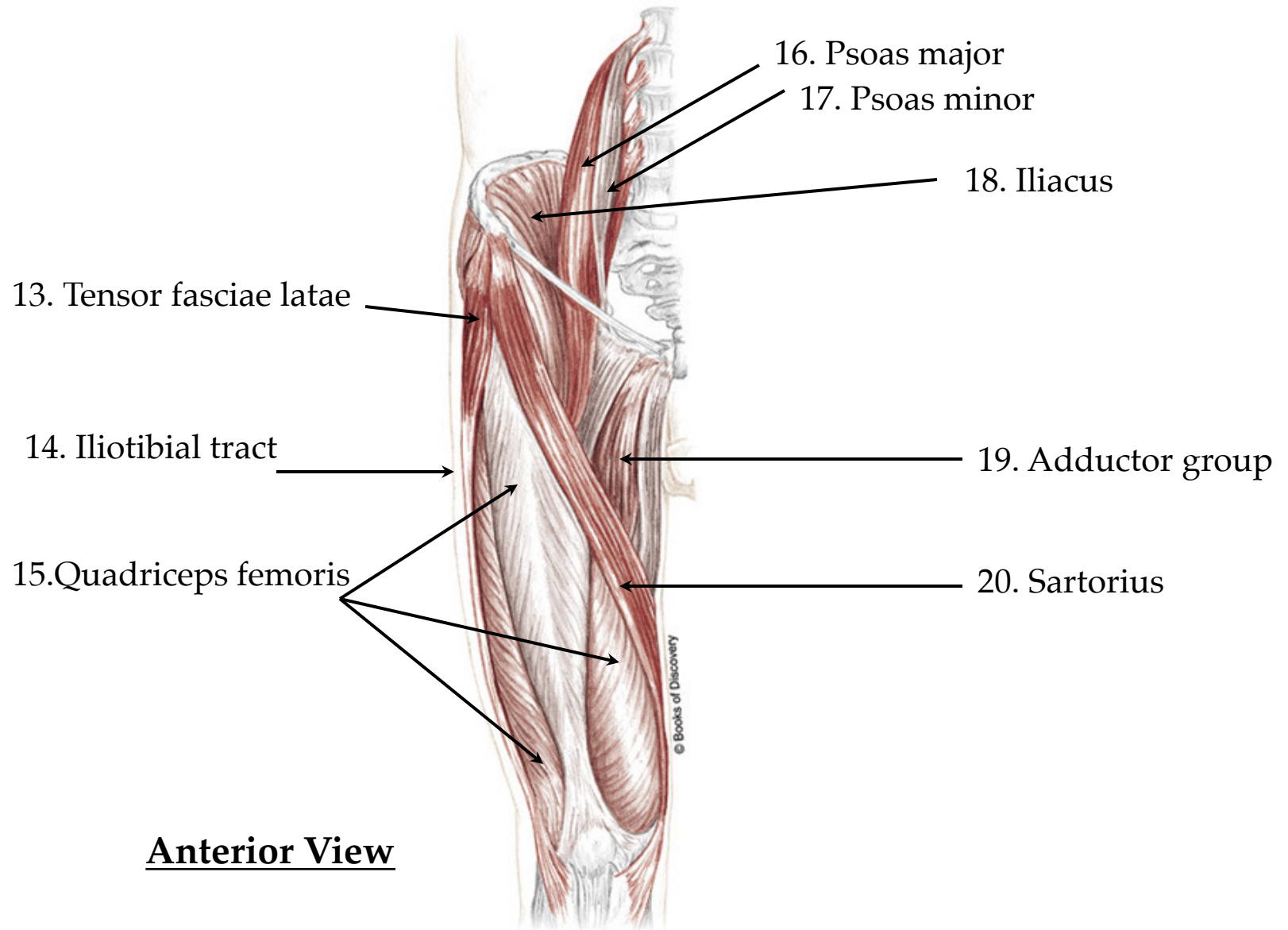




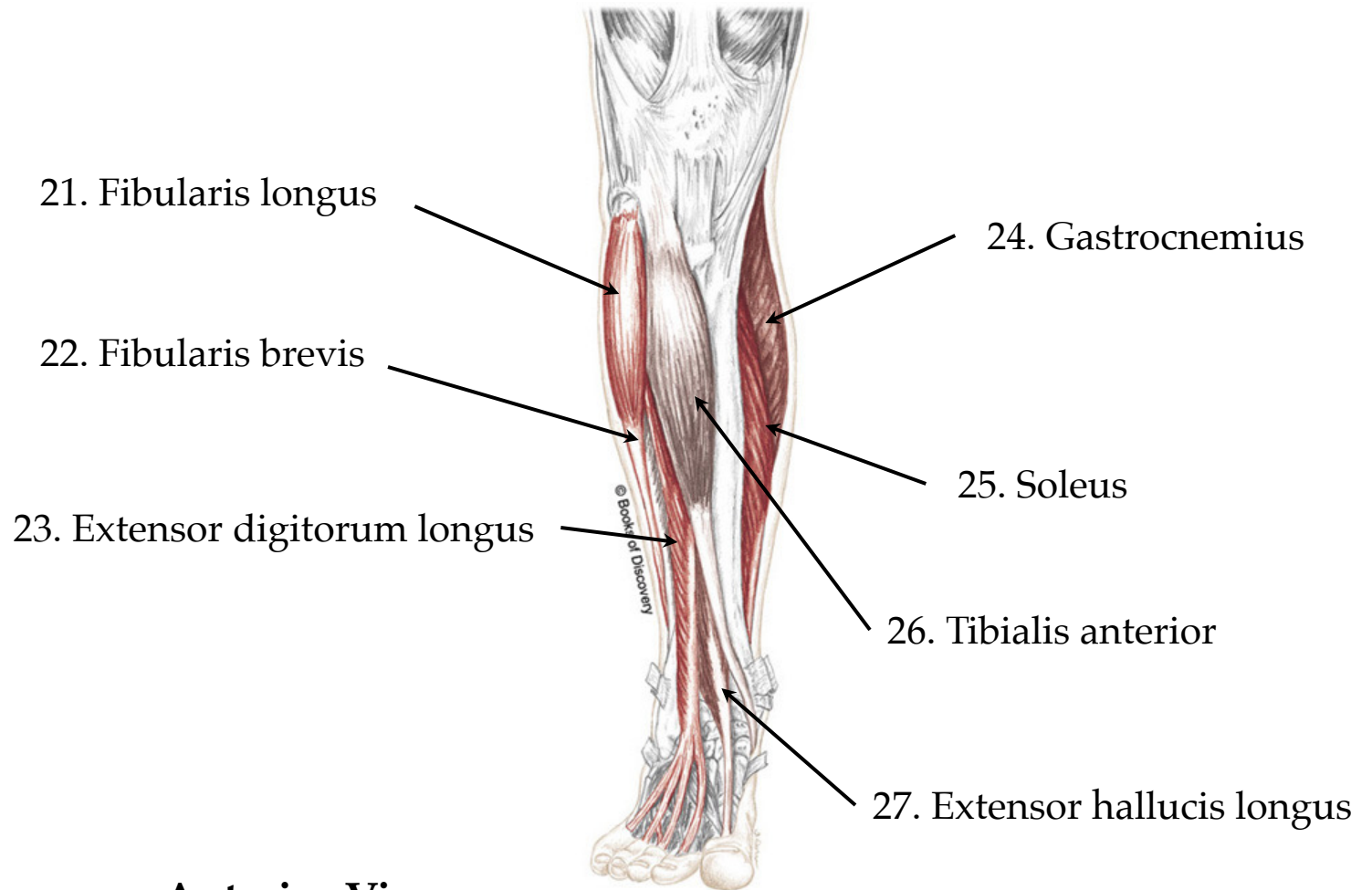
# Trail Guide, Page 62



# Trail Guide, Page 296

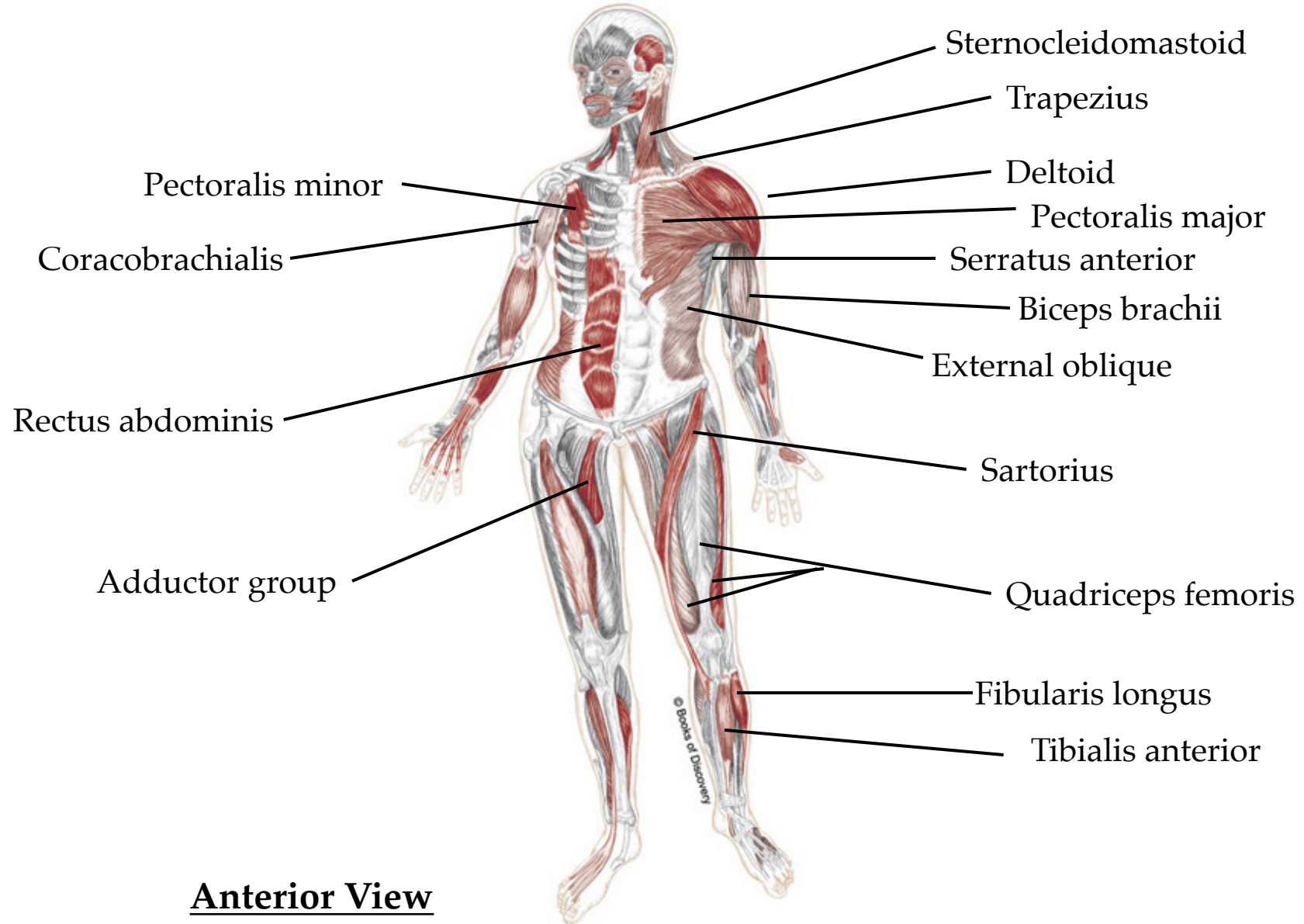


# Trail Guide, Page 367

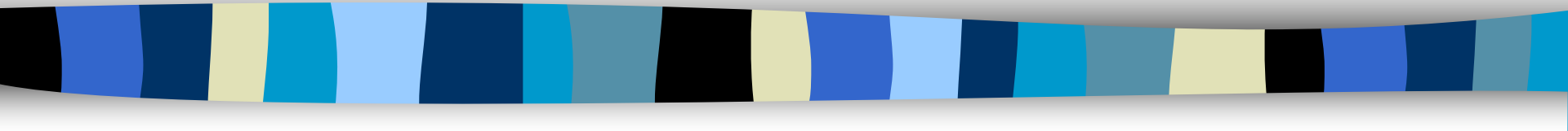


**Anterior View**

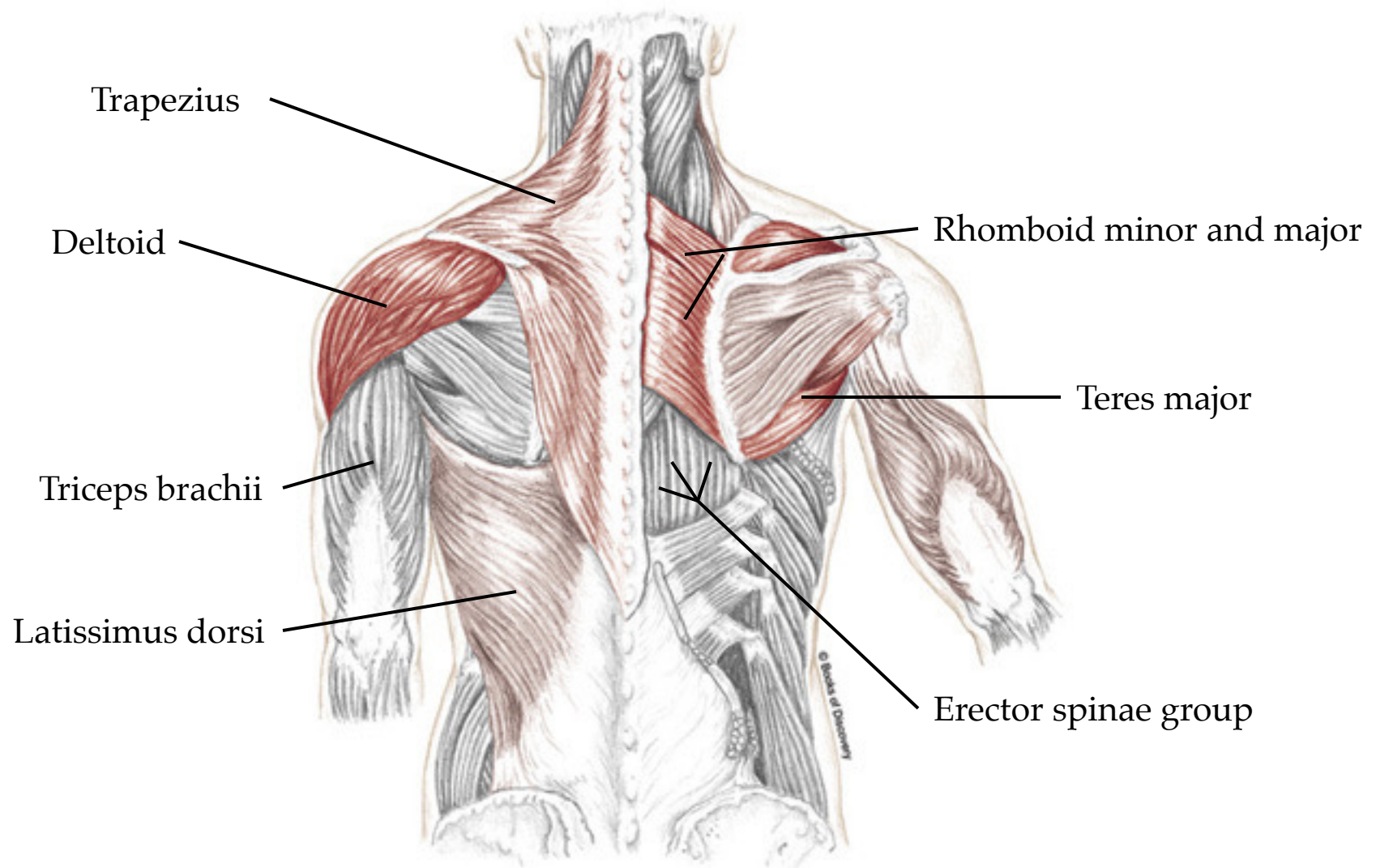
# Trail Guide, Page 35



# Posterior Muscles



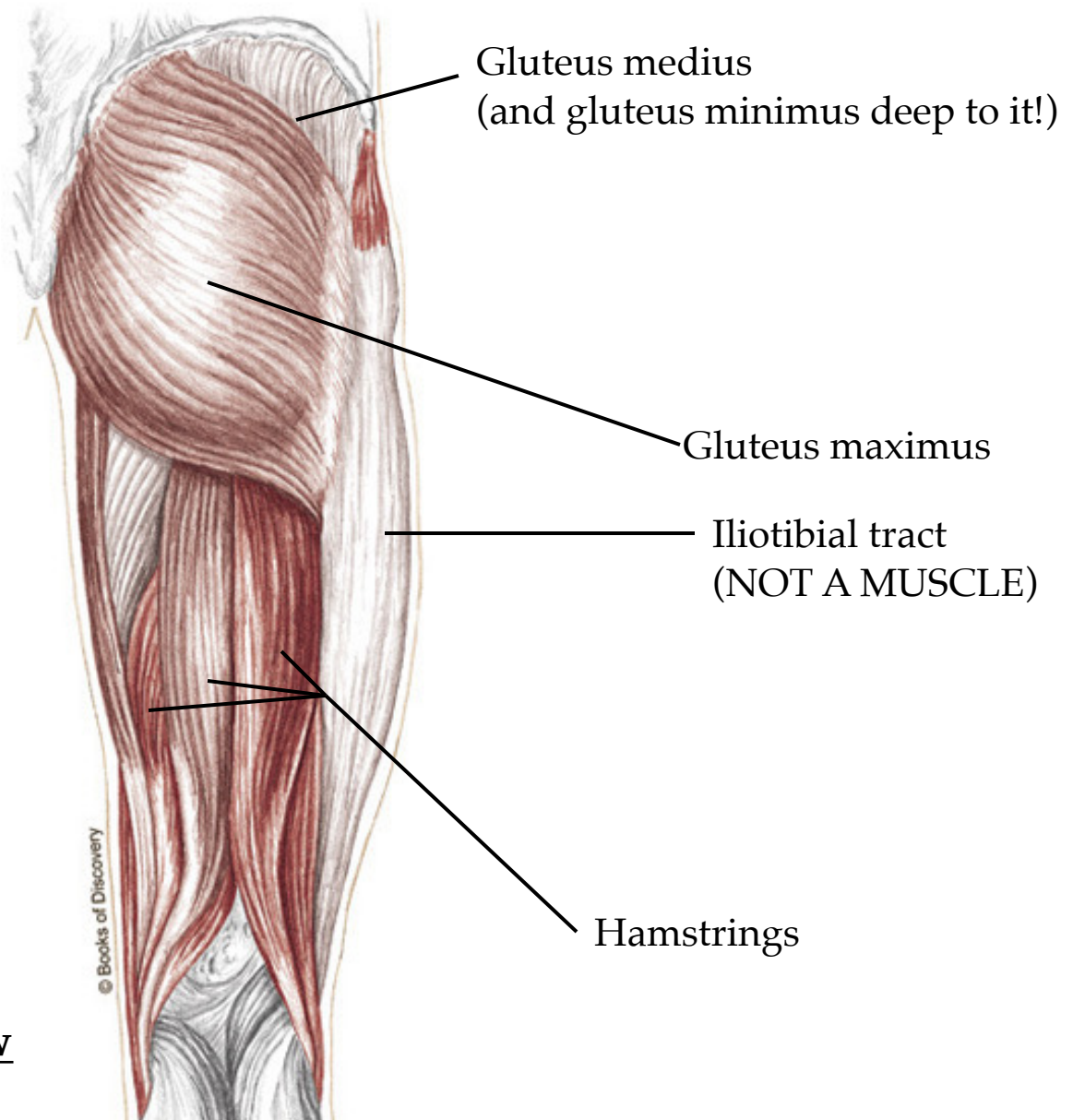
# Trail Guide, Page 61



**Posterior View**



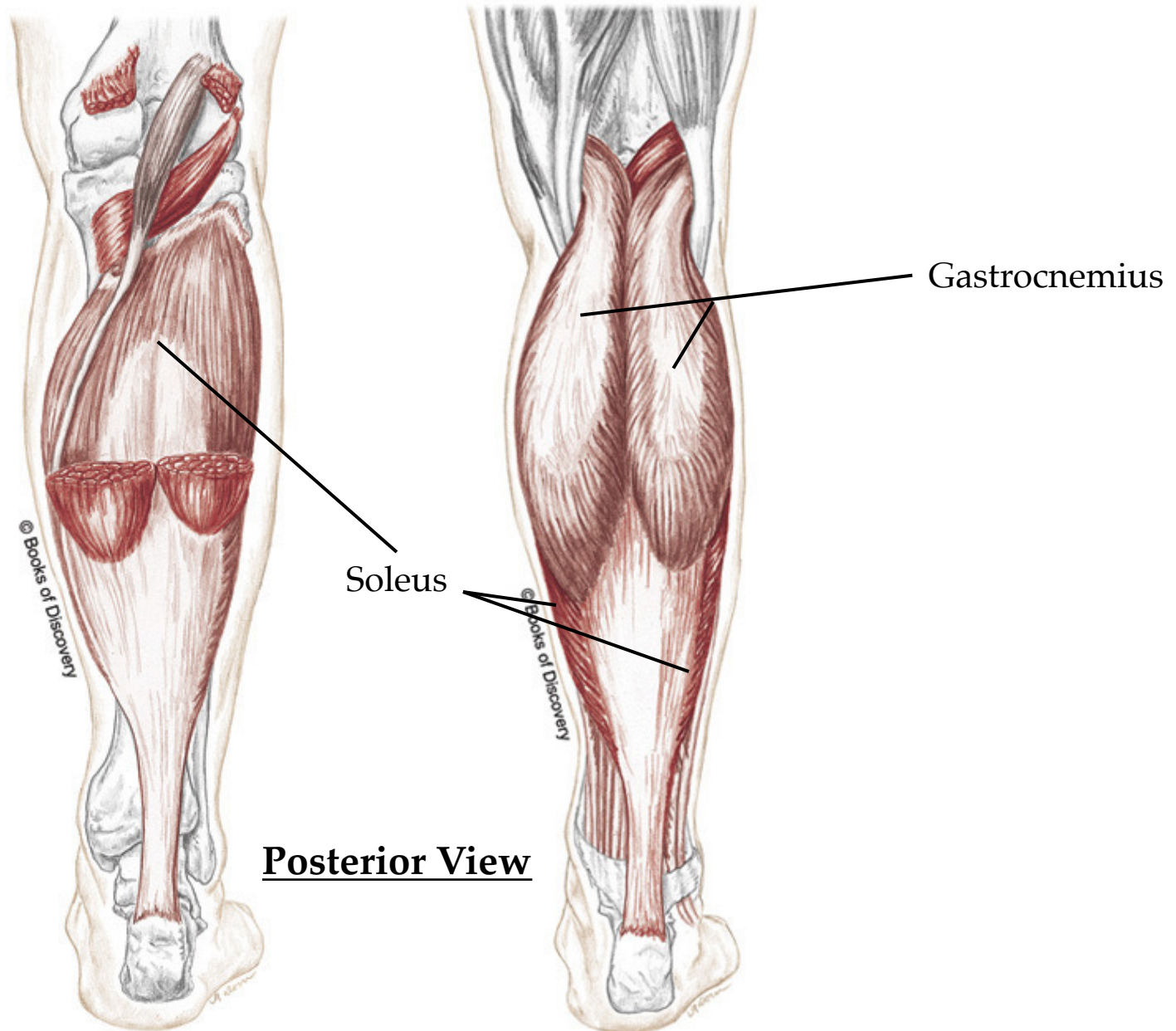
# Trail Guide, Page 297



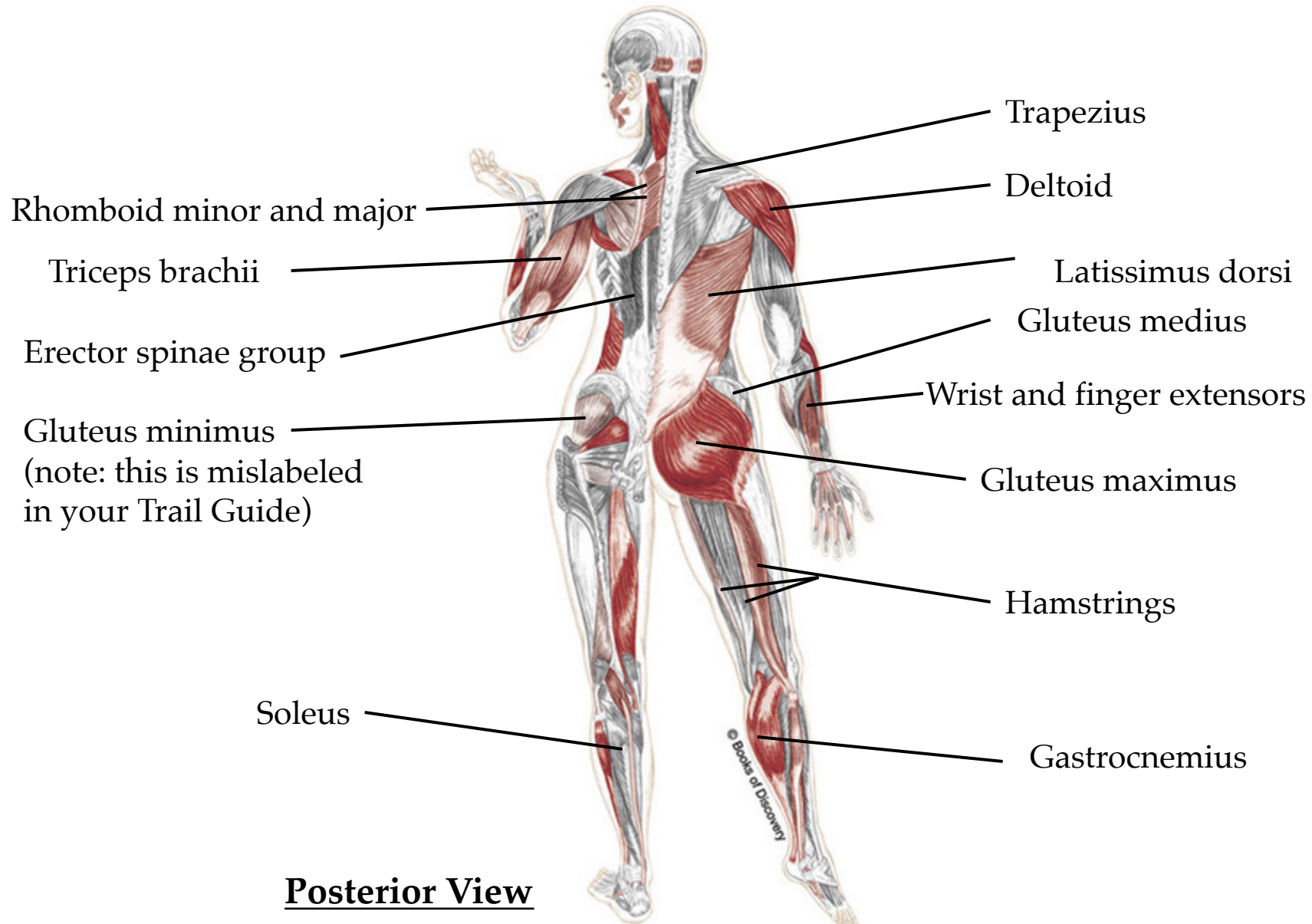
Posterior View



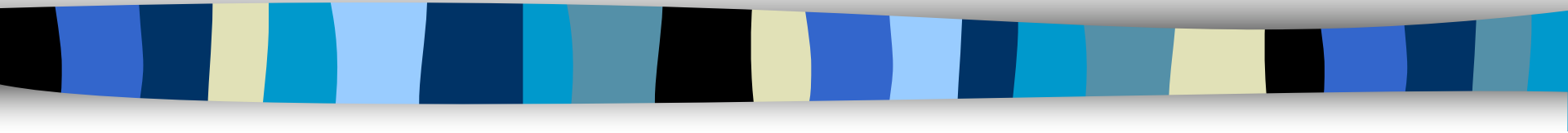
# Trail Guide, Page 366



# Trail Guide, Page 36

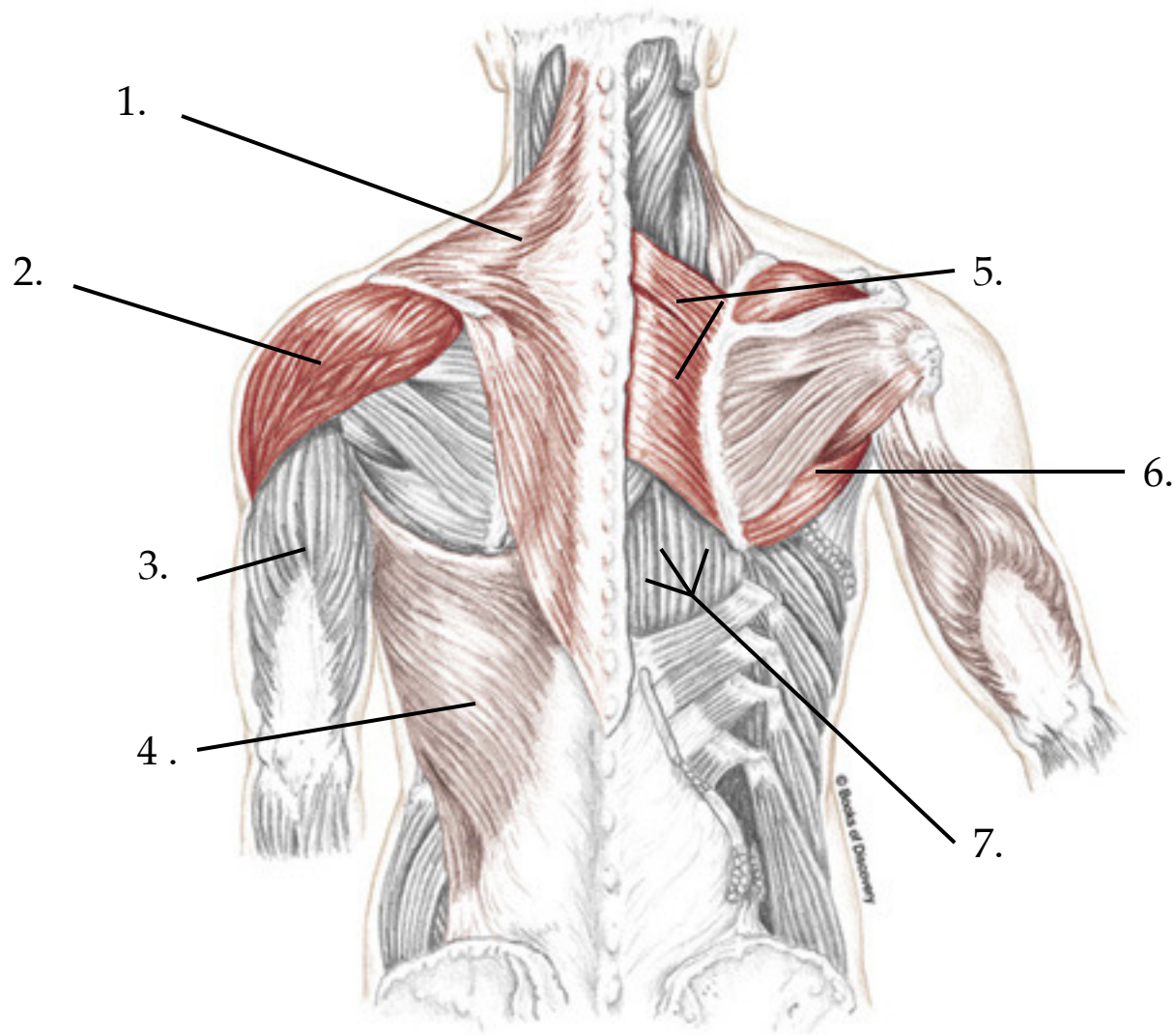


# Review



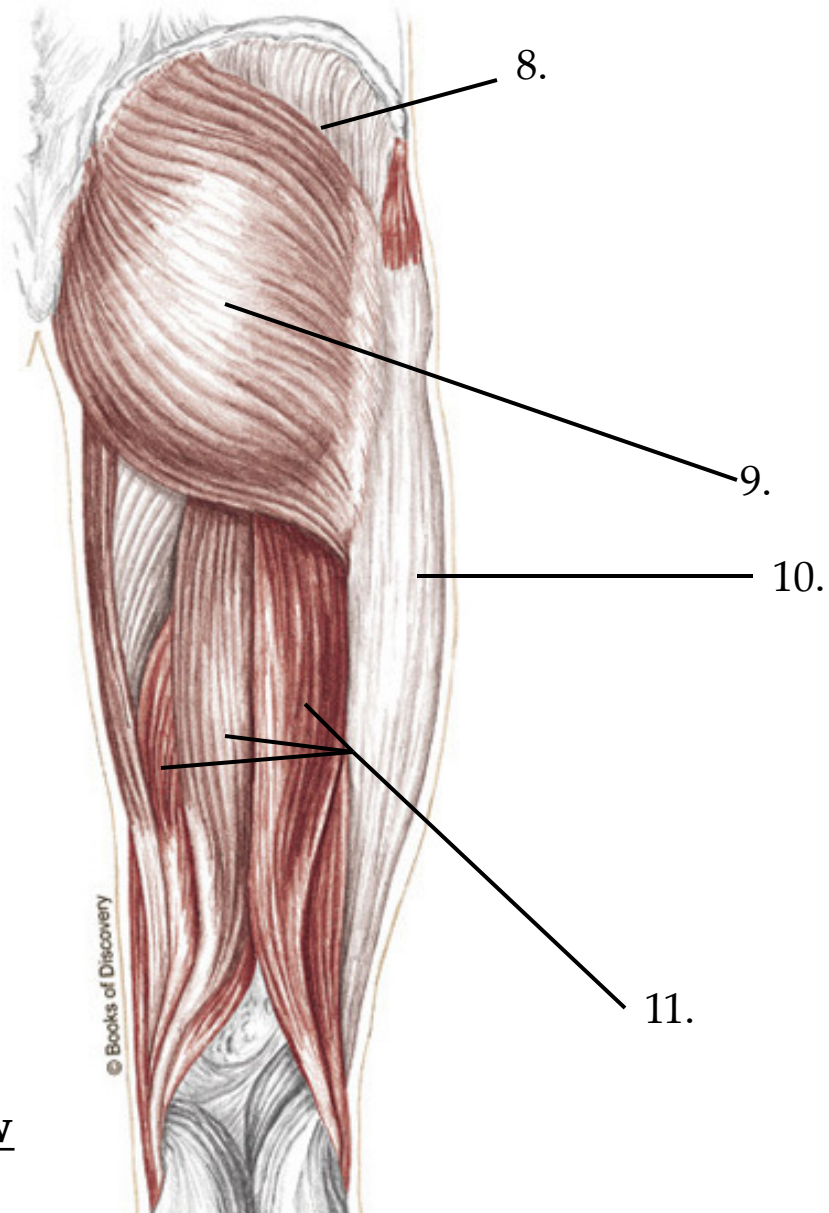
Write the name of the muscle for each number

# Trail Guide, Page 61



Posterior View

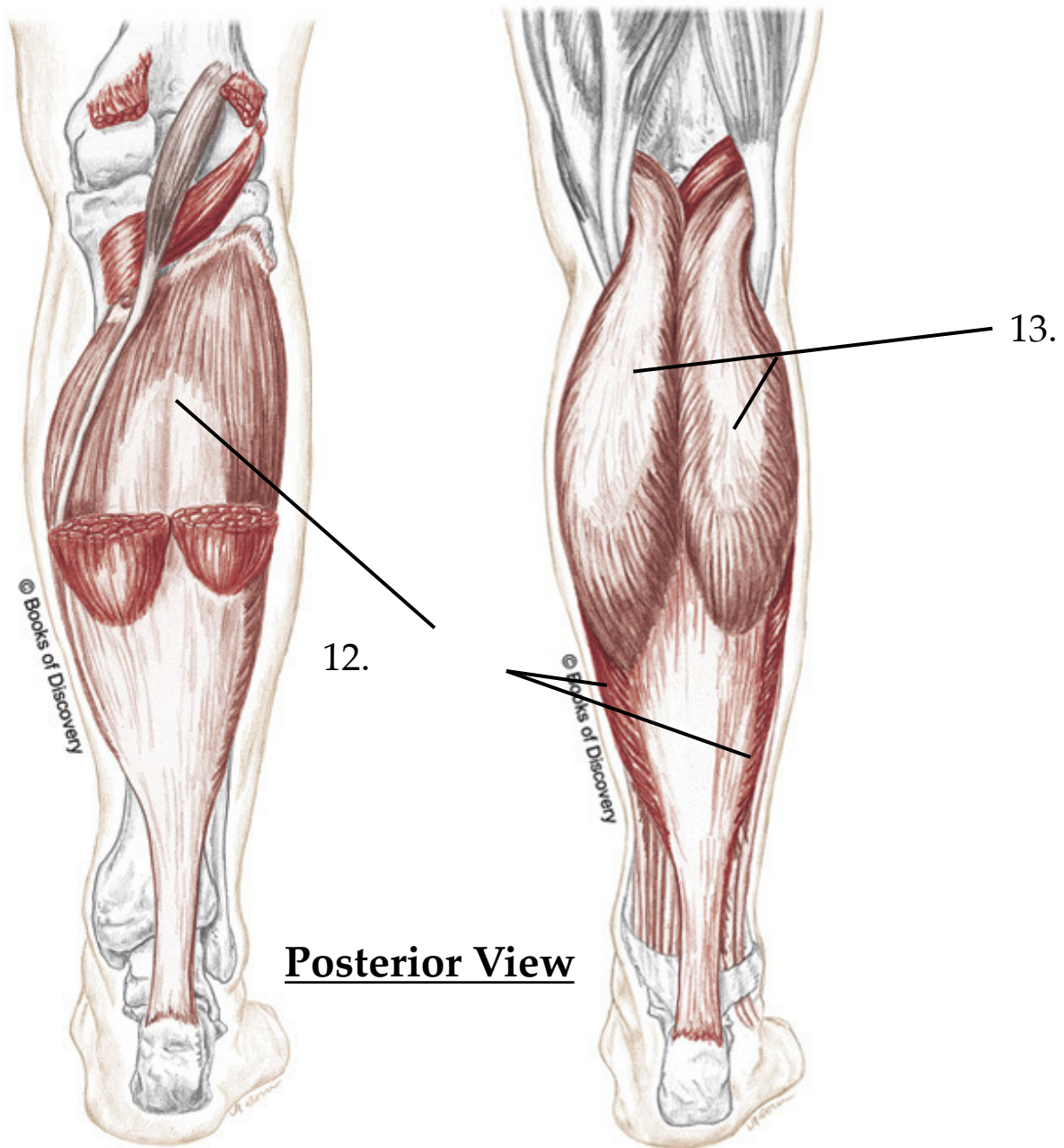
# Trail Guide, Page 297



Posterior View

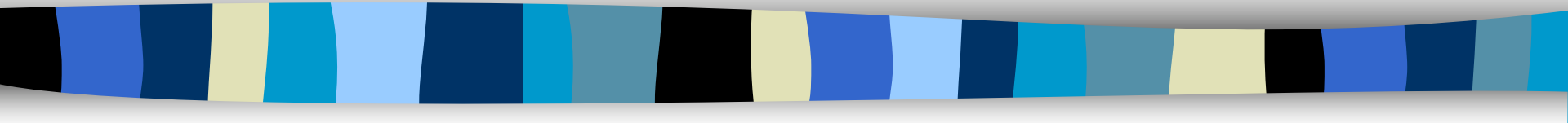


# Trail Guide, Page 366

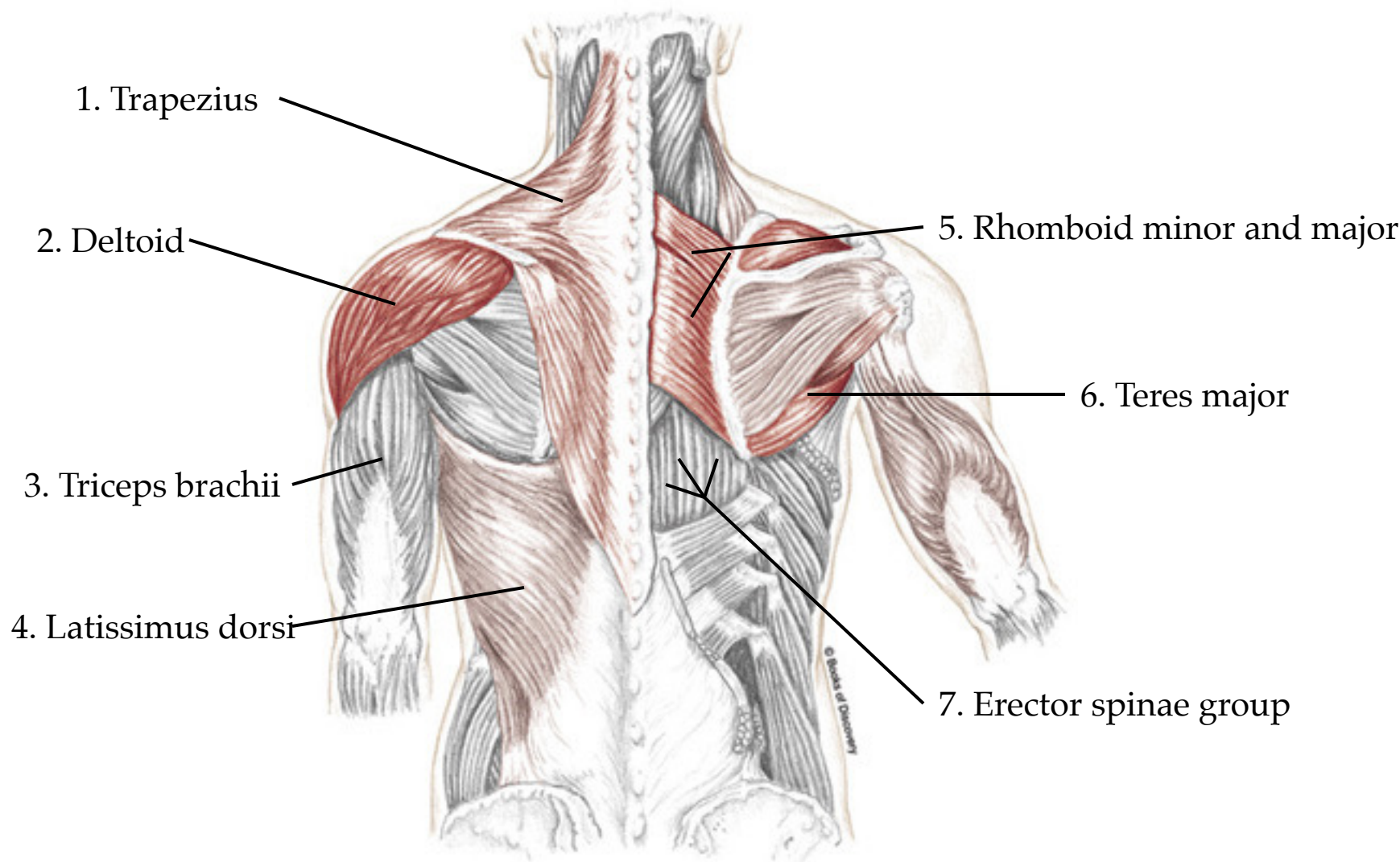




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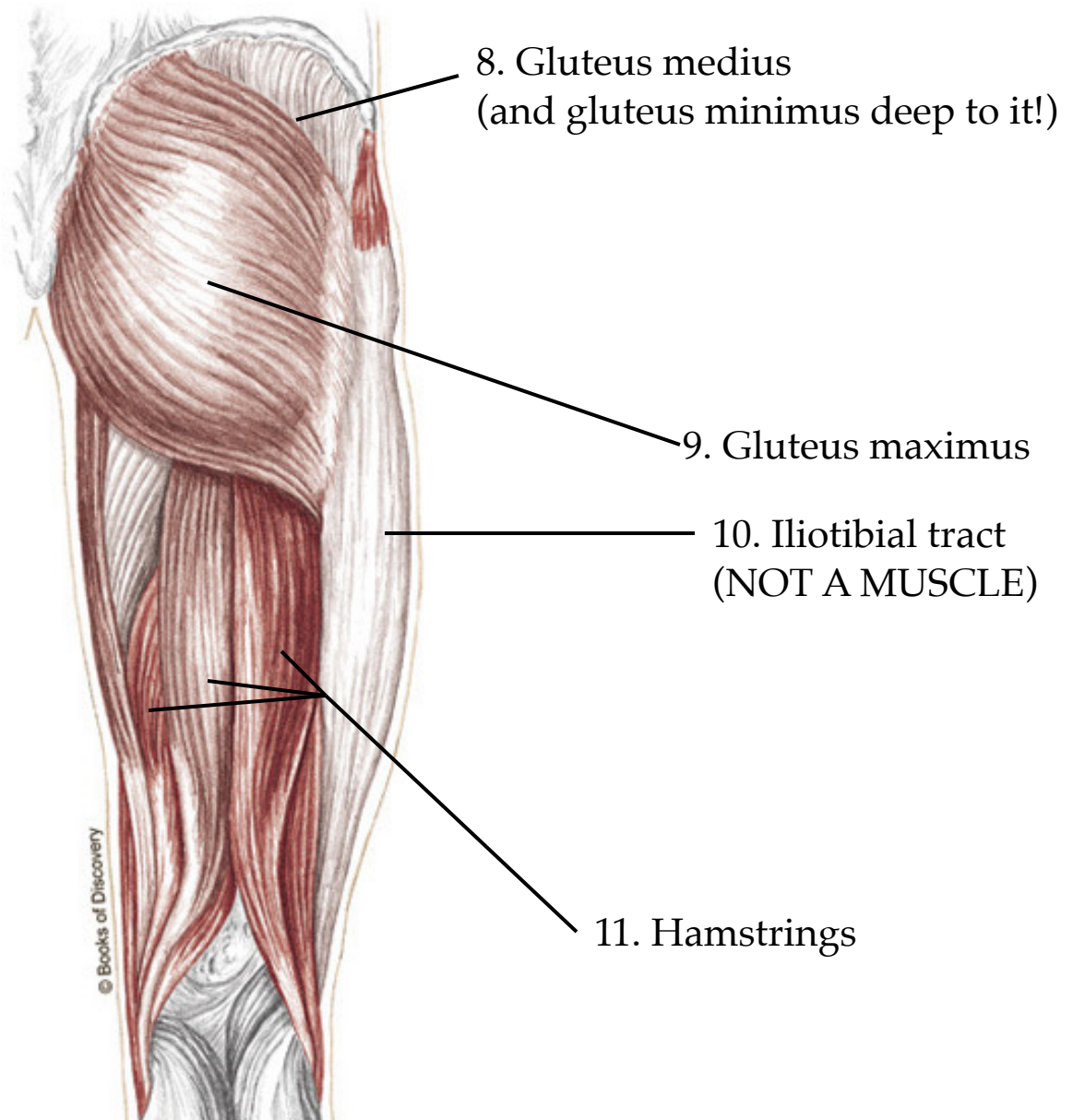


# Trail Guide, Page 61



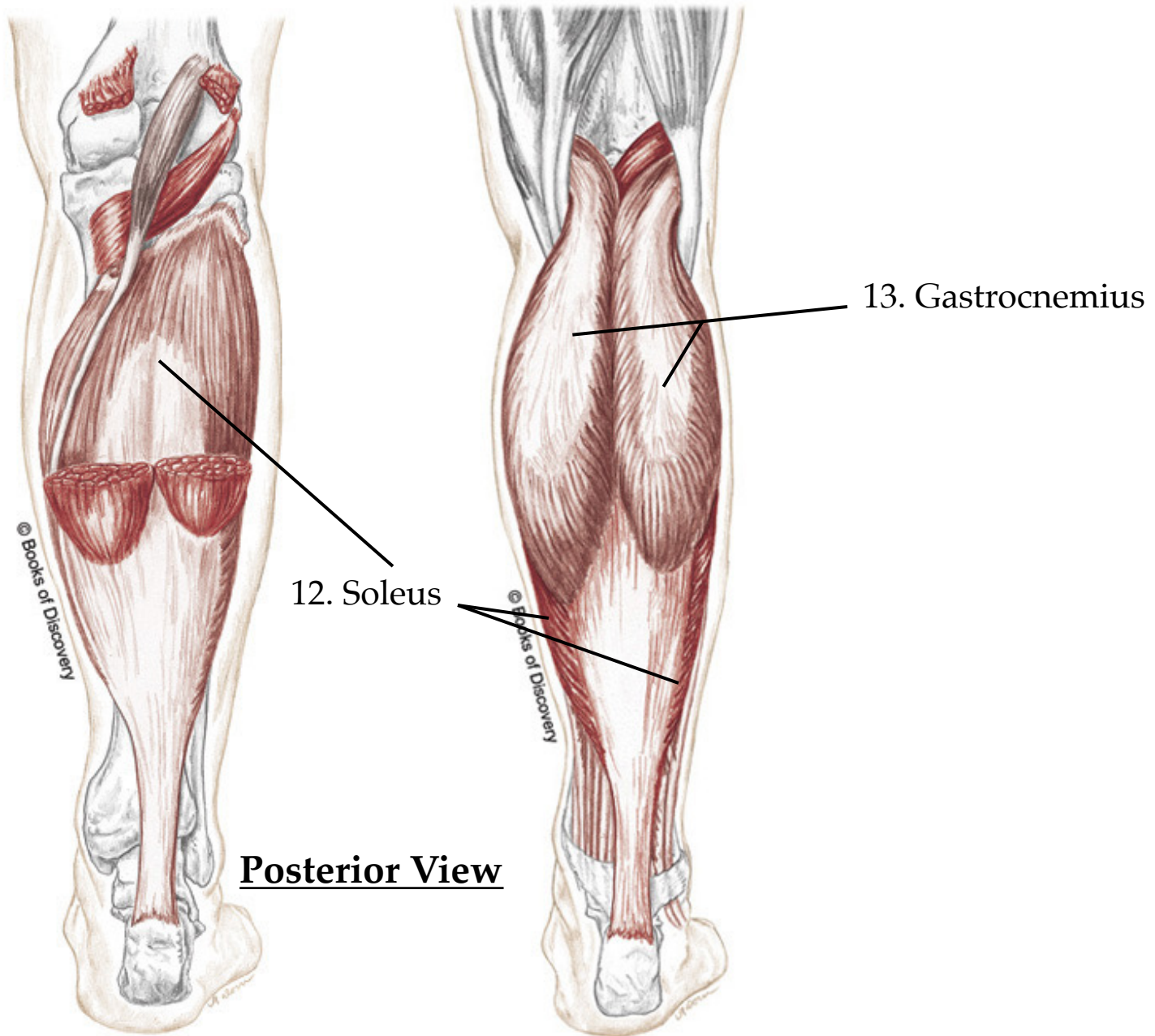
**Posterior View**

# Trail Guide, Page 297

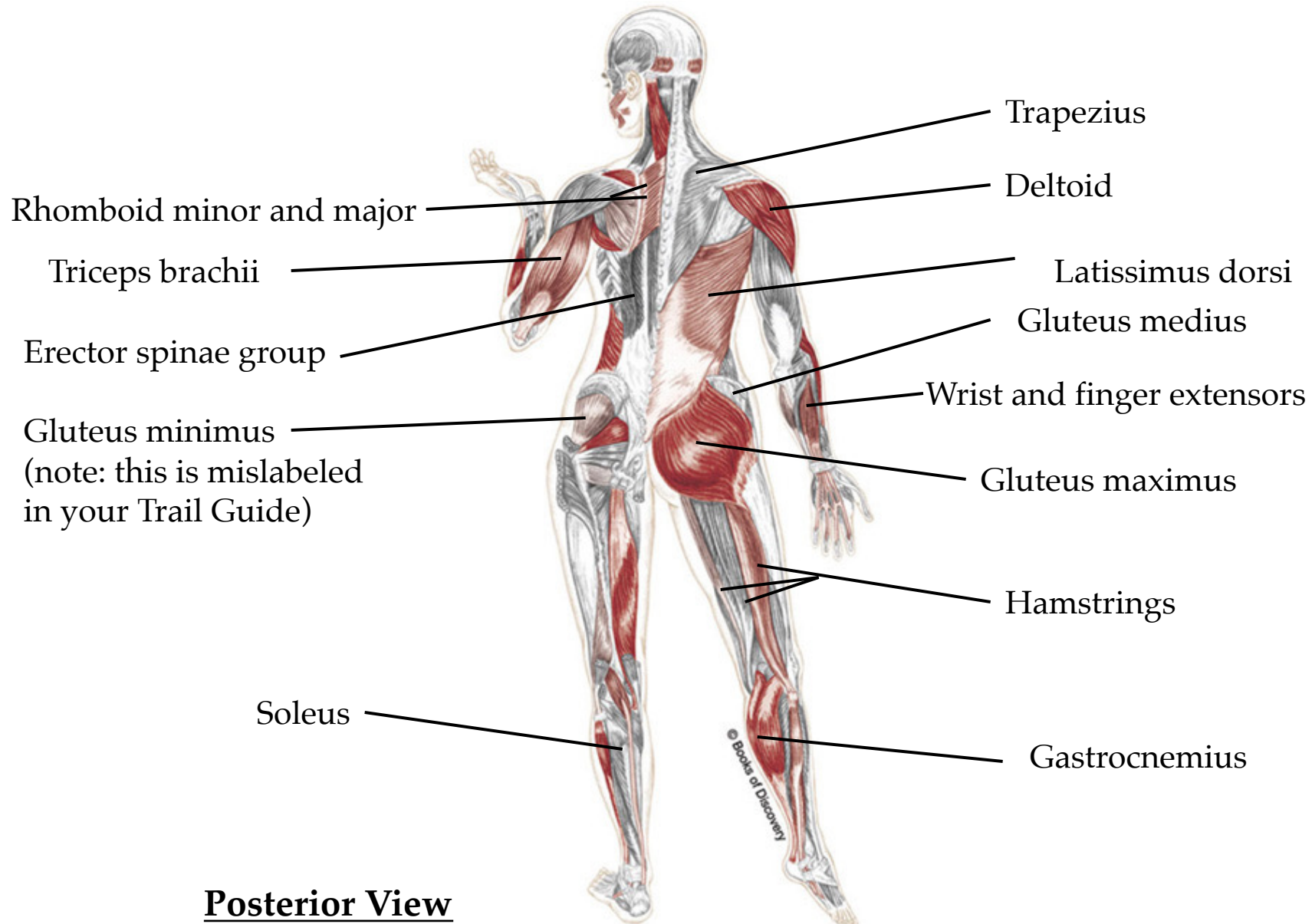


Posterior View

# Trail Guide, Page 366



# Trail Guide, Page 36



**Posterior View**

# 12a Kinesiology:

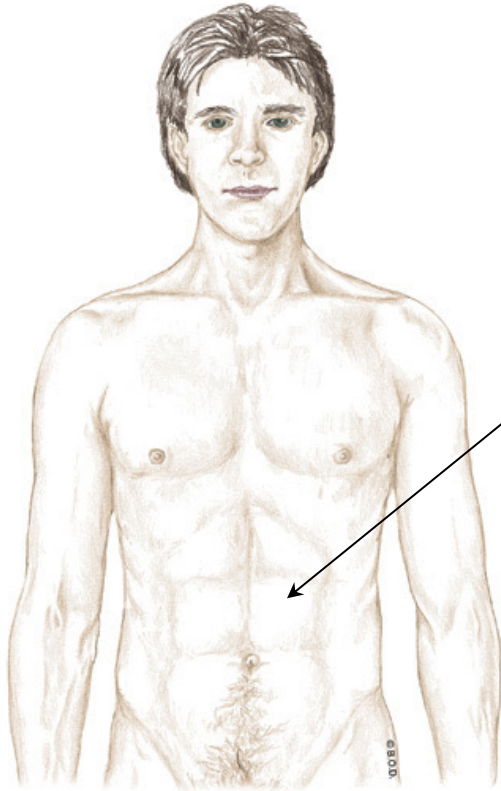
## Muscle Names and Locations





# Rectus Abdominis

## Trail Guide, Page 210



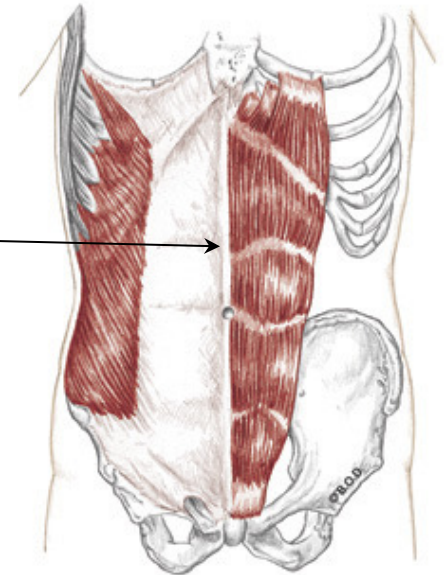
Anterior View

### **Rectus abdominis**

has multiple superficial bellies that are often referred to as a “washboard belly”.

The abdominals as a group of muscles consist of four muscles:

- Rectus abdominis
- External oblique
- Internal oblique
- Transversus abdominis



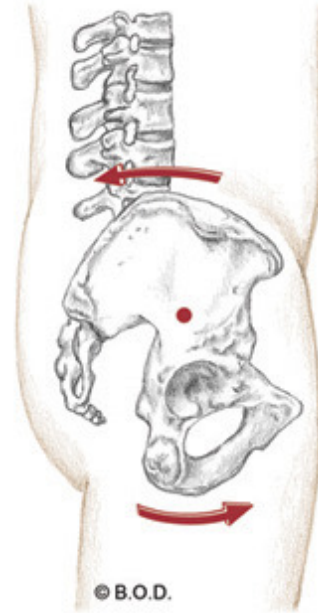
Anterior View

When do you use your rectus abdominis?

# Actions of the Rectus Abdominis



Flexion of the vertebral column



Posterior pelvic tilt

# Rectus Abdominis, page 210

A

Flex the vertebral column

Tilt the pelvis posteriorly

O

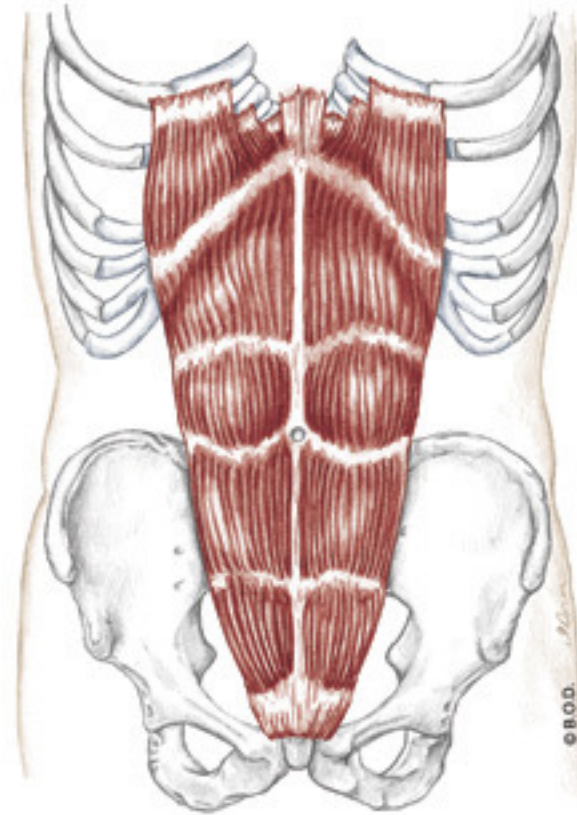
Pubic crest

Pubic symphysis

I

Cartilage of 5th, 6th, and 7th ribs

Xiphoid process



Anterior View



# Rectus Abdominis, page 210

A

Flex the vertebral column

Tilt the pelvis posteriorly

O

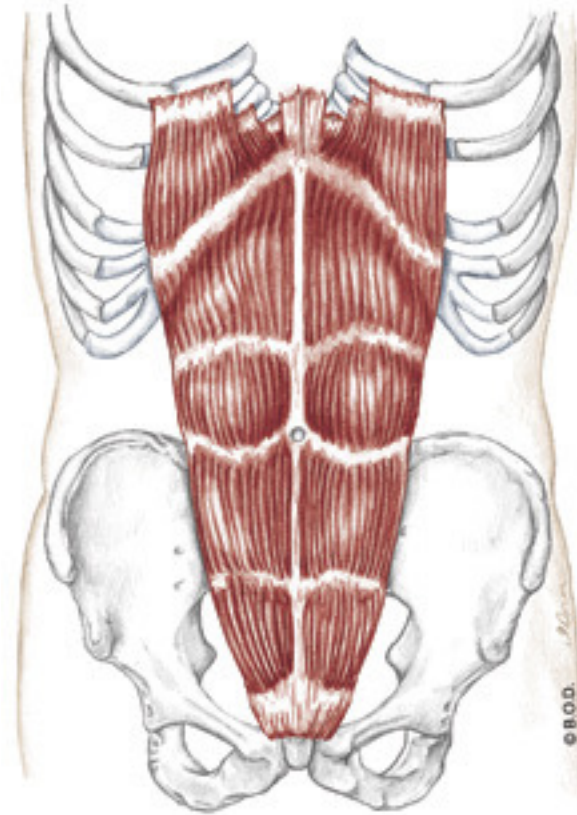
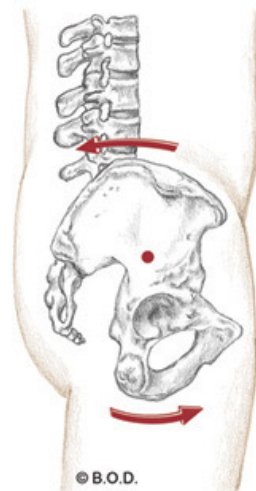
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Cartilage of 5th, 6th, and 7th ribs

Xiphoid process



Anterior View

# Rectus Abdominis, page 210

A

**Flex** the vertebral column

**Tilt** the pelvis posteriorly

O

Pubic crest

Pubic symphysis

I

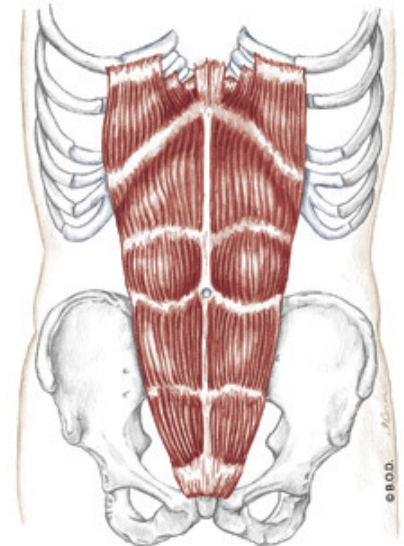
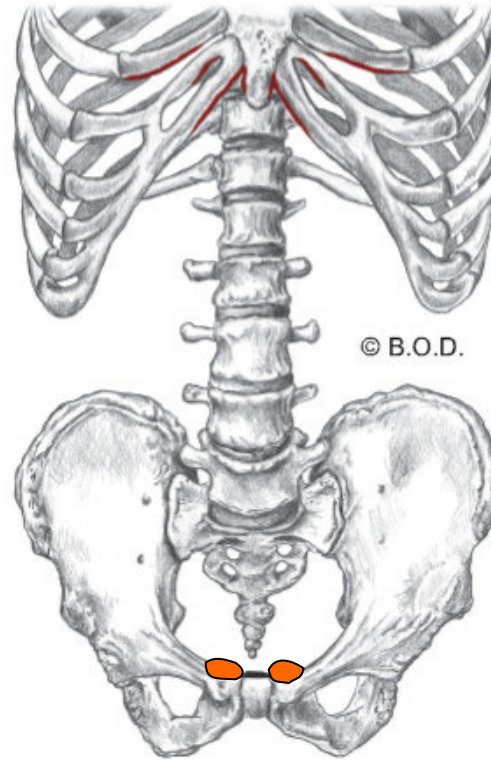
Cartilage of 5th, 6th, and 7th ribs

Xiphoid process

Ilium

Pubis

Ischium



Anterior View



# Rectus Abdominis, page 210

A

**Flex** the vertebral column

**Tilt** the pelvis posteriorly

C

Pubic crest

Pubic symphysis

I

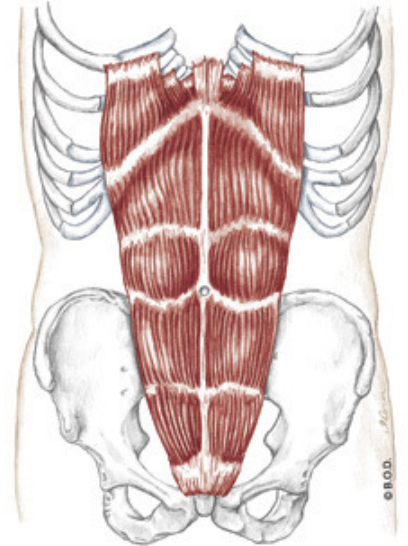
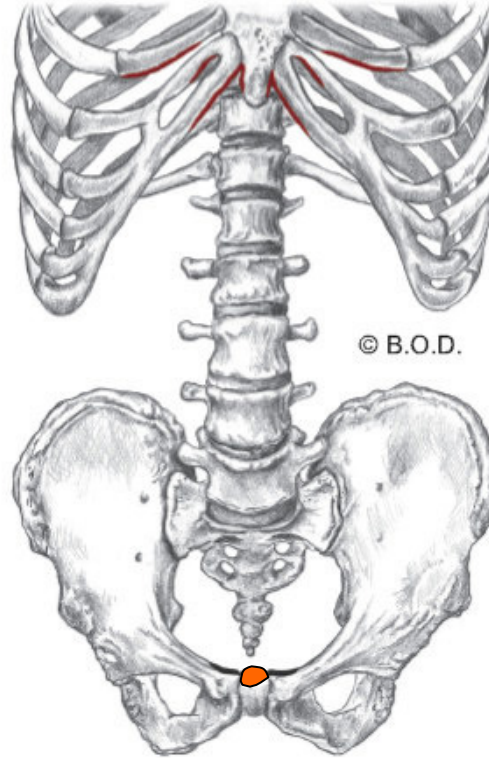
Cartilage of 5th, 6th, and 7th ribs

Xiphoid process

Ilium

Pubis

Ischium



Anterior View



# Rectus Abdominis, page 210

A

Flex the vertebral column

Tilt the pelvis posteriorly

O

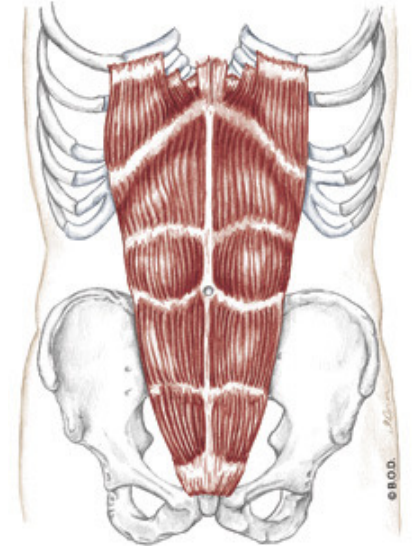
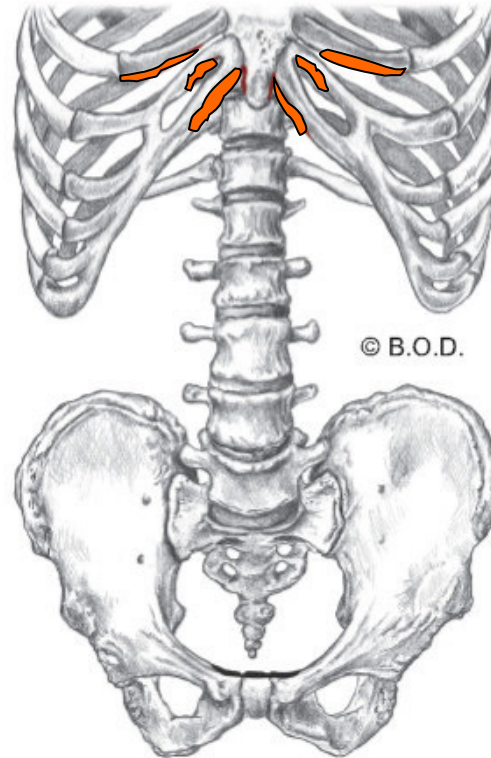
Pubic crest

Pubic symphysis

I

Cartilage of 5th, 6th, and 7th ribs

Xiphoid process



Anterior View

# Rectus Abdominis, page 210

A

Flex the vertebral column

Tilt the pelvis posteriorly

O

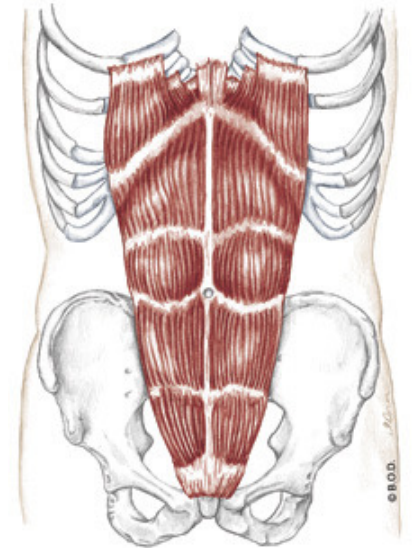
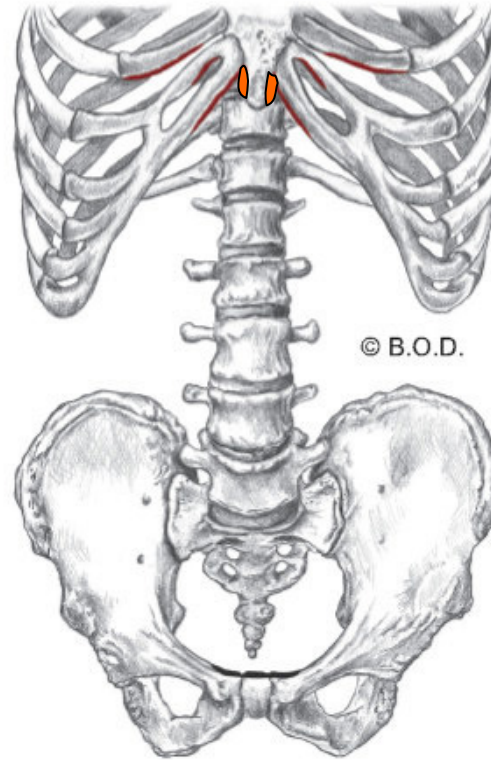
Pubic crest

Pubic symphysis

I

Cartilage of 5th, 6th, and 7th ribs

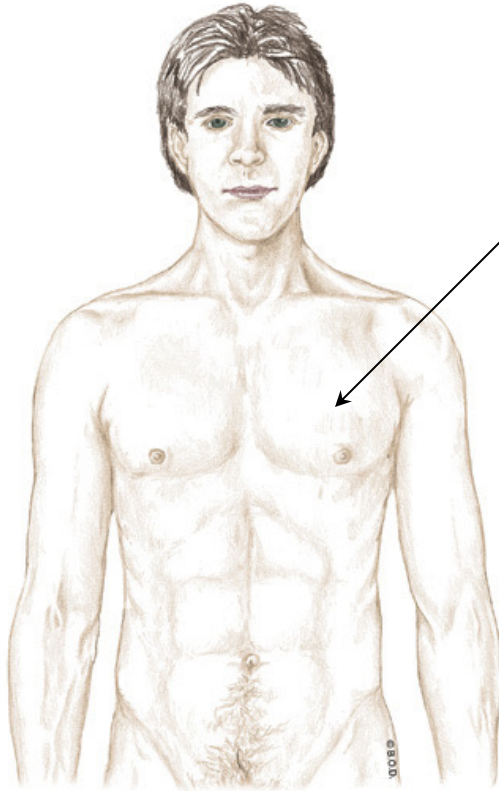
Xiphoid process



Anterior View

# Pectoralis Major

## Trail Guide, Page 89



Anterior View

### **Pectoralis Major**

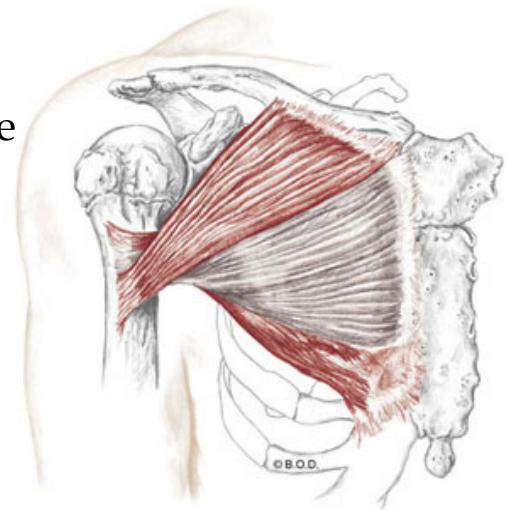
is a broad, powerful muscle located on the chest.

Pec major consists of three segments:

- Clavicular (clavicle)
- Sternal (sternum)
- Costal (rib cartilage)

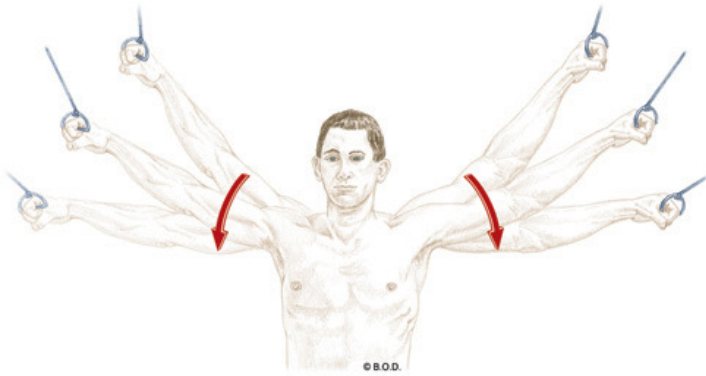
Pec major is also an antagonist to itself:  
Upper fibers flex the glenohumeral joint.  
Lower fibers extend the glenohumeral joint.

When do you use your pecs?

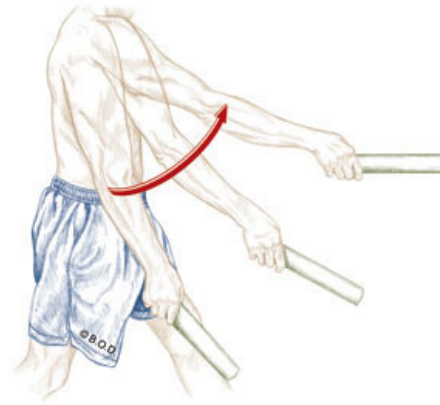


Anterior View

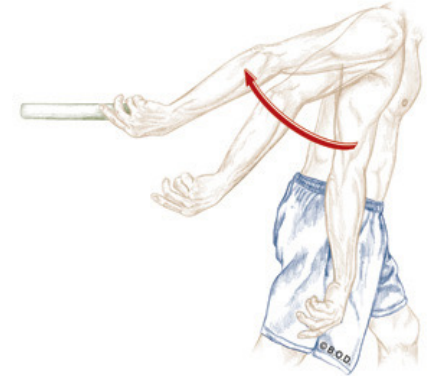
# Actions of the Pectoralis Major



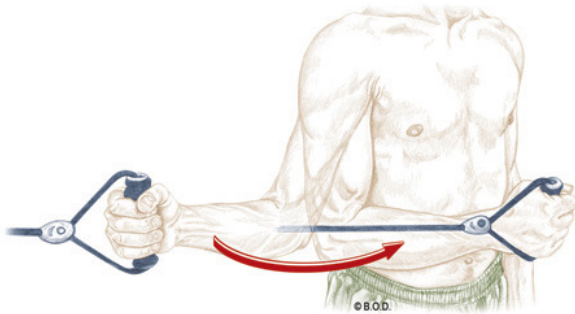
Adduct the glenohumeral joint



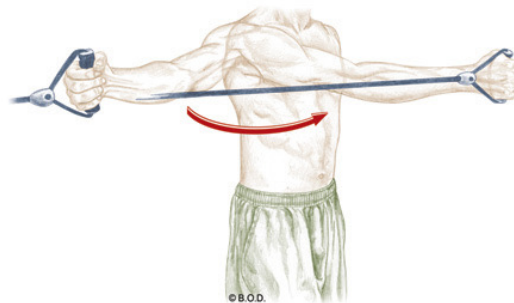
Flex the glenohumeral joint



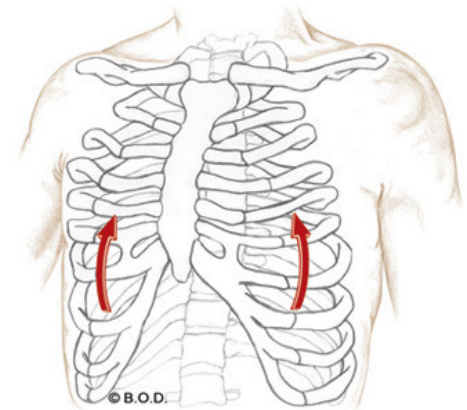
Extend the glenohumeral joint



Medially rotate the glenohumeral joint



Horizontally adduct the glenohumeral joint



Assist to elevate the thorax during forced inhalation

# Pectoralis Major, page 89

**A** All fibers:

**Adduct** the glenohumeral joint

**Medially rotate** the glenohumeral joint

Assist to **elevate** the thorax during forced inhalation (with the arm fixed)

*Upper fibers:*

**Flex** the glenohumeral joint

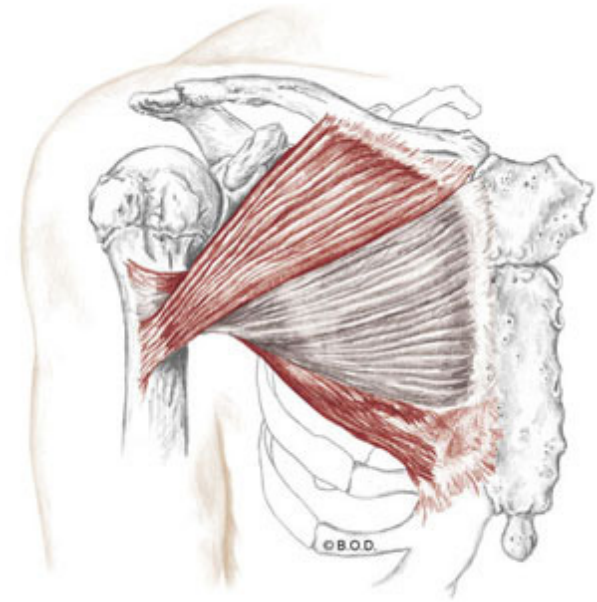
**Horizontally adduct** the glenohumeral joint

*Lower fibers:*

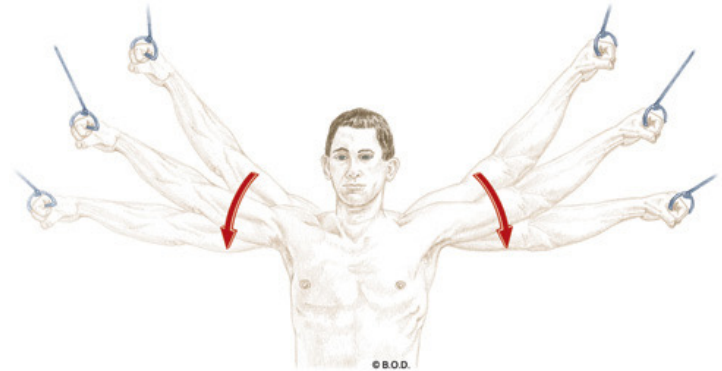
**Extend** the glenohumeral joint

**O** Medial half of the clavicle  
Sternum  
Cartilage of ribs 1-6

**I** Crest of greater tubercle of humerus



Anterior View





# Pectoralis Major, page 89

**A** All fibers:

**Adduct** the glenohumeral joint

**Medially rotate** the glenohumeral joint

Assist to **elevate** the thorax during forced inhalation (with the arm fixed)

*Upper fibers:*

**Flex** the glenohumeral joint

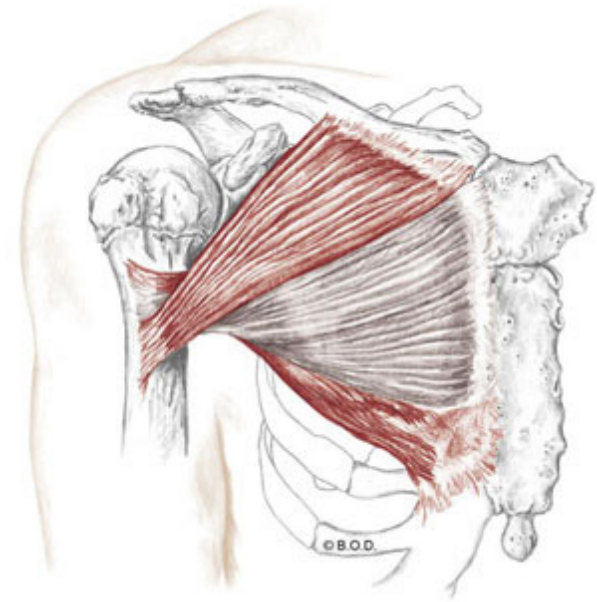
**Horizontally adduct** the glenohumeral joint

*Lower fibers:*

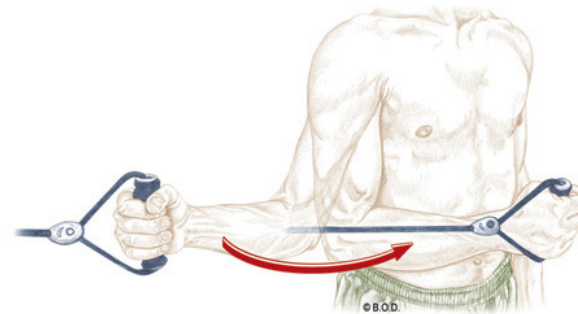
**Extend** the glenohumeral joint

**O** Medial half of the clavicle  
Sternum  
Cartilage of ribs 1-6

**I** Crest of greater tubercle of humerus



Anterior View





# Pectoralis Major, page 89

**A** All fibers:

**Adduct** the glenohumeral joint

**Medially rotate** the glenohumeral joint

Assist to **elevate** the thorax during forced inhalation (with the arm fixed)

*Upper fibers:*

**Flex** the glenohumeral joint

**Horizontally adduct** the glenohumeral joint

*Lower fibers:*

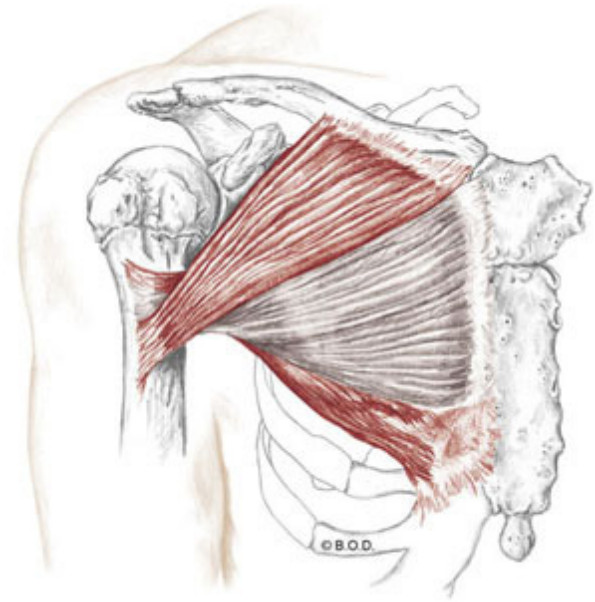
**Extend** the glenohumeral joint

**O** Medial half of the clavicle

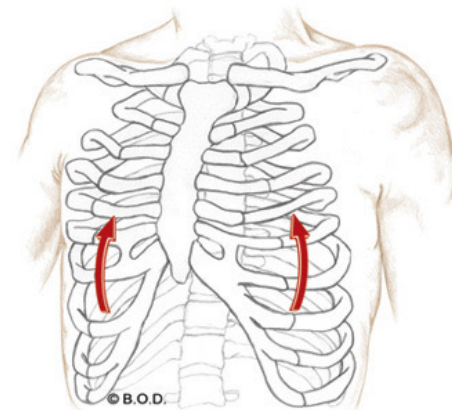
Sternum

Cartilage of ribs 1-6

**I** Crest of greater tubercle of humerus



Anterior View



# Pectoralis Major, page 89

**A** All fibers:

**Adduct** the glenohumeral joint

**Medially rotate** the glenohumeral joint

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*Upper fibers:*

**Flex** the glenohumeral joint

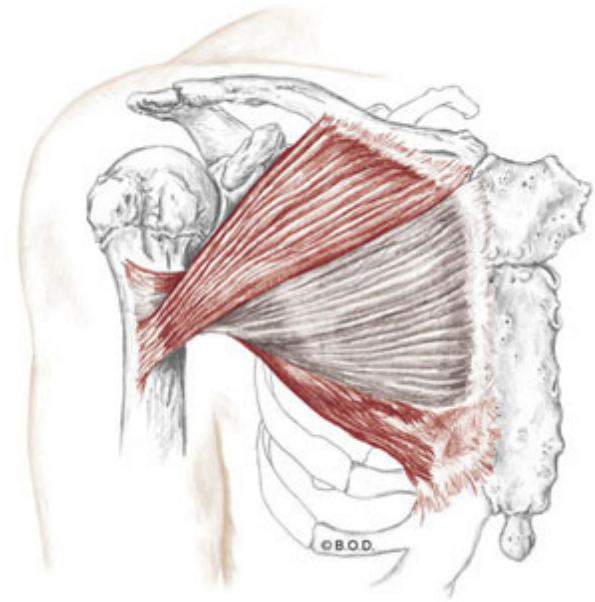
**Horizontally adduct** the glenohumeral joint

*Lower fibers:*

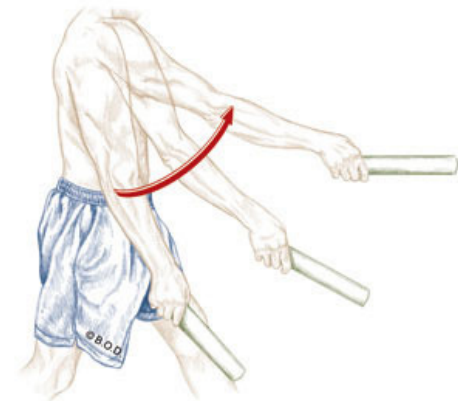
**Extend** the glenohumeral joint

**O** Medial half of the clavicle  
Sternum  
Cartilage of ribs 1-6

**I** Crest of greater tubercle of humerus



Anterior View



# Pectoralis Major, page 89

**A** All fibers:

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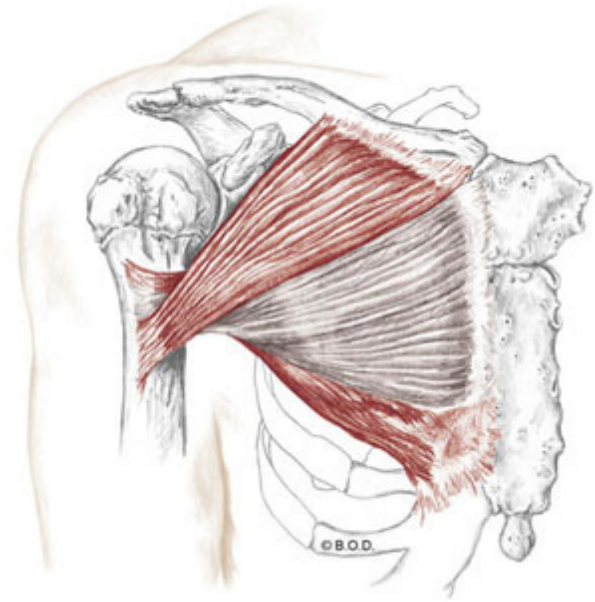
**Horizontally adduct** the glenohumeral joint

*Lower fibers:*

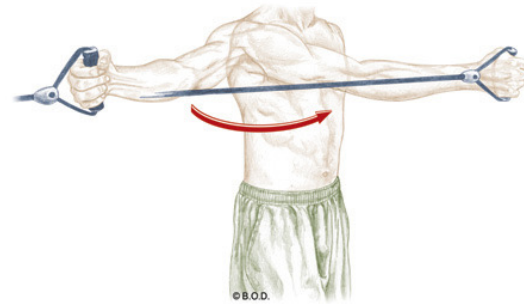
**Extend** the glenohumeral joint

**O** Medial half of the clavicle  
Sternum  
Cartilage of ribs 1-6

**I** Crest of greater tubercle of humerus



Anterior View



# Pectoralis Major, page 89

**A** All fibers:

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**Medially rotate** the glenohumeral joint

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*Upper fibers:*

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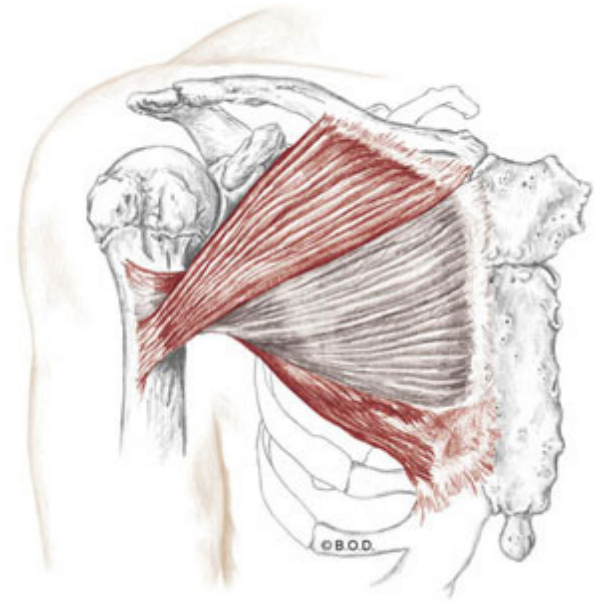
**Horizontally adduct** the glenohumeral joint

*Lower fibers:*

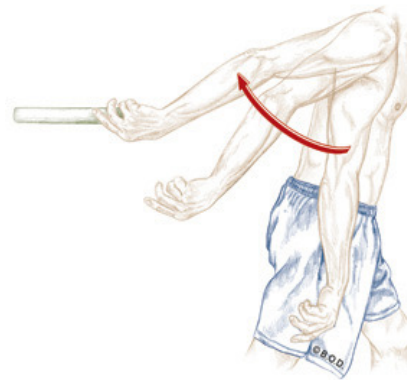
**Extend** the glenohumeral joint

**O** Medial half of the clavicle  
Sternum  
Cartilage of ribs 1-6

**I** Crest of greater tubercle of humerus



Anterior View



# Pectoralis Major, page 89

**A** All fibers:

**Adduct** the glenohumeral joint

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**Flex** the glenohumeral joint

**Horizontally adduct** the glenohumeral joint

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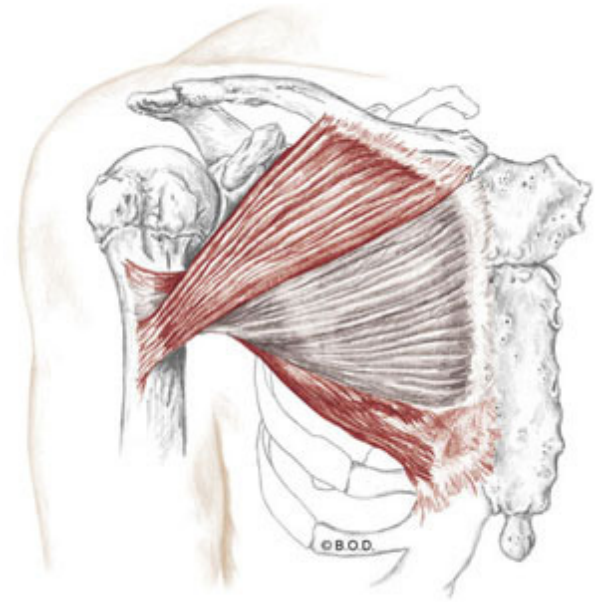
**Extend** the glenohumeral joint

**O** Medial half of the clavicle

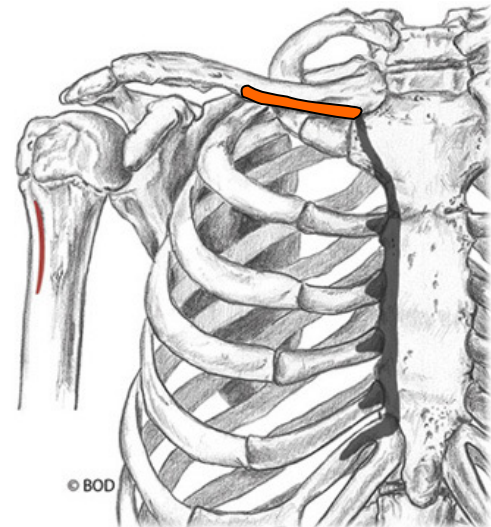
Sternum

Cartilage of ribs 1-6

**I** Crest of greater tubercle of humerus



Anterior View





# Pectoralis Major, page 89

**A** All fibers:

**Adduct** the glenohumeral joint

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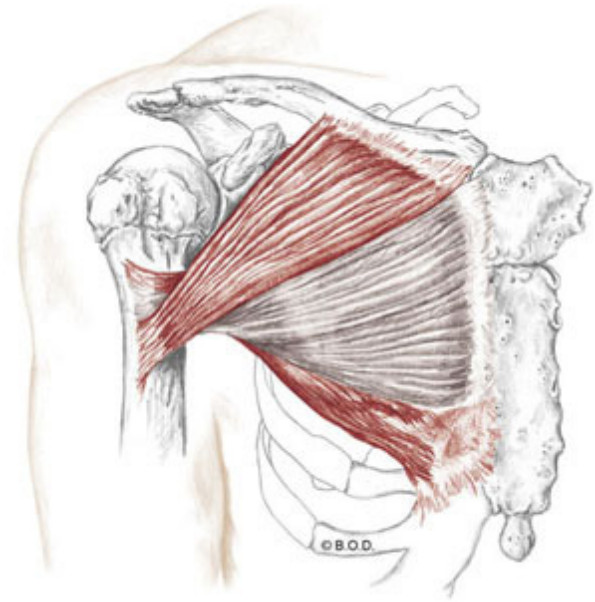
**Extend** the glenohumeral joint

**O** Medial half of the clavicle

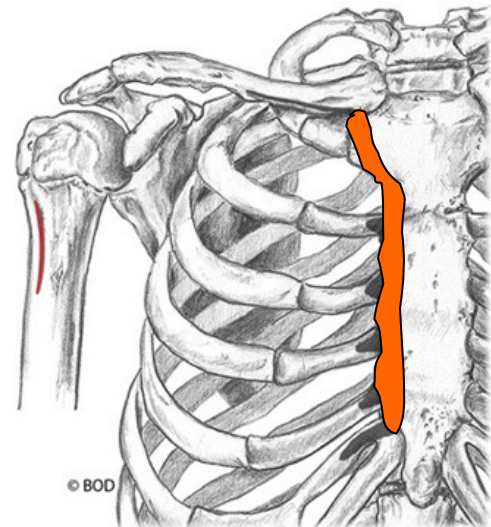
Sternum

Cartilage of ribs 1-6

**I** Crest of greater tubercle of humerus



Anterior View





# Pectoralis Major, page 89

**A** All fibers:

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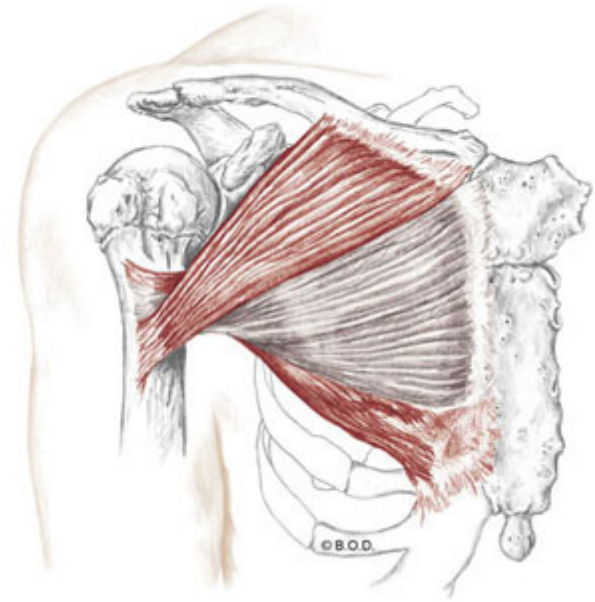
*Lower fibers:*

**Extend** the glenohumeral joint

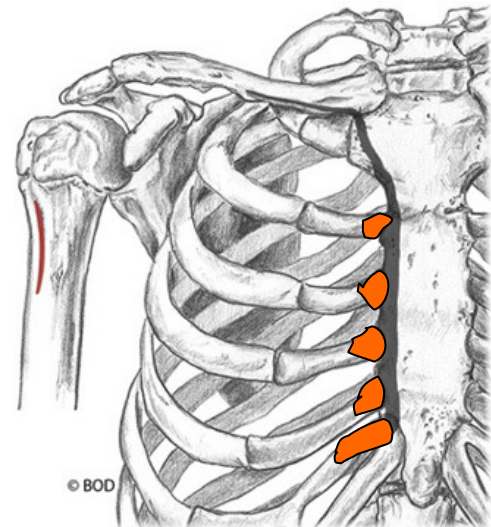
**O** Medial half of the clavicle  
Sternum

Cartilage of ribs 1-6

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Anterior View



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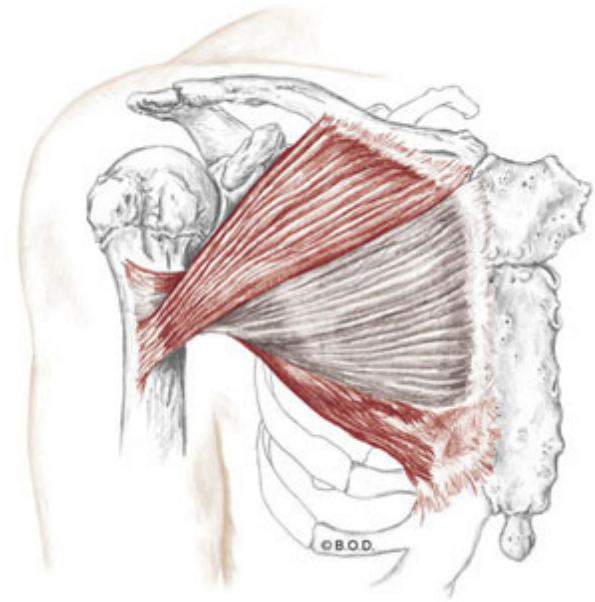
**Horizontally adduct** the glenohumeral joint

*Lower fibers:*

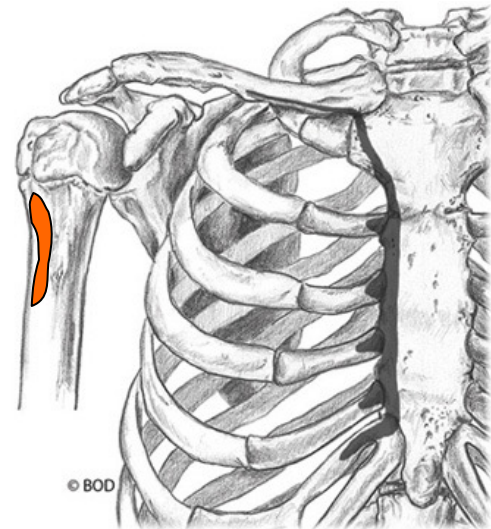
**Extend** the glenohumeral joint

**O** Medial half of the clavicle  
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Cartilage of ribs 1-6

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Anterior View



# 12a Kinesiology:

## Muscle Names and Locations

