

Hole's Human Anatomy and Physiology

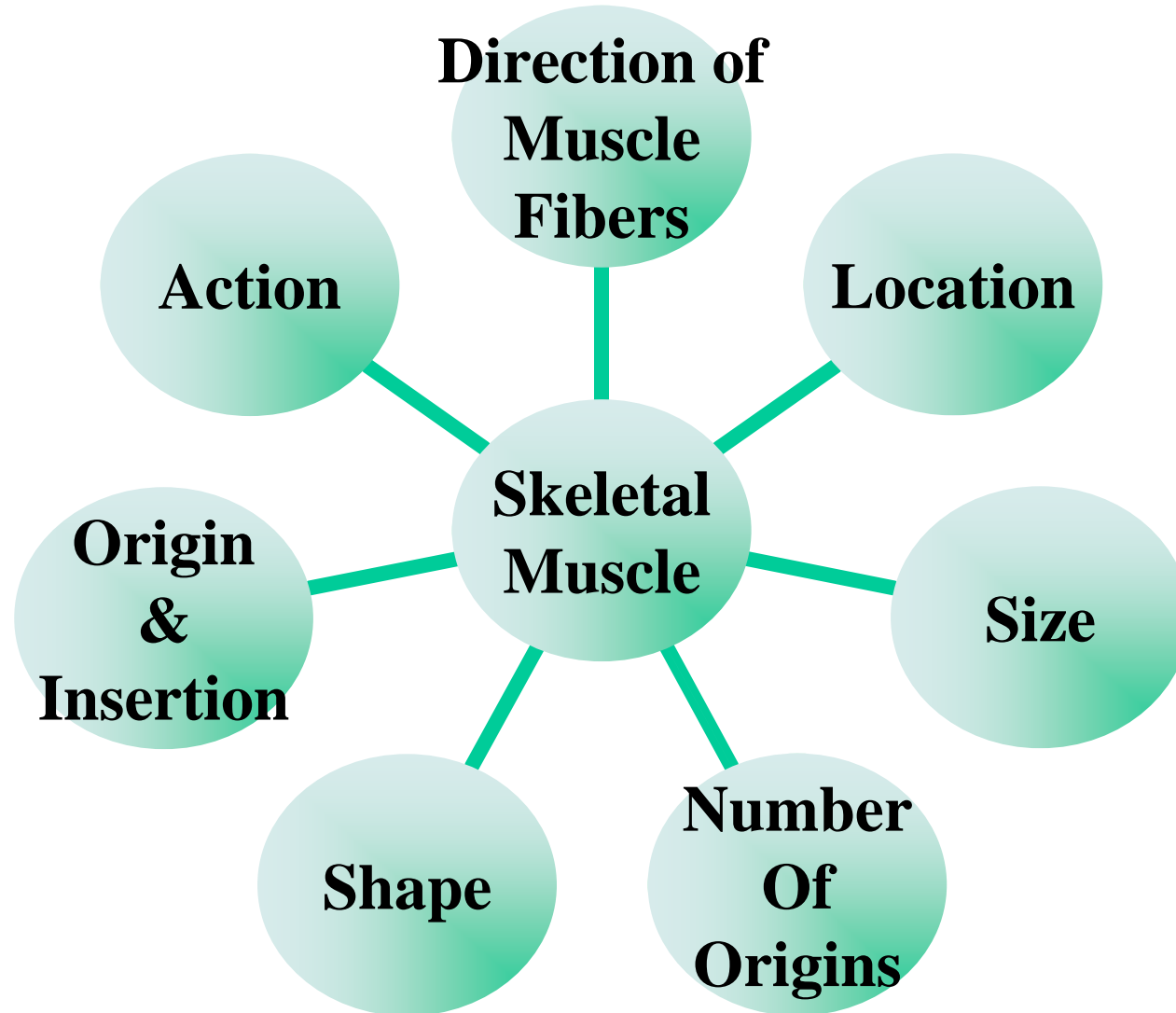
Twelfth Edition

Shier ♦ Butler ♦ Lewis

Chapter
9
Muscular System



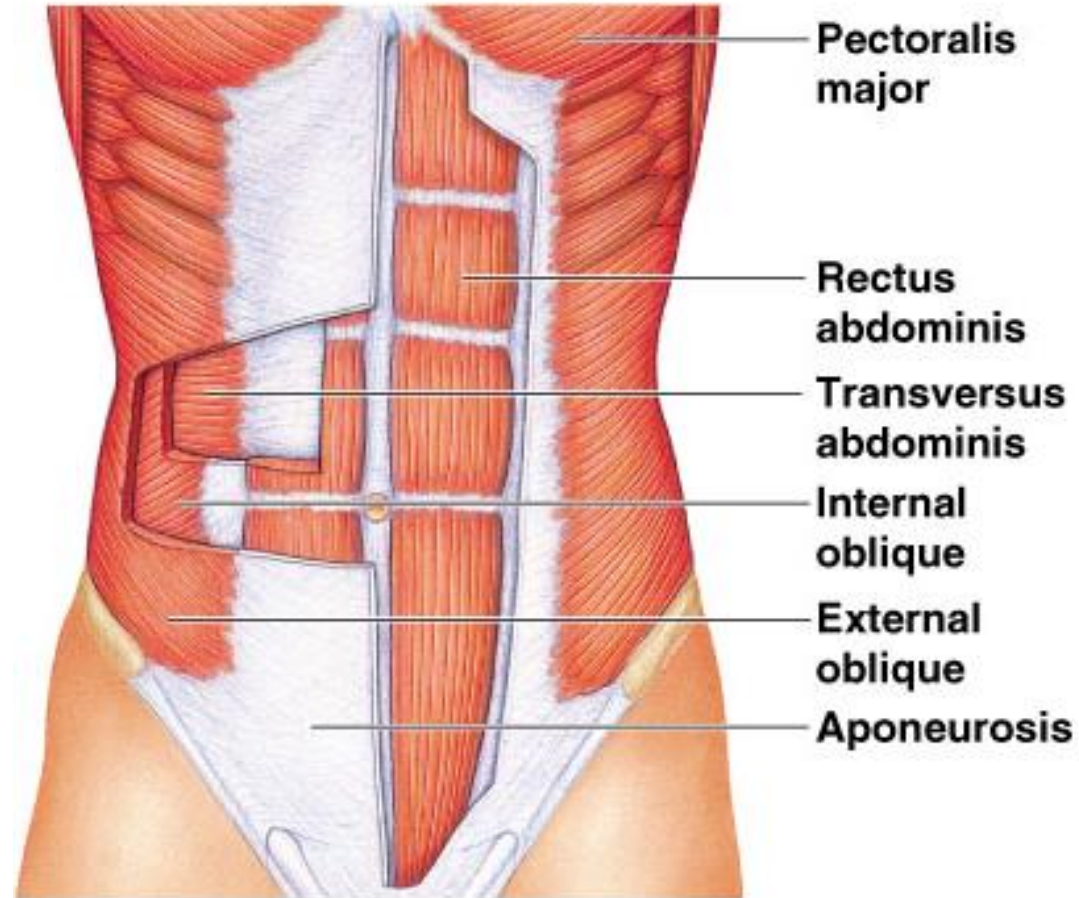
Naming Skeletal Muscles



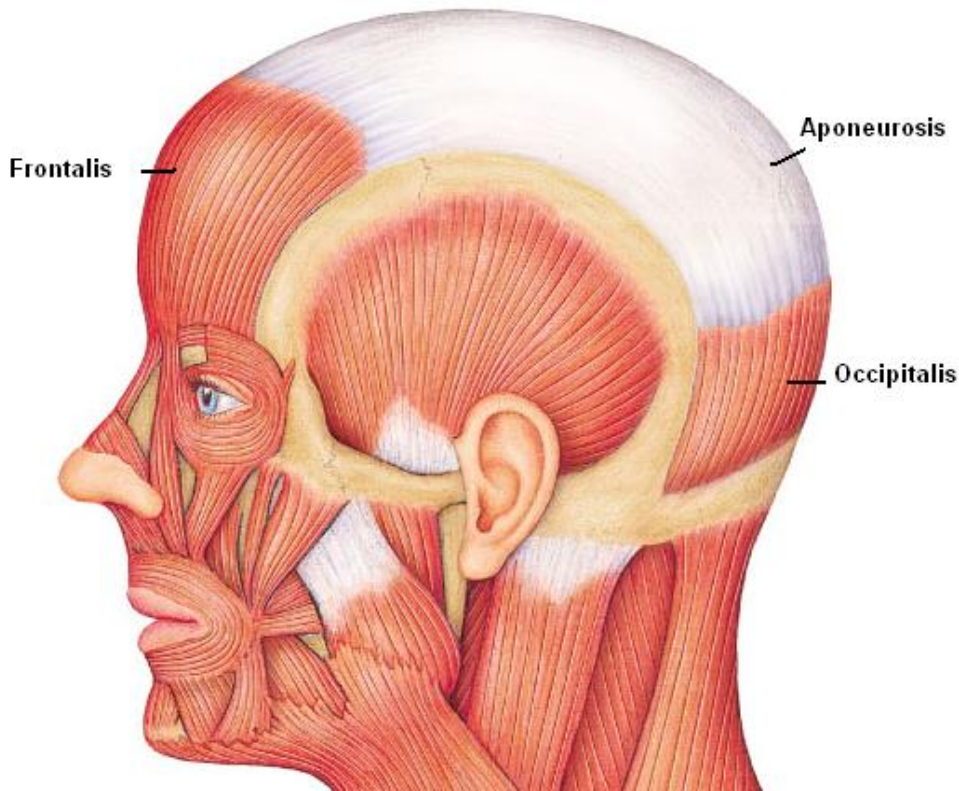
Direction of Muscle Fibers

For example: Relative to the Midline

- **RECTUS** = parallel to the midline
“Rectus Abdominus”
- **TRANSVERSE** = perpendicular to midline
“Transverse Abdominus”
- **OBLIQUE** = diagonal to midline
“External Oblique”



Location

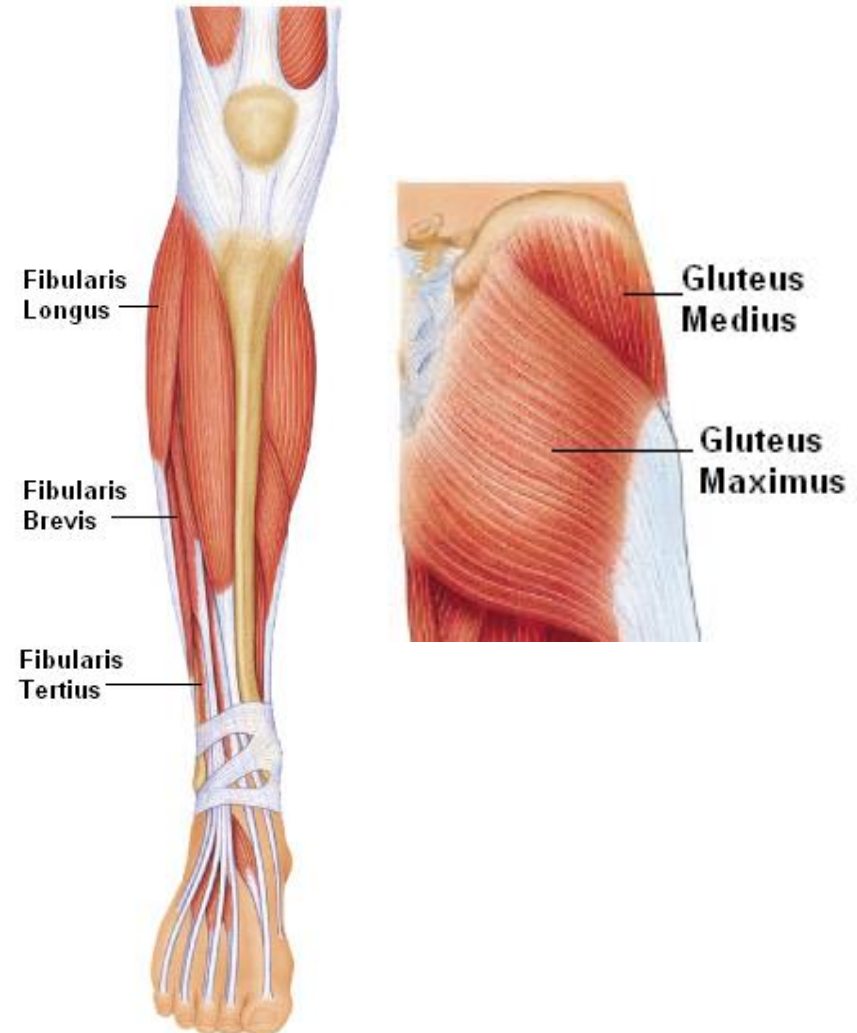


- Structure near which muscle is found
 - **FRONTALIS** = near FRONTAL bone
 - **OCCIPITALIS** = near OCCIPITAL bone

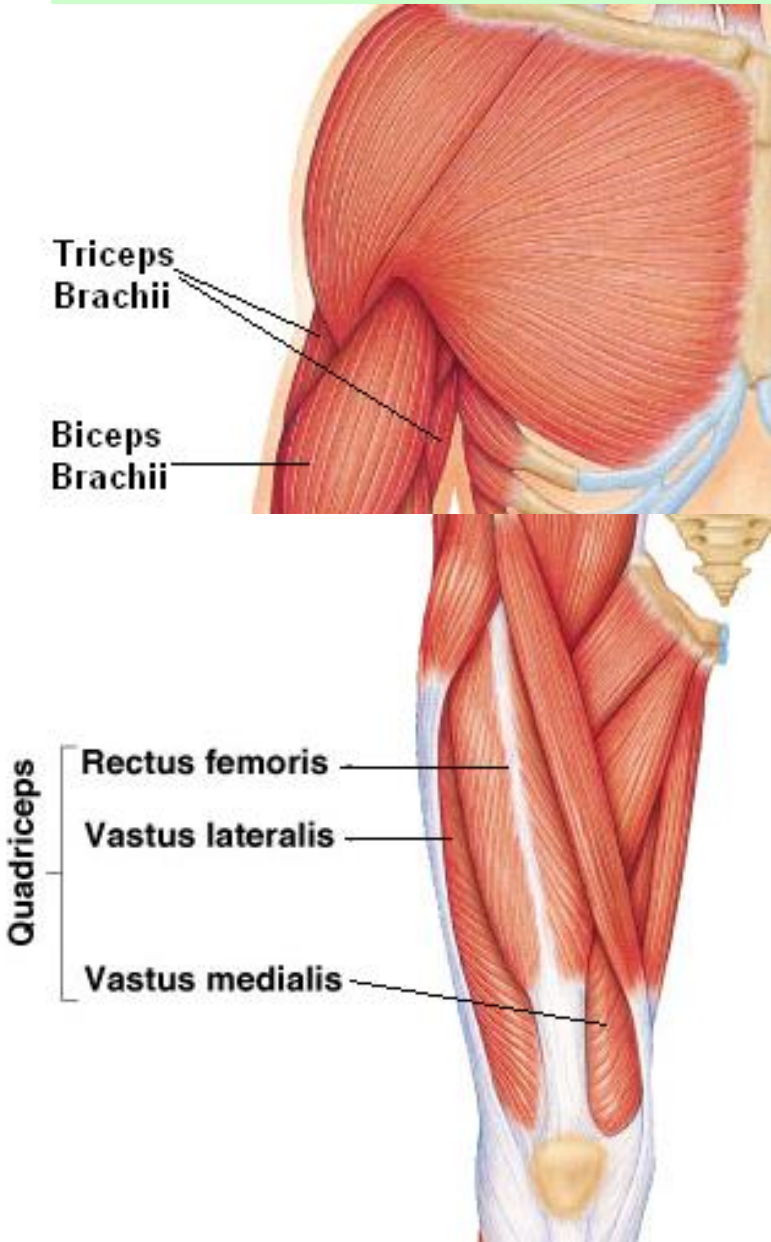
Size

Relative Size of Muscle:

- **MAXIMUS** = largest
 - *Gluteus Maximus*
- **MEDIUS** = middle
 - *Gluteus Medius*
- **MINIMUS** = smallest
 - *Gluteus Minimus*
- **LONGUS** = longest
 - *Fibularis Longus*
- **BREVIS** = short
 - *Fibularis Brevis*
- **TERTIUS** = shortest
 - *Fibularis Tertius*




Number of Origins

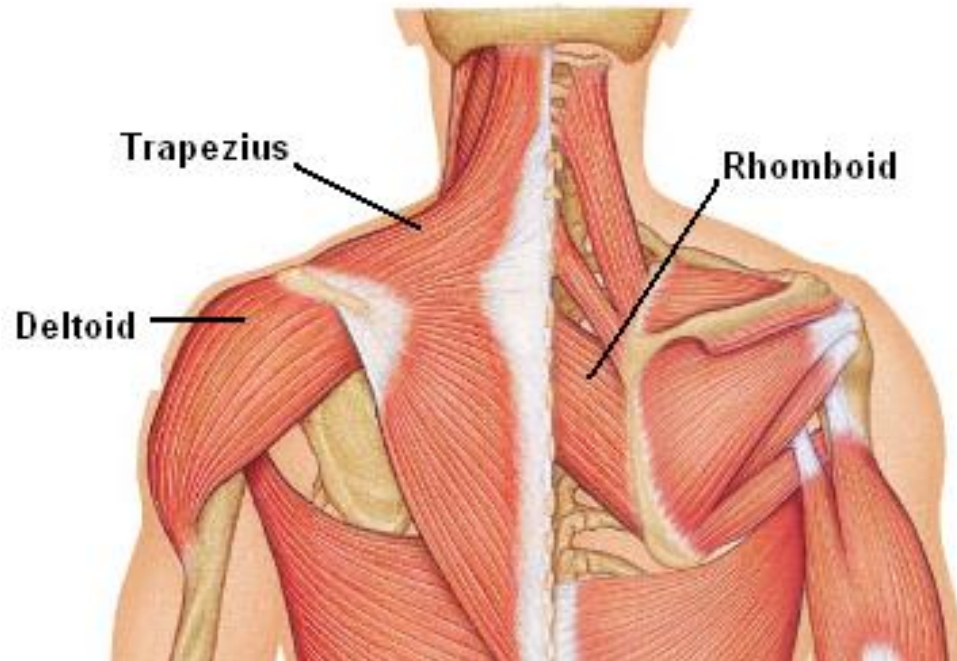


Number of tendons of origin (or “heads” of the muscle):

- **BICEPS** = Two
 - *Biceps Brachii*
 - *Biceps Femoris*
- **TRICEPS** = Three
 - *Triceps Brachii*
- **QUADRICEPS** = Four
 - *Quadriceps Femoris*

Shape

- **DELTOID** = triangular shape Δ
- **TRAPEZIUS** =
like a trapezoid, a four-sided figure
with two sides parallel
- **SERRATUS** = saw-toothed 
- **RHOMBOID** = \diamond
like a rhombus with
equal and parallel sides
- **TERES** =
round/cylindrical \circ

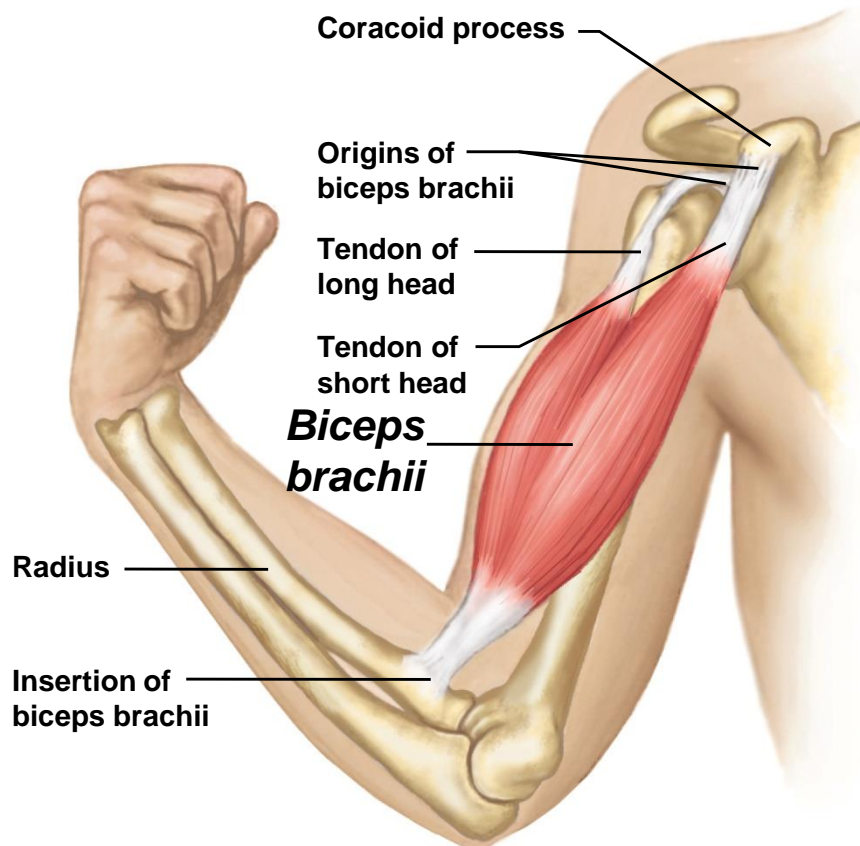
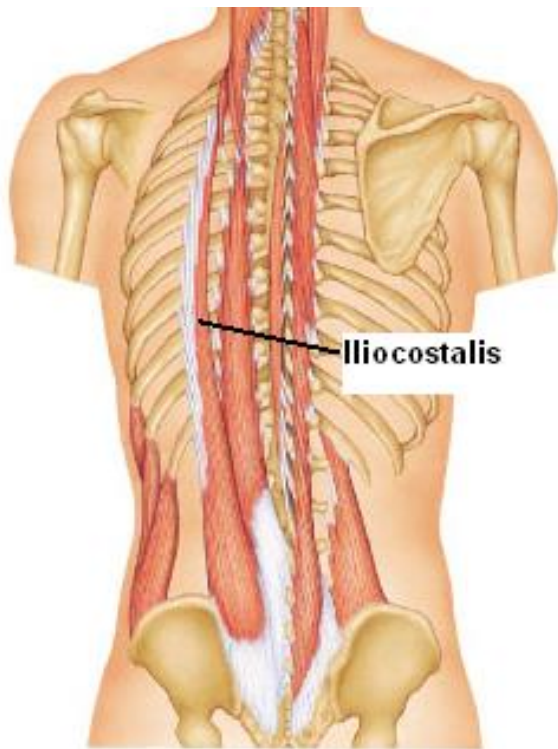


Origin & Insertion

Which bones the muscles are attached to:

- Origin – attachment to an immovable bone
- Insertion – attachment to a movable bone

ex: *Iliocostalis* = attaches to the ilium & ribs (costal = ribs)

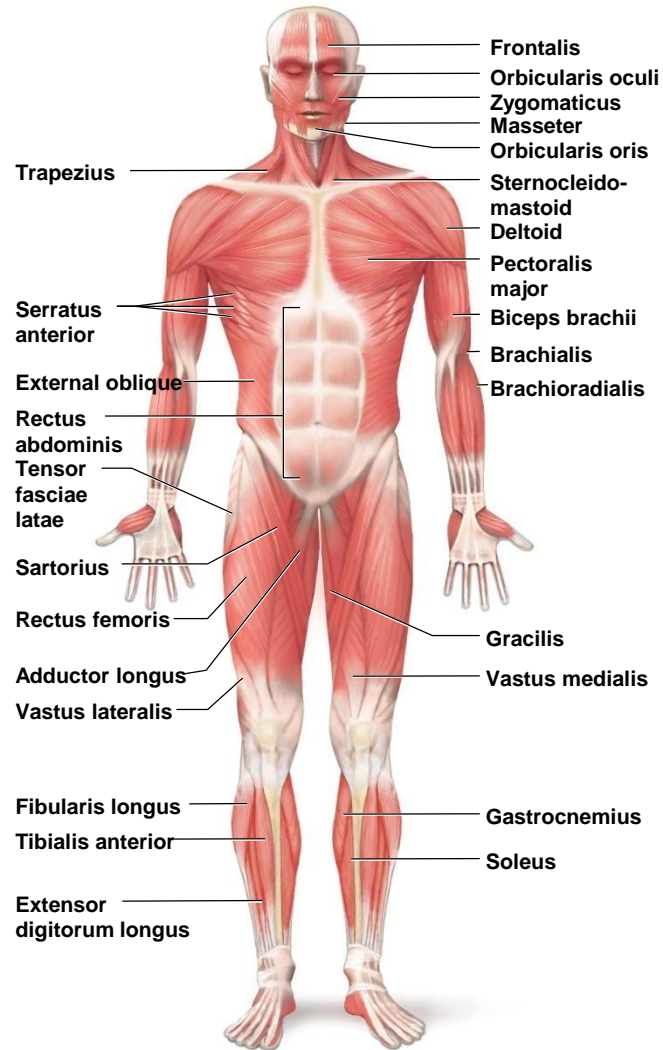


Action

NAME	ACTION	EXAMPLE
FLEXOR	Decrease angle at a joint	<i>Flexor Carpi Radialis</i>
EXTENSOR	Increase angle at a joint	<i>Extensor Carpi Ulnaris</i>
ABDUCTOR	Move bone away from midline	<i>Abductor Pollicis Longus</i>
ADDUCTOR	Move bone toward midline	<i>Adductor Longus</i>
SUPINATOR	Turn palm upward/anterior	<i>Supinator</i>
PRONATOR	Turn palm downward/posterior	<i>Pronator Teres</i>

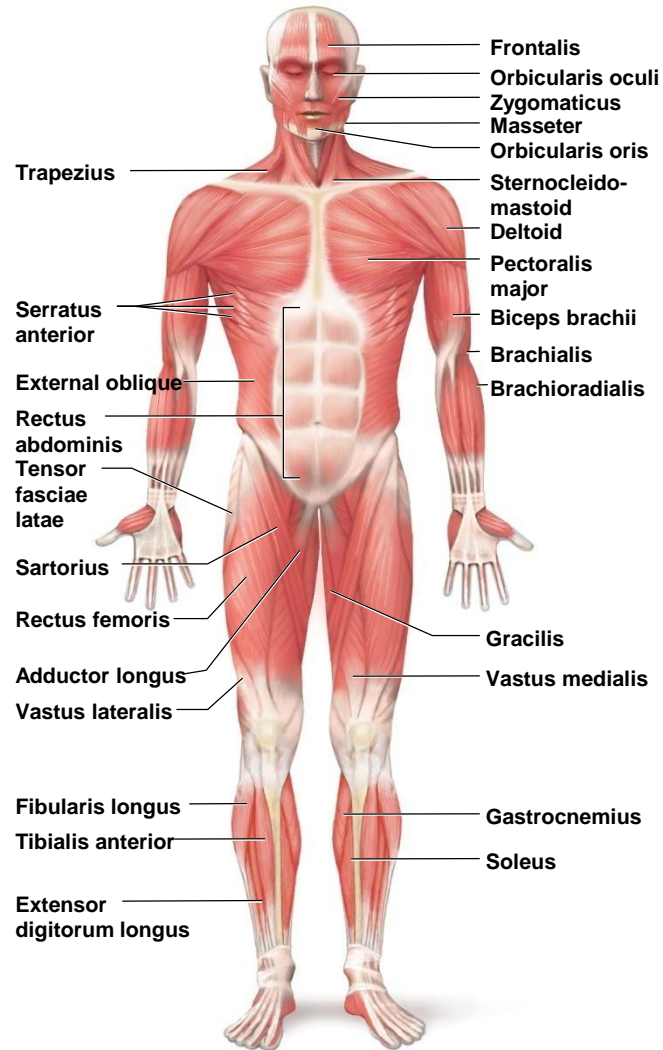
9.8: Major Skeletal Muscles

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Major Skeletal Muscles

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