Rectus Abdominis

Origin: Pubis (short horizontal line)
Insertion: Across top of thoracic arch

Action: Pulls thorax down/pelvis up
Shape: Long, flat, bullet-shaped muscle
Comments:
- Linea alba: tendinous furrow along mid-line
- Semi-lunar lines: tendinous furrow along margins
- Navel located in between thorax and pelvis
- Upper portion flatter with tendinous horizontal furrows
- Lower portion rounder

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External Oblique

*Origin:* Diagonally across lower 8 ribs of thorax
  (interweaves with Serratus Anterior muscle)

*Insertion:* Front half of iliac crest
  Inguinal ligament
  Semi-lunar line

*Action:* Bends trunk to the side, rotates thorax, flex trunk

*Shape:* 2 parts
  - Thoracic part like a wing with finger-like muscle bundles
  - Flank part tear drop shaped

*Comments:*
  - Upper portion muscle bundles run at a 45° angle to horizontal
  - Lower portion called flank pad

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Sacrospinalis

*Origin:* Along spine and sacrum, posterior 1/5 iliac crest
*Insertion:* Into ribs all the way to skull (most prominent in small of back)

*Action:* Pulls thorax up, straightens back

*Shape:* Generally 2 cylinders on either side of spine
*Comments:*  
- Also called chords of the back  
- Transition form between thorax and pelvis  
- Each cylinder may be divided into a lateral and a medial form

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Sternomastoid

**Origin:** Top of the sternum
   Upper 1/3 of clavicle (inside end)

**Insertion:** Mastoid process (bump on skull behind the ear)

**Action:** Paired together: tips head back, individually: turns head side to side

**Shape:** Straplike

**Comments:**
- Called “the cords of the neck”
- Spiral around cylinder of neck.
- Form silhouette of neck in front view
- Straight when head is turned
- Tendons at origin form pit of neck
- Create triangles of neck in side view

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**Pectoralis Major**

*Origin:* Medial ½ of clavicle  
  - Sternum  
  - Thorax, above Rectus Abdominis  
*Insertion:* Shaft of humerus, upper ⅓, on the front

*Action:* Pulls arm across chest  
*Shape:* Large, thick, fan-shaped, in 3 parts  
*Comments:*  
- 3 overlapping parts create characteristic fold of armpit  
- Depression between Pectoralis Major and Deltoid
Deltoid

Origin: Outer 1/3 of clavicle
  Outer acromion
  Spine of scapula
Insertion: Shaft of humerus, ½ way down outside

Action: Pulls arm forward, outward, backward
Shape: Triangular, in 3 parts
Comments:
  • Depression between Deltoid and Pectoralis Major
  • Characteristic shape of shoulder, square and straight near acromion and round as it inserts at humerus
Trapezius

*Origin:* Base of skull, along spine  
*Insertion:* Outer 1/4 of clavicle  
  Medial acromion  
  Upper edge of spine of scapula  
  Part of lower edge of scapular spine  

*Action:* Rotates, lifts and pulls scapula down  
*Shape:* Kite shape  
*Comments:*  
- Forms back of neck, top of shoulders and vertical plane of back  
- Tendinous in the middle, bump of 7th cervical vertebra visible  
- Continues “W” of scapular and rhomboid planes
**Teres Major**

*Origin:* Lower angle of scapula  
*Insertion:* Shaft of humerus

*Action:* Pulls arm backward  
*Shape:* Oval

*Comments:*  
- Overlaps Latissimus Dorsi as it approaches arm
Rhomboids

*Origin:* Lower neck and upper thoracic vertebra
*Insertion:* Edge of vertebral margin of scapula

*Action:* Raises scapula
*Shape:* Quadrilateral under Trapezius

*Comments:*
- Oval in contraction
- Forms rhomboid plane of “W” on upper back
**Serratus Anterior**

*Origin:* Diagonally across lower 8 ribs of thorax  
(interweaves with External Oblique muscle)

*Insertion:* Under scapula along the vertebral margin

*Action:* Rotates scapula

*Shape:* Quadrilateral with finger-like muscle bundles

*Comments:*
  - Mostly covered by scapula
  - Lower portion creates volume below scapula wrapping around thorax (under Latissimus Dorsi)
  - Visible muscle bundles interweave horizontally with External Oblique

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Latissimus Dorsi

*Origin:* Along lower ½ of spine, sacrum and posterior ⅓ of iliac crest

*Insertion:* Front of shaft of humerus, below ball

*Action:* Pulls arm back (swimming), lifts body (climbing)

*Shape:* Triangular, sheet-like muscle

*Comments:*
- Tendinous over small of back
- Overlaps lower angle of scapula
- Overlays Sacrospinalis and Serratus Anterior muscles
- Most prominent on side of figure
- Teres major muscle overlaps Latissimus Dorsi at shoulder
Biceps

Origin: Socket of scapula (2 heads)
Insertion: Upper shaft of radius, front

Action: Flexes elbow, supinates lower arm, pulls arm in front of the body at the shoulder
Shape: Ovoid

Comments:
- Round, narrow belly on front of upper arm
- Emerges from under Pectoralis Major
- Angles slightly toward the armpit compared to humerus

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Triceps

Origin: Socket of scapula (long head)
Lower 3/4 of back humerus shaft (medial head)
Upper 1/3 of back humerus shaft (lateral head)

Insertion: Triceps tendon to ulna at olecranon process
(point of elbow)

Action: Extends elbow
Shape: 3 tear drop shapes secured to triceps tendon

Comments:
- Bellies high on back of upper arm
- Long head passes over Teres Major (and under Teres Minor) to its attachment on scapula
- Triceps tendon cups back of arm and angles away slightly from shoulder
Brachialis

*Origin:* Lower ½ of front of humerus
*Insertion:* Front claw of ulna

*Action:* Flexes elbow
*Shape:* Wide, spear tip shape

*Comments:*
- Sandwiched between Biceps and Triceps
- Visible on the outside of upper arm, oval as elbow flexes
- Deltoid insert slightly forward and in common with Brachialis origin
- Gives additional muscular bulk to lower front ½ of humerus
**Brachioradialis and Ridge Group**

*Origin:* Outside lower shaft of humerus
*Insertion:* Thumb side of wrist

*Action:* Brachioradialis flexes elbow
    Ridge group extends wrist
*Shape:* Flat bellies twisting toward wrist

*Comments:*
- Bellies lie in upper 1/2 of forearm with long tendinous tails at the wrist
- Emerges from between the Triceps and Brachialis
- Brachioradialis folds across the middle of its belly with the elbow flexed

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Extensor Group of Forearm (HOB)

Origin: High, Outside on spool of humerus
Insertion: Back of hand

Action: Extend wrist
Shape: Elongated bellies with long tendons for insertion

Comments:
• Bellies emerge from between Ridge Group and point of elbow (olecranon)
• Tendons pass over wrist and fan out to insert on shaft of fingers
• Ulnar crest creates furrow between Extensor and Flexor Groups

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Flexors of the Forearm (LIP)

Origin: Low Inside spool of humerus  
Insertion: Palm side of hand

Action: Flex wrist  
Shape: Elongated bellies with long tendons for insertion

Comments:
- Bellies mass to form rounded ovoid on inside forearm  
- Tendons pass over wrist through the carpal tunnel then fan out over the palm to the fingers  
- Ulnar crest creates furrow between Flexor and Extensor Groups

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Gluteus Maximus

Origin: Side of sacrum
Insertion: Shaft of femur & Ilio-tibial band below the Great trochanter

Action: Extends thigh backward
Shape: Rectangular

Comments:
- Ilio-tibial band is a band of fascia running from the Great trochanter to lateral condyle of tibia
- Overlaps Gluteus medius at rear
- Narrow profile
- Like a doughnut around Great trochanter
- Depression behind Great trochanter
- Gluteal fold below Great trochanter created by band of fascia, horizontal when tensed, angled when relaxed
Gluteus Medius

*Origin:* Below iliac crest
*Insertion:* Great trochanter

*Action:* Abducts thigh (pulls away from the body)
*Shape:* Triangular

*Comments:*
- On the side of hips
- Gluteus maximus overlaps Gluteus medius at rear
- Front lower on Great trochanter than rear
Tensor Fascia Lata

**Origin:** Just behind ASIS

**Insertion:** Upper portion of ilio-tibial band → outer head of tibia

**Action:** Raises thigh

**Shape:** Short, teardrop in extension
Triangular in flexion

**Comments:**
- Lower end is often widest part of male hips
- With Gluteus maximus, like a hand around Great trochanter
Vastus Lateralis (extensor)

**Origin:** Great trochanter and femur  
**Insertion:** Quadriceps tendon → patella → nose of tibia

**Action:** Extends knee  
**Shape:** Oval slab

**Comments:**
- Located on outside of thigh, below Great trochanter  
- Ilio-tibial band lies on top  
- Furrow between Hamstring and Vastus lateralis (flexor and extensor)  
- Belly ends 2" above patella and bulges higher than hamstrings  
- Tensor fascia latae passes over Vastus lateralis
Sartorius

Origin: Just below ASIS
Insertion: Inside head of tibia with Hamstring and Gracilis

Action: Raises thigh and flexes knee
Shape: Long, narrow S-shaped ribbon

Comments:
- Longest muscle in the body
- Together with Tensor Fascia Lata, called the “reins” of the knee
- Spirals to knee dividing thigh diagonally
- Continuity with Tibialis
- From the front view Sartorius passes behind Vastus medialis and reappears below it on the inside of the knee
Rectus Femoris

*Origin:* AIIS (below ASIS, below Sartorius)
*Insertion:* Quadriceps tendon → patella → nose of tibia

*Action:* Extends knee, raises thigh
*Shape:* Fusiform

*Comments:*
- Part of the Quadriceps muscle
- Narrow on front of thigh
- Belly high on thigh
- Depression below ASIS as it emerges from between Tensor fascia lata and Sartorius
- Sometimes seen in two forms with vertical furrow pointing at ASIS
**Vastus Medialis**

*Origin:* Deep to shaft of femur (inside and rear)  
*Insertion:* Quadriceps tendon → patella → nose of tibia

*Action:* Extends knee  
*Shape:* Teardrop

*Comments:*  
- Part of the Quadriceps muscle  
- Belly comes down to about mid way down the patella  
- In extension, cut diagonally by band of Richter (higher outside, lower inside)

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**Front View**

- Teardrop  
- Patella

**Greatest Projection**

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**Front View**

- Ilio-Tibial Band

**Inside View**

- Gracilis  
- Hamstring  
- Sartorius
Medial Adductors (Groin muscles)

*Origin:* Bottom of pelvis  
*Insertion:* Inside and rear shaft of upper femur

*Action:* Adducts thigh (pulls leg toward midline)  
*Shape:* Conical

*Comments:*  
- Major mass of inner thigh

Gracilis

*Origin:* Bottom of pelvis  
*Insertion:* Inside head of tibia between Sartorius and hamstring

*Action:* Adducts thigh  
*Shape:* Ribbon like

*Comments:*  
- On inside profile of thigh  
- Overlays Medial Adductors
Hamstrings

**Origin:** Deep on bottom of pelvis
**Insertion:** Head of fibula
  Head of tibia, inside by tendon to
  nose of tibia

**Action:** Flexes knee
**Shape:** Ovoid

**Comments:**
- Like a tongs grabbing either side of the tibia at the knee
- Insertion on inside knee in common with Sartorius and Gracilis
- Mass, narrow on thigh, angles medially
- Tendons sharply evident around flexed knee, often as furrow in extended knee
- Furrow between Hamstring and outer side thigh muscle (Vastus lateralis)
- Compare tendon attachments of Hamstrings and Ilio-tibial band

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Gastrocnemius

*Origin:* Above the condyles of femur  
*Insertion:* Achilles tendon to heel

*Action:* Flexes knee, points foot  
*Shape:* Large, split belly with one common tendon

*Comments:*
- Attaches high at the back of the knee  
- V-shape of muscular columns above, bellies below  
- Inside belly comparatively lower, rounder  
- Outside belly comparatively higher, squarer  
- Fat pad (popliteal fat) bulges behind extended knee  
- Creates profile of lower leg, from front inside Gastrocnemius points to patella  
- Achilles tendon narrowest at ankle (3/4"), flares slightly as it inserts into heel
Soleus

*Origin:* Head of fibula  
Back of tibia  
*Insertion:* Achilles tendon to heel  

*Action:* Points foot  
*Shape:* Rounded elongated triangle  

*Comments:*  
- Located under Gastrocnemius and Achilles tendon  
- Furrowed by tendon in contraction  
- More evident on inside lower leg
**Peroneus Longus**

**Origin:** Head of fibula & upper ⅓ of tibia  
**Insertion:** Behind outer ankle to sole of foot

**Action:** Points foot, and everts foot  
**Shape:** Flat oval with long tendon  
**Comments:**
- Belly high on outer lower leg
- Appears to be continuous with hamstring
- Extensors of big toe and other toes emerge from between Tibialis and Peroneus longus
Tibialis

*Origin:* Outer front of head of tibia & upper shaft of tibia

*Insertion:* Passes in front of ankle to the inside sole of foot, behind the ball

*Action:* Raises foot and inverts foot

*Shape:* Oval with a long tendon

*Comments:*  
- Belly high on lower leg, creates high profile in side view  
- Positioned obliquely on lower leg  
- Appears as a continuation of spiral of Sartorius  
- In side view, belly convex above and tendon concave below  
- Extensors of big toe and other toes emerge from between Tibialis and Peroneus longus