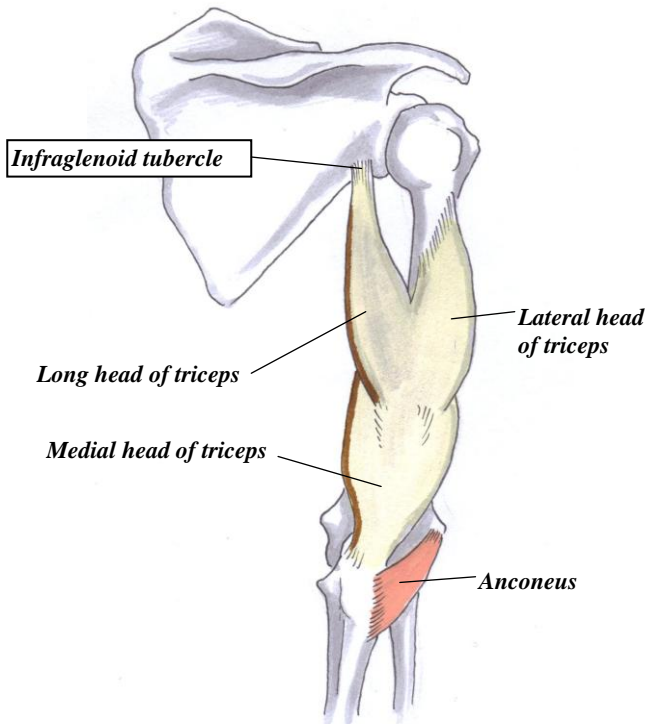
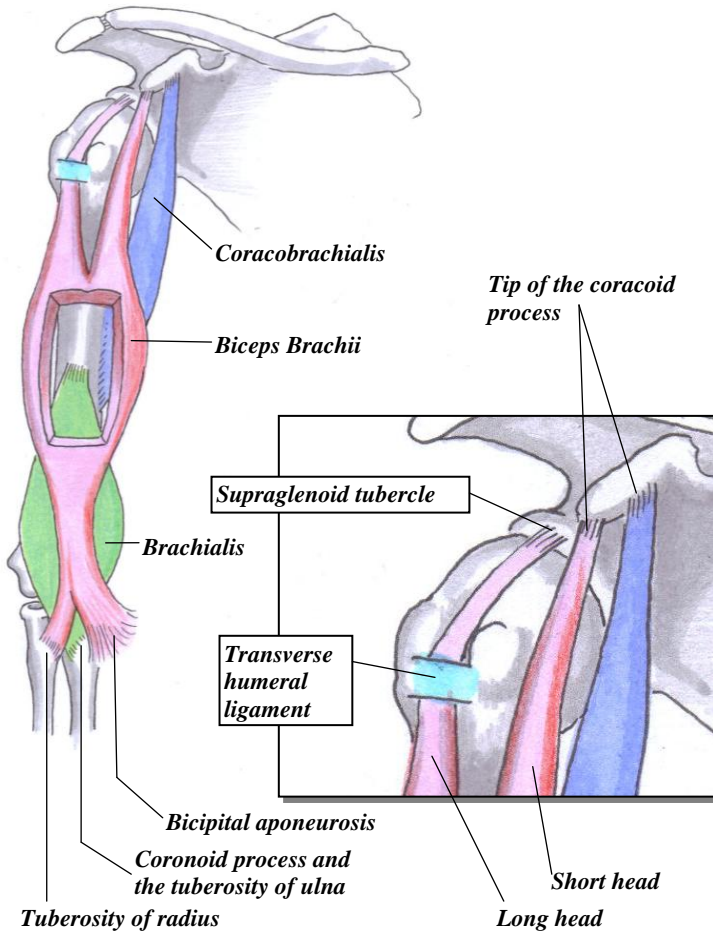


The innervation and mechanics of the flexor and extensor muscle compartments of the arm



Anterior Compartment: FLEXORS

All supplied by the **MUSCULOCUTANEOUS NERVE**

Biceps Brachii

Some of the brachialis is innervated by the radial nerve—the half that is posterior to the insertion of deltoid

Two heads:

- **SHORT HEAD:**
 - o The medial head.
 - o Originates from the tip of the coracoid process
- **LONG HEAD:**
 - o The lateral head.
 - o Originates from the supraglenoid tubercle of the glenoid fossa
- The biceps inserts into the tuberosity of radius; and it also inserts into the antebrachial fascia by virtue of the bicipital aponeurosis.
- It does very different things depending on what position the arm is in:
 - o It supinates the forearm by pulling on the aponeurosis, when the arm is pronated; it is the **MOST POWERFUL SUPINATOR** of the forearm
 - o when the forearm is supine it FLEXES the elbow joint by pulling on the attachment to the radial tuberosity.
 - o It is useless as a flexor when the forearm is pronated.
- The short head resists dislocation of the shoulder

Coracobrachialis

- Originates at the tip of the coracoid process of scapula
- Inserts into the middle third of the medial humerus
- Helps flex and adduct the arm
- Resists dislocation of the shoulder: it's a SHUNT muscle, it resists the downward dislocation of the humeral head
- Stabilizes the glenohumeral joint
- A landmark – it is pierced by the musculocutaneous nerve

Brachialis

- Originates from the distal half of the anterior humerus
- Inserts into the tuberosity of the ulna, and the coronoid process
- Flexes the forearm in all positions – it's the **PRIMARY FLEXOR**

Posterior Compartment: EXTENSORS

All supplied by the **RADIAL NERVE**

Triceps Brachii

- **LONG HEAD:**
 - o Originates from the infraglenoid tubercle
- **LATERAL HEAD:**
 - o Originates from the proximal humerus, more proximal than the radial groove
- **MEDIAL HEAD:**
 - o Originates from the posterior surface of the humerus, distal to the radial groove

The united triceps inserts into the olecranon of ulna
It is the chief extensor of the arm.

The long head resists dislocation of the head of humerus, especially during abduction

Anconeus

- Originates from the posterior lateral epicondyle of humerus
- Inserts into the lateral surface of olecranon
- Assists the triceps in flexing the forearm, and stabilizes the elbow joint. It also pulls the joint capsule out of the way of the olecranon upon extension; otherwise it would get pinched in the olecranon fossa. Many anatomists believe it to be a vestigial and forgotten 4th head of the triceps.