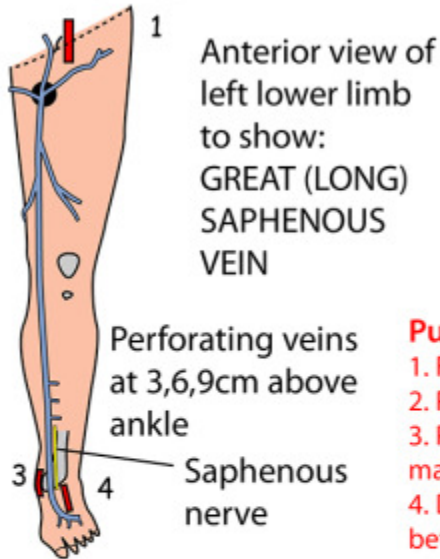
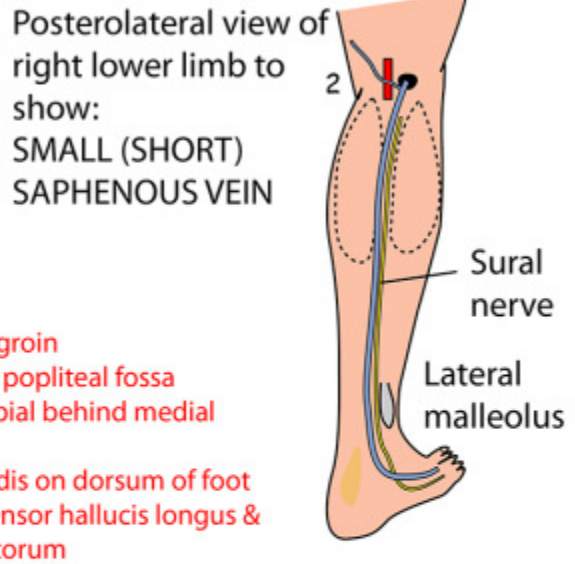


VEINS AND PULSES IN THE LOWER LIMB

ANTEROMEDIAL



POSTERIOR



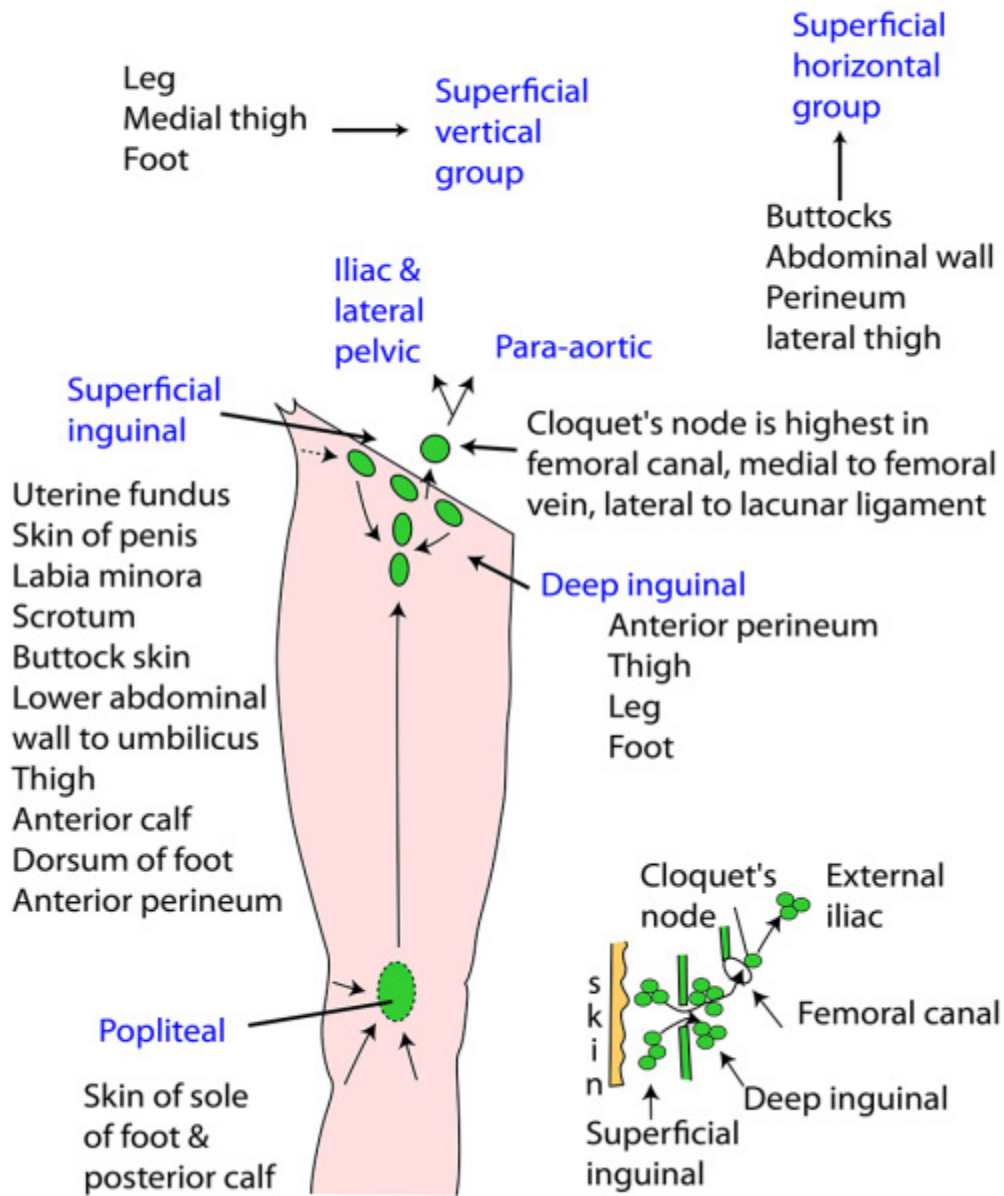
Pulses

1. Femoral in groin
2. Popliteal in popliteal fossa
3. Posterior tibial behind medial malleolus
4. Dorsalis pedis on dorsum of foot between extensor hallucis longus & extensor digitorum

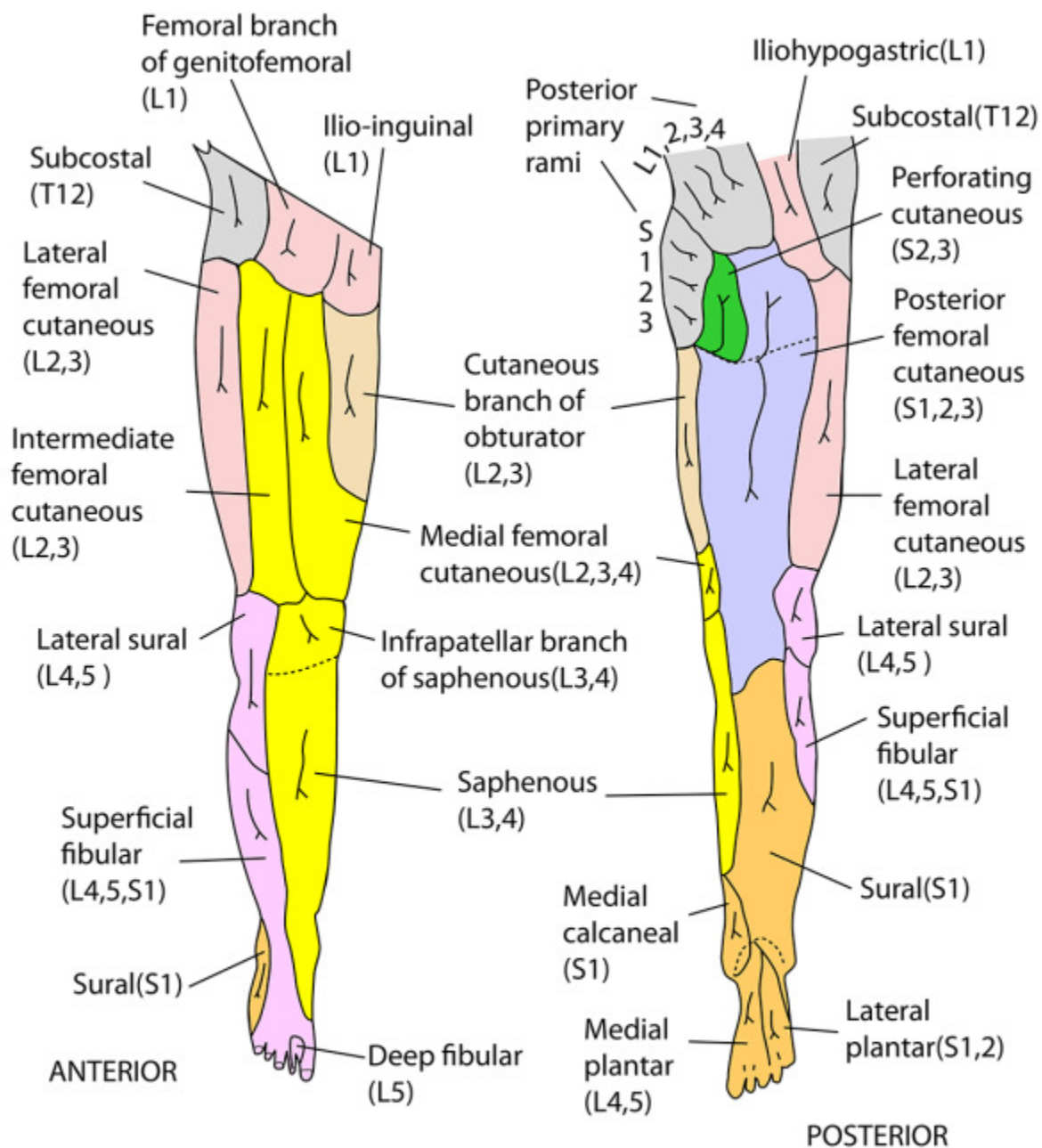
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LOWER LIMB LYMPHATICS



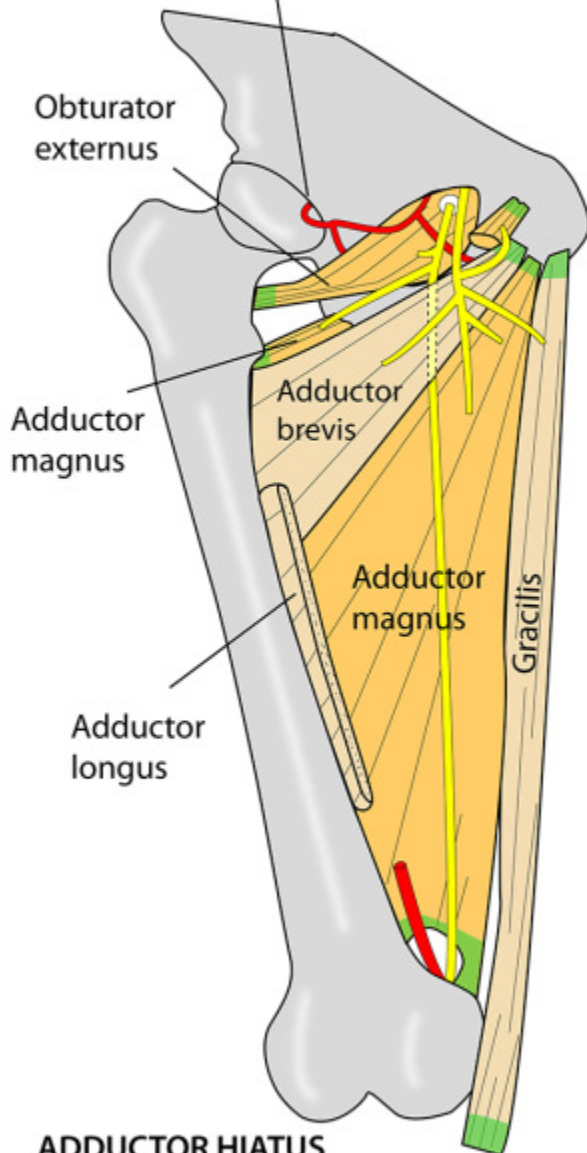
CUTANEOUS NERVES OF LOWER LIMB



MEDIAL THIGH

Branch of obturator artery via ligamentum teres to fovea of head of femur

For details of muscles, please see muscle section in the book - Instant Anatomy, by R H Whitaker & N R Borley. 4th edition. Wiley-Blackwell 2010



OBTURATOR NERVE

From anterior divisions of L2,3,4

Anterior branch:
Lies between adductors longus & brevis, contributes to subsartorial plexus for medial thigh skin, supplies gracilis, adductors longus, brevis

Posterior branch:
Lies between adductors brevis & magnus, supplies adductor portion of adductor magnus, obturator externus & knee joint via a small branch that passes through the adductor hiatus

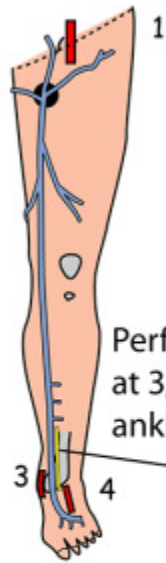
Medial collateral ligament of knee is probably a remnant of the tendon of the hamstring portion of adductor magnus that was originally attached to the tibia

ADDUCTOR HIATUS

Transmits femoral artery, femoral vein, the small genicular branch of the posterior branch of the obturator nerve. The saphenous nerve may pass through it, but if so, then it immediately returns more superficially so that it does not enter the popliteal fossa

VEINS AND PULSES IN THE LOWER LIMB

ANTEROMEDIAL

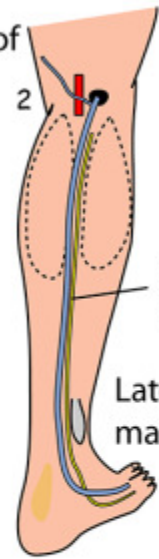


Anterior view of left lower limb to show:
GREAT (LONG) SAPHENOUS VEIN

Perforating veins at 3,6,9cm above ankle

Saphenous nerve

POSTERIOR



Posterolateral view of right lower limb to show:
SMALL (SHORT) SAPHENOUS VEIN

Sural nerve

Lateral malleolus

Pulses

1. Femoral in groin
2. Popliteal in popliteal fossa
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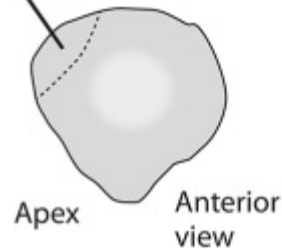
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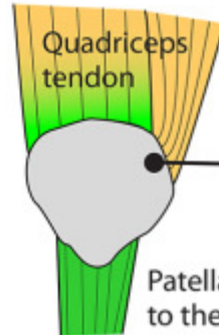
RIGHT PATELLA

Largest sesamoid bone in body
Mobile from side to side

Upper lateral part
is site of bipartite
patella



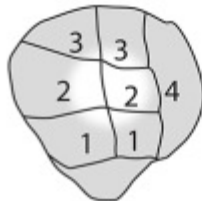
Anterior/posterior
is obvious



Lateral/posterior surface
is: Larger, longer, more
steeply sloped

Posterior view

ARTICULATION WITH FEMUR



1. In extension
2. In slight flexion
3. In flexion
4. In full flexion

Lateral Medial

OSSIFICATION

Several centres between 3 & 6 years that fuse at puberty (they appear as child starts running). Sometimes a separate centre superior/lateral at 6 years - fuses at puberty

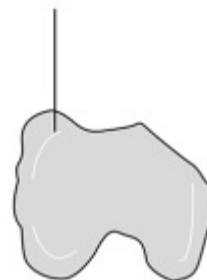
Deviation from the vertical (the tibia) to a line along the femur (pull of quadriceps). Wider the pelvis, the greater Q angle ($F > M$)
Offset tends to pull patella laterally. 3 factors avoid dislocation



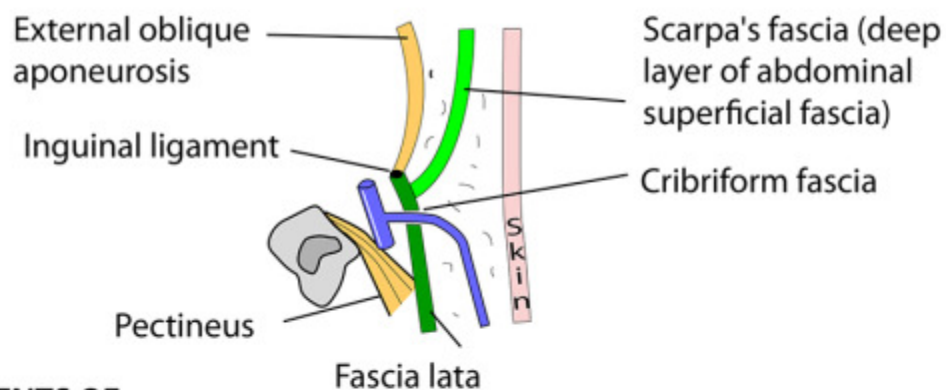
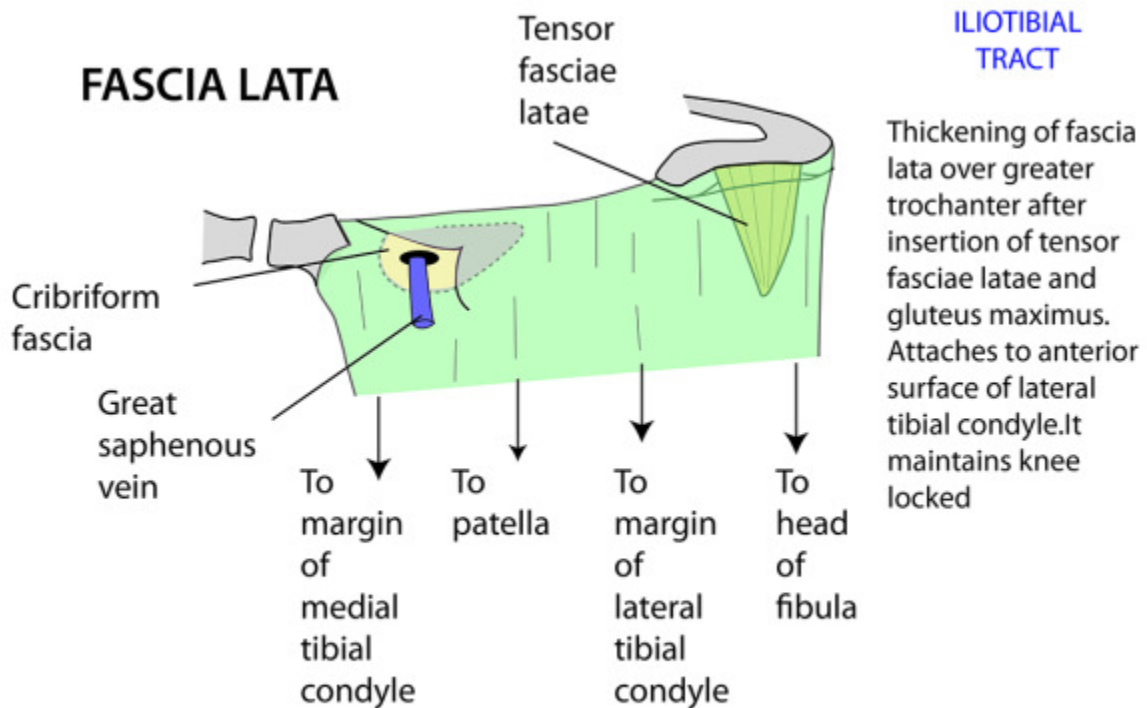
1. Insertion of lower fibres of vastus medialis into medial side of patella

2. Stronger medial retinacular fibres of knee capsule

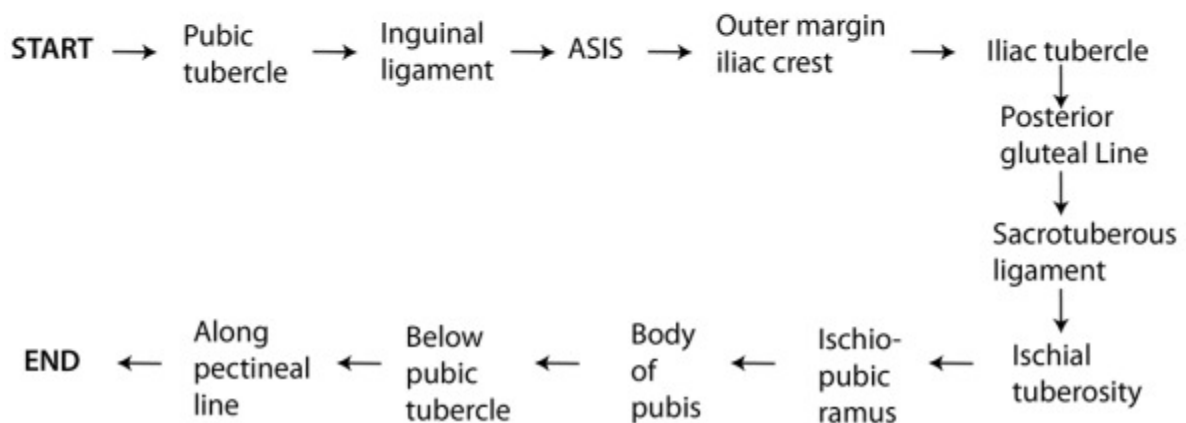
3. More anteriorly protuberant lateral condyle of lower femur. Note that lateral condyle is smaller than medial one but it protrudes further anteriorly



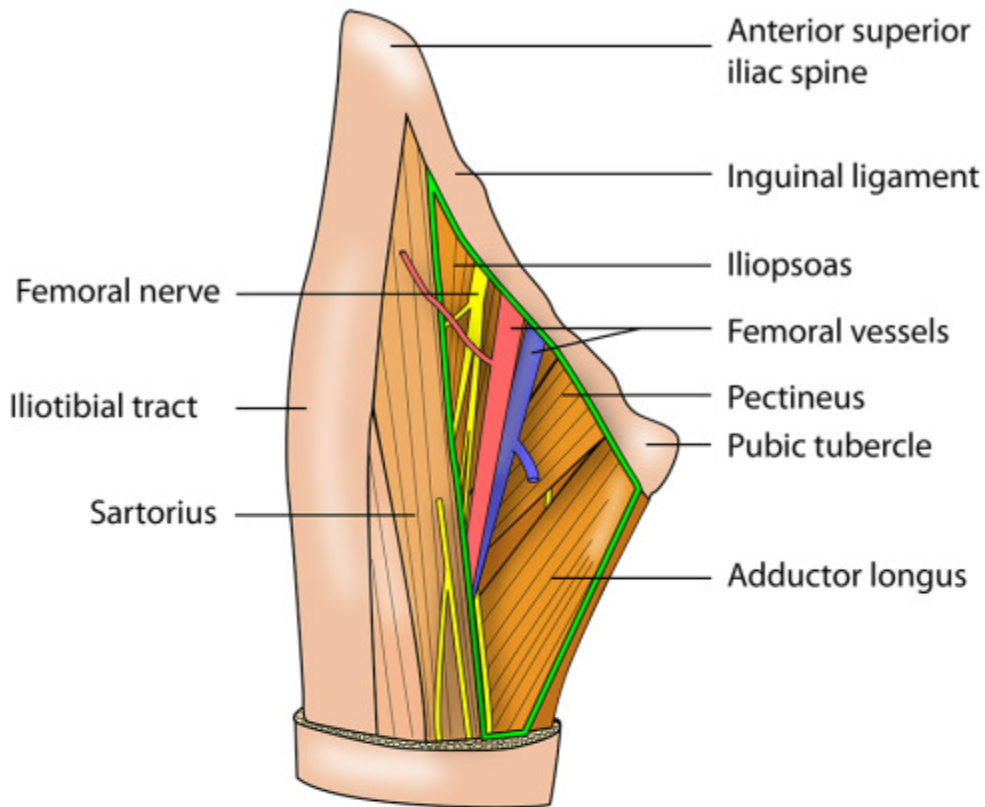
THE Q ANGLE AND PATELLA DISLOCATION



ATTACHMENTS OF FASCIA LATA



FEMORAL TRIANGLE



BOUNDARIES

Lateral

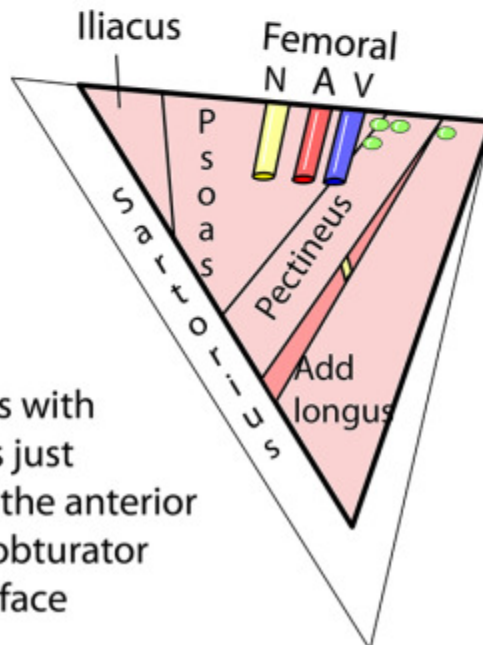
Medial border of sartorius

Roof

Fascia lata

Floor

Marked muscles with adductor brevis just showing. It has the anterior division of the obturator nerve on its surface



Superior

Inguinal ligament

Medial

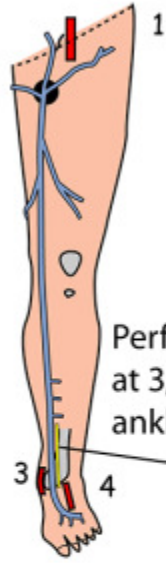
Medial border of adductor longus

Contains

Femoral nerve
Femoral artery
Femoral vein
Deep inguinal nodes

VEINS AND PULSES IN THE LOWER LIMB

ANTEROMEDIAL

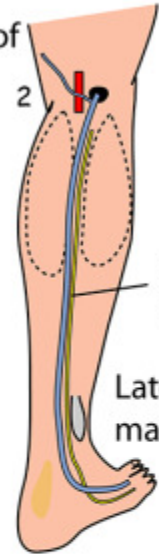


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GREAT (LONG) SAPHENOUS VEIN

Perforating veins at 3,6,9cm above ankle

Saphenous nerve

POSTERIOR



Posterolateral view of right lower limb to show:
SMALL (SHORT) SAPHENOUS VEIN

Sural nerve

Lateral malleolus

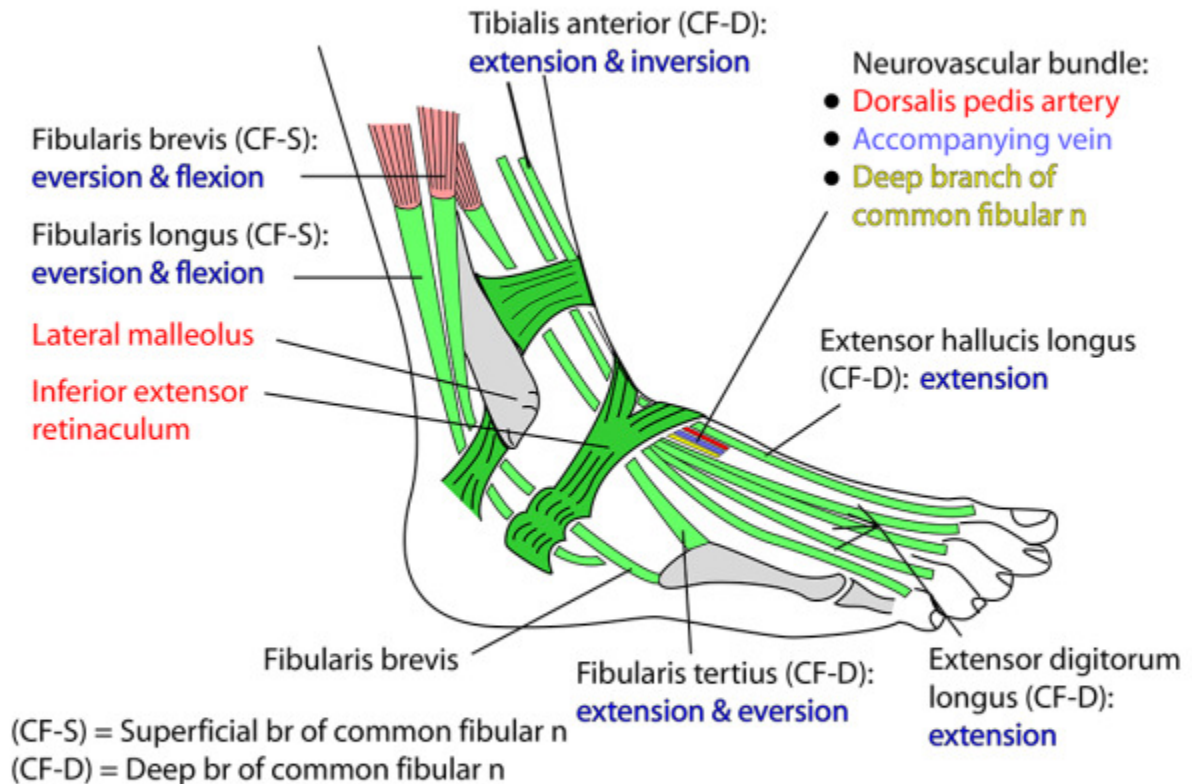
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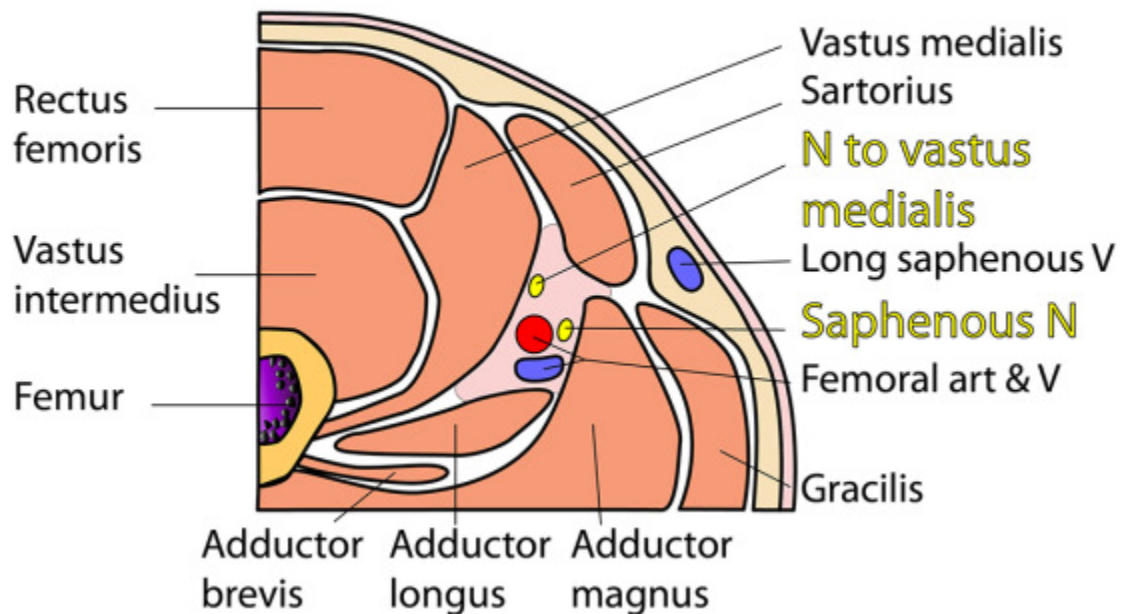
TENDON & NEUROVASCULAR RELATIONSHIPS ON **LATERAL** ASPECTS OF RIGHT ANKLE



Mnemonic for dorsal tendons, vessels & nerves from medial to lateral :

"Timothy Has **A** Very
Nasty Diseased Foot"

RIGHT ADDUCTOR (SUBSARTORIAL/HUNTER'S) CANAL (R)
(viewed from below)



From: Apex of femoral triangle to adductor hiatus

Borders:

Lateral: Vastus medialis

Medial: Adductor longus superiorly & adductor magnus inferiorly,

Roof: Sartorius, fascia, Subsartorial plexus (contributed to by the anterior branch of obturator, medial cutaneous n of thigh, saphenous nerve. It supplies the skin of medial thigh)

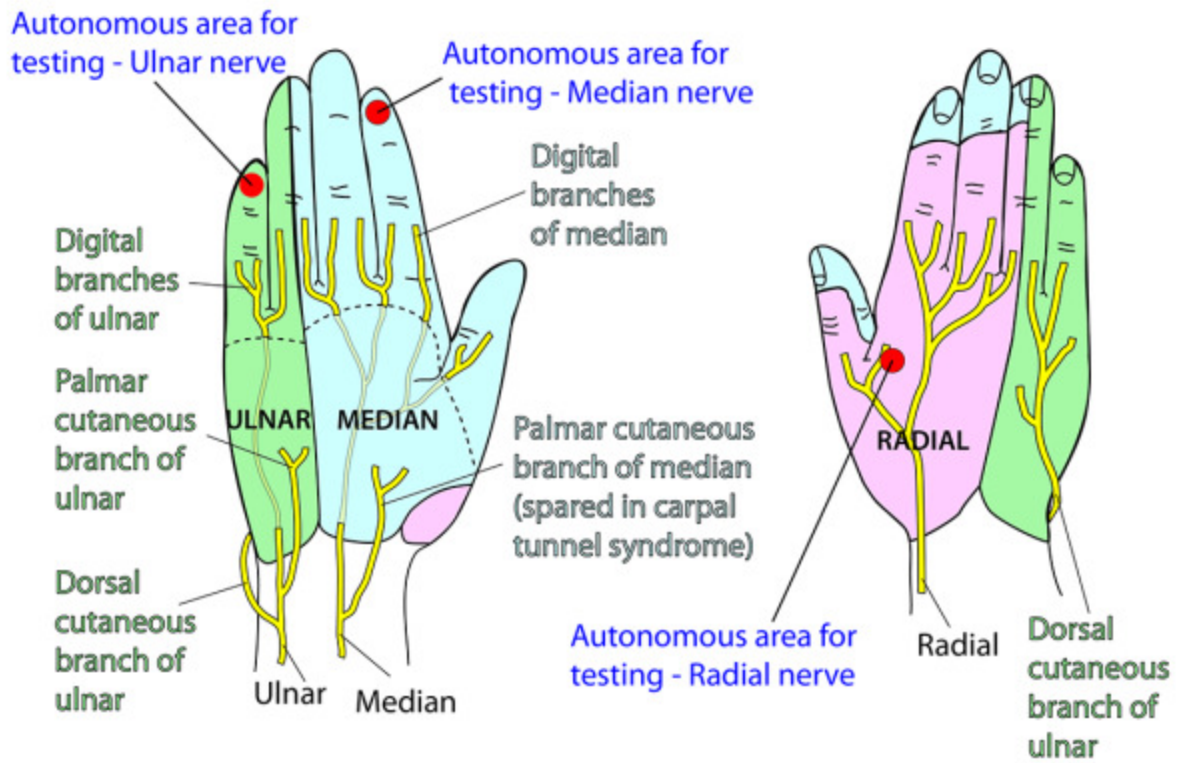
Contains: Femoral artery & vein; saphenous nerve; nerve to vastus medialis

Transmits: A small branch of the posterior division of the obturator nerve to the knee joint

Relations: Femoral artery is always between vein & saphenous nerve. Femoral vein spirals from medial to artery in femoral triangle to posterior to artery in canal.

Femoral artery gives descending genicular artery as it leaves the adductor hiatus

CUTANEOUS NERVE SUPPLY OF HAND



NERVE LESIONS IN THE UPPER LIMB - 14

AXILLARY NERVE DAMAGE IN FRACTURE OR DISLOCATION OF NECK OF HUMERUS

Aetiology: Fractured neck of humerus or dislocation of shoulder (in 5% of dislocations)

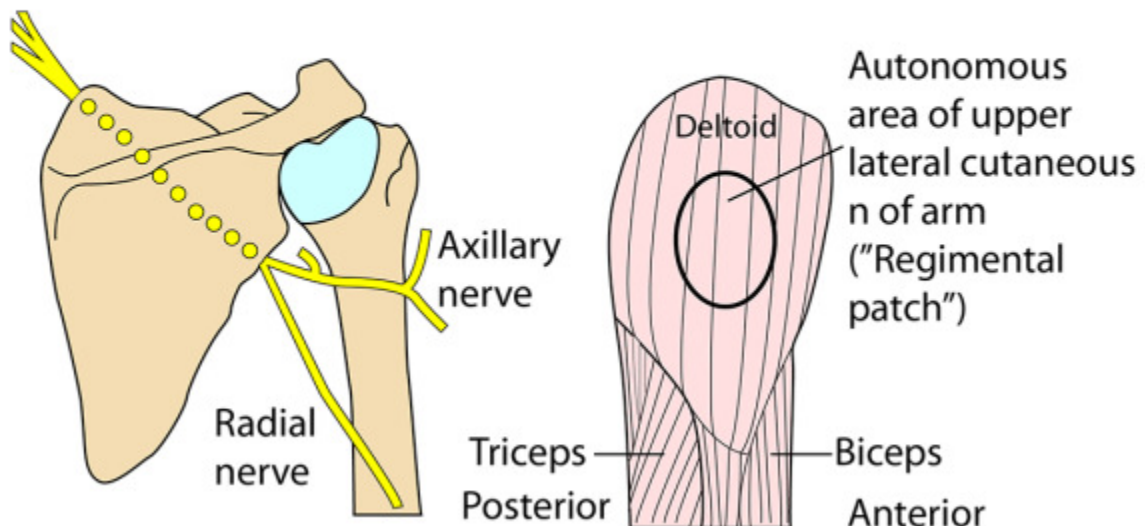
Muscle: Loss of deltoid and teres minor

Movement loss: Diminished flexion, extension & abduction of shoulder.

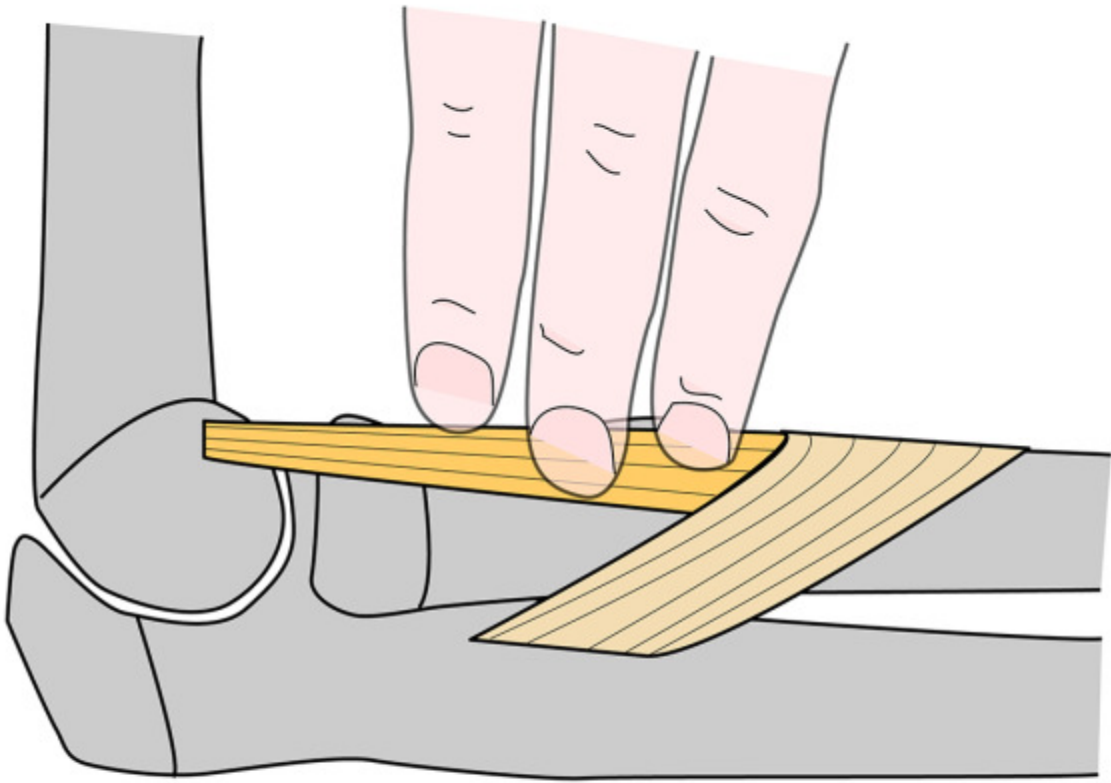
Result: Wasting of deltoid

Sensory loss: Upper lateral cutaneous nerve of arm from its posterior branch. The autonomous area for this nerve is an area the size of a 'regimental patch'

Test: For loss of sensation as indicated. In the acute clinical situation it is not practical to test for motor activity in deltoid



SURFACE ANATOMY

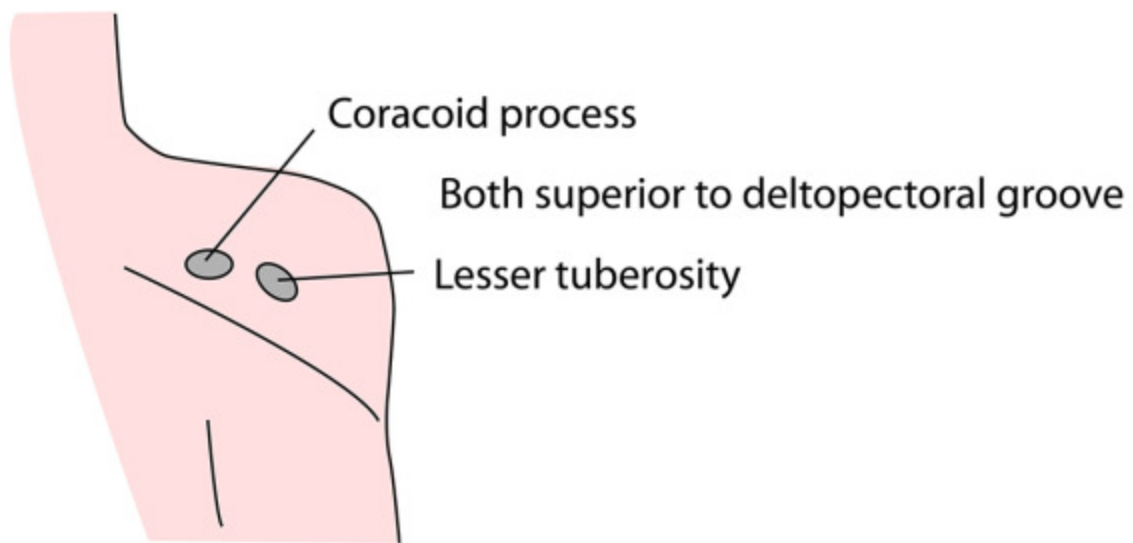


Henry's method for finding the
posterior interosseous nerve

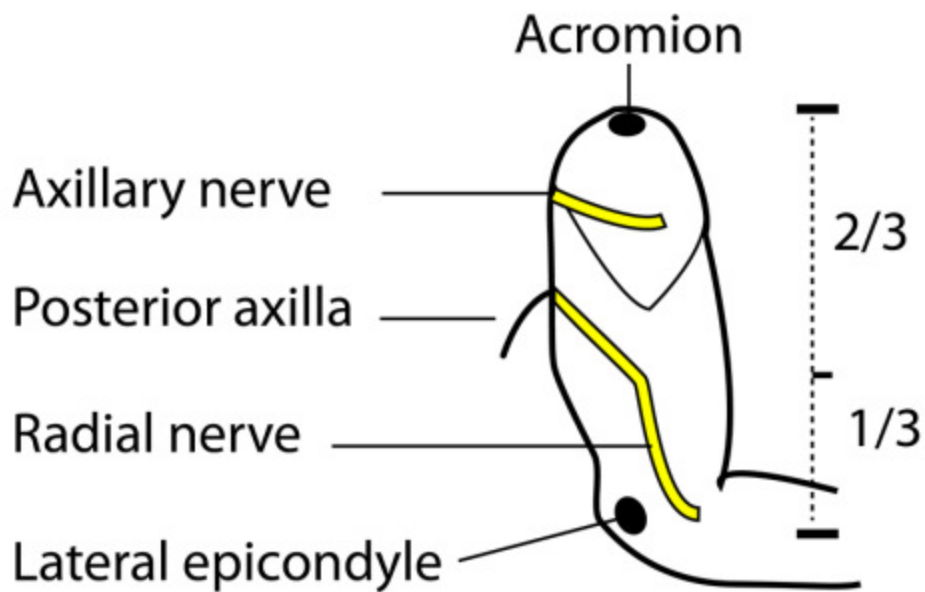
3 fingers inferior to head of radius
as the nerve passes into supinator

PALPABLE STRUCTURES IN THE UPPER LIMB

- Acromioclavicular joint
- Medial & lateral epicondyles
- Olecranon
- Head of radius
- Anconeus (posterior to olecranon)
- Radial & ulnar styloid processes
- Dorsal (Lister's) tubercle of radius
- Hook of hamate
- Biceps tendon and aponeurosis
- Brachial, radial & ulnar pulses

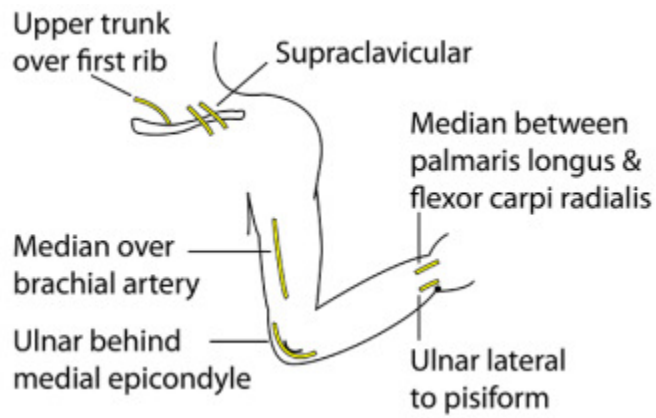


VULNERABLE NERVES IN THE ARM

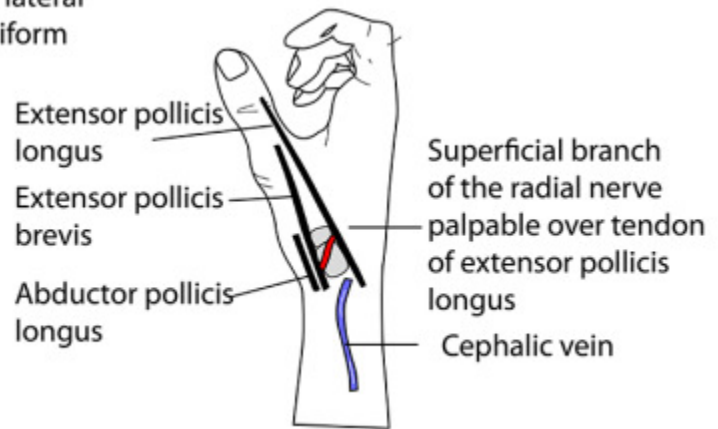


RADIAL NERVE

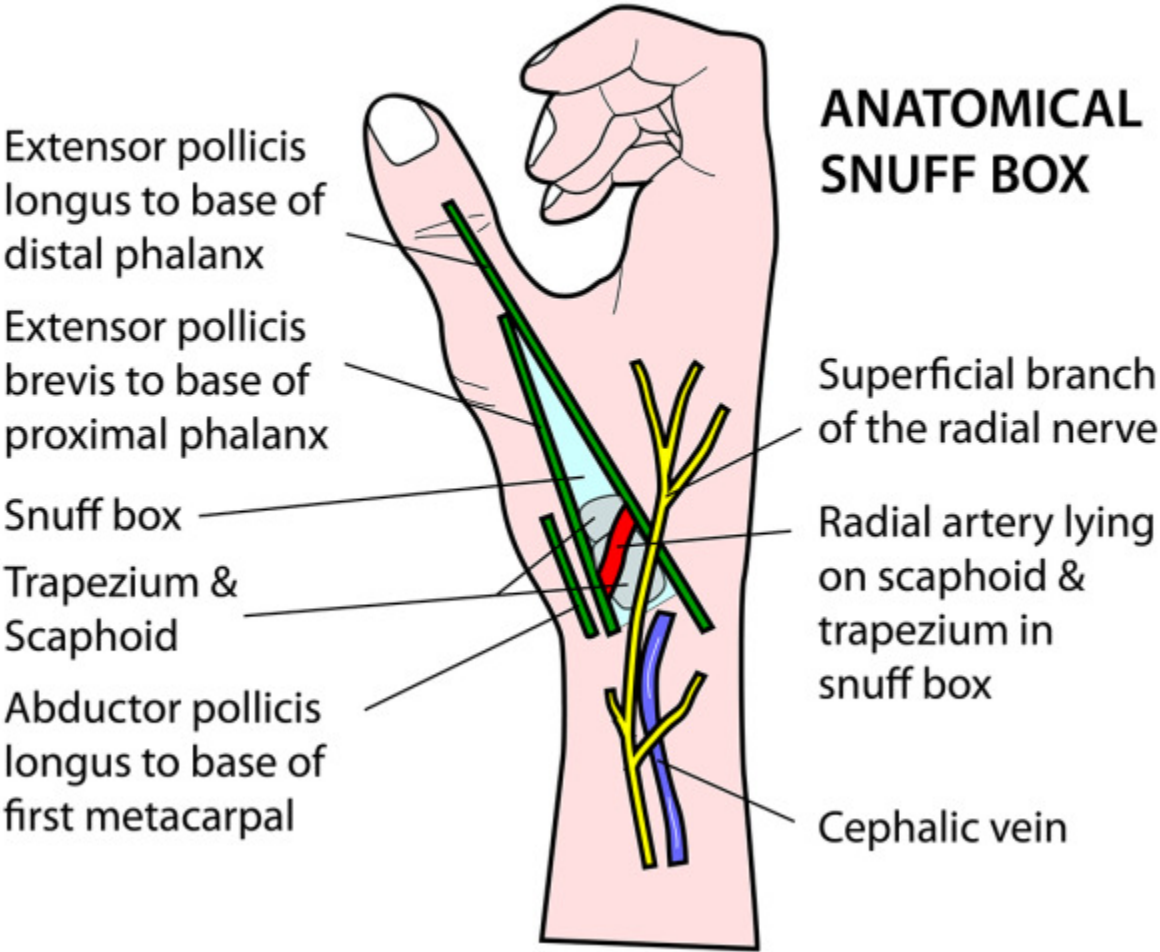
Passes from where the posterior axilla meets the arm to a point $2/3$ down a line from acromion to the lateral epicondyle then it passes anterior to the lateral epicondyle



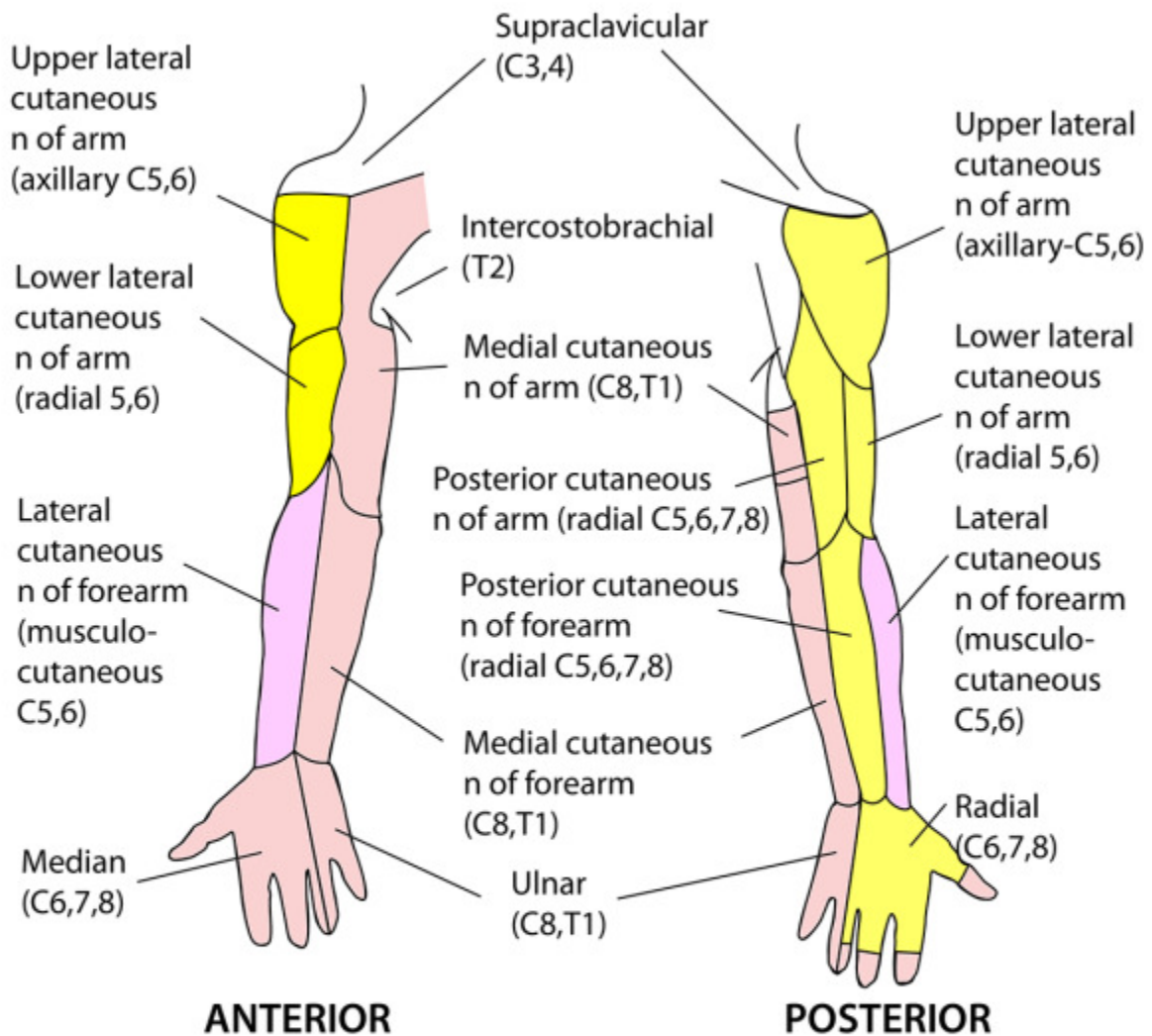
NERVES NEAR SURFACE OR PALPABLE IN UPPER LIMB



SURFACE ANATOMY



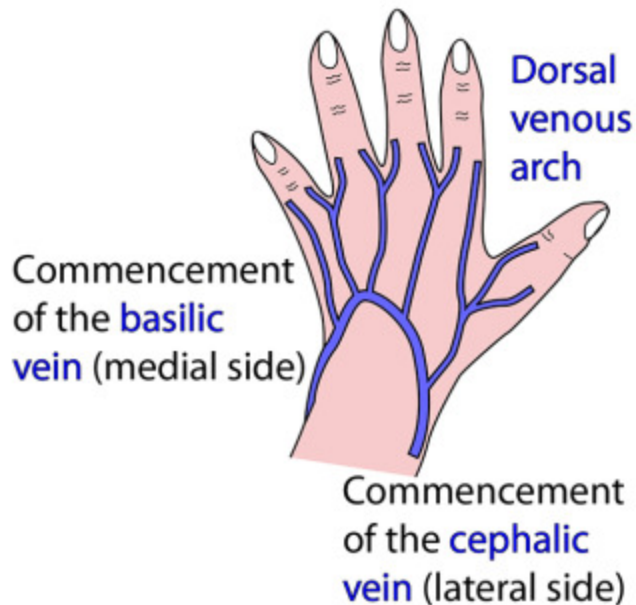
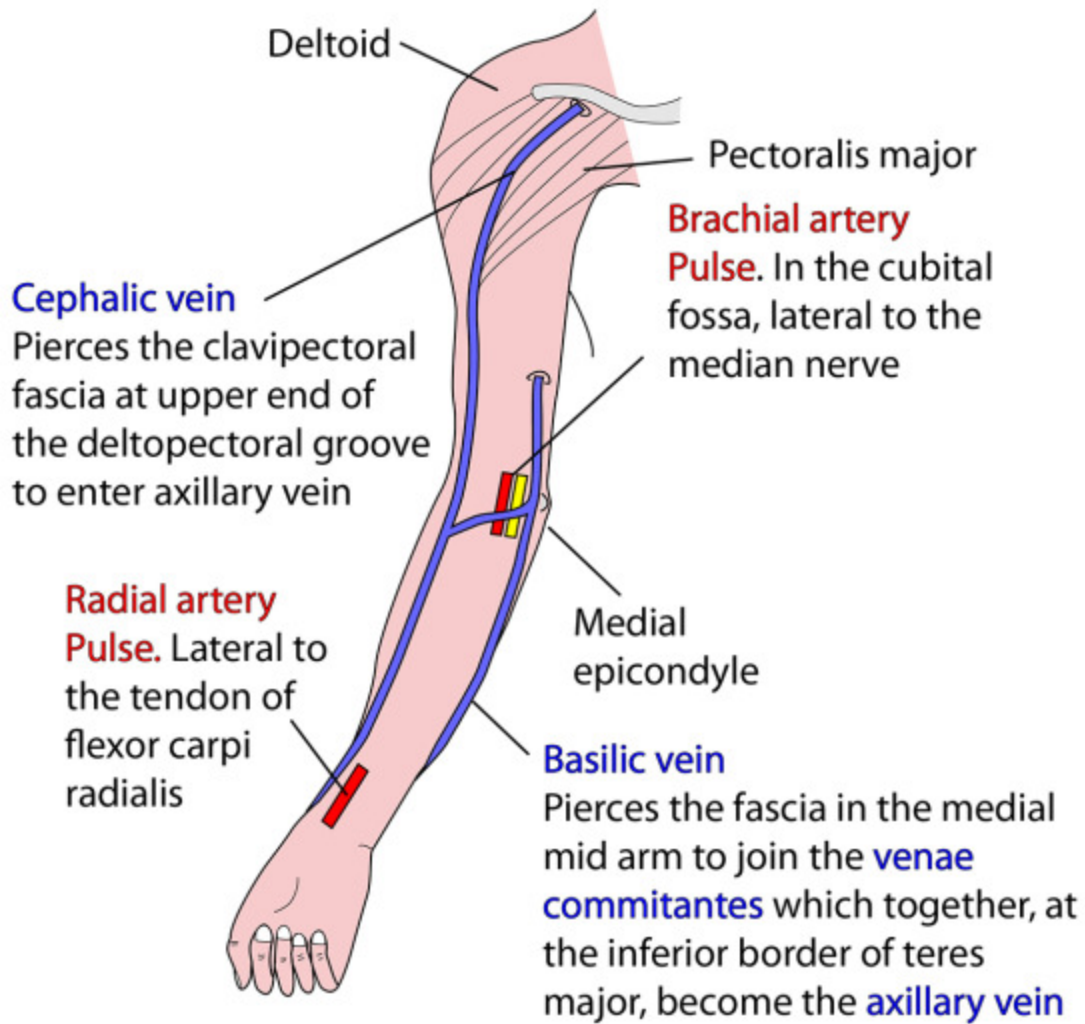
CUTANEOUS NERVES OF UPPER LIMB



- Lateral cord
- Medial cord
- Posterior cord

Note: there is no lateral cutaneous branch of T1. The intercostal nerve T2, intercostobrachial, & T3 have anterior & posterior branches that anastomose with medial cutaneous nerve of arm to supply medial arm & floor of axilla

SUPERFICIAL VEINS AND PULSES IN UPPER LIMB



SUPERFICIAL CUBITAL FOSSA (RIGHT SIDE)

Boundaries:

Triangular area between:
Pronator teres
Brachioradialis
Line between epicondyles

Contains:

Brachial artery
Median nerve
Biceps tendon
lymph nodes

Roof:

Deep fascia of forearm
Bicipital aponeurosis
Median cubital vein
Medial cutaneous nerve of forearm
Lateral cutaneous nerve of forearm

Floor

Brachialis
Supinator

