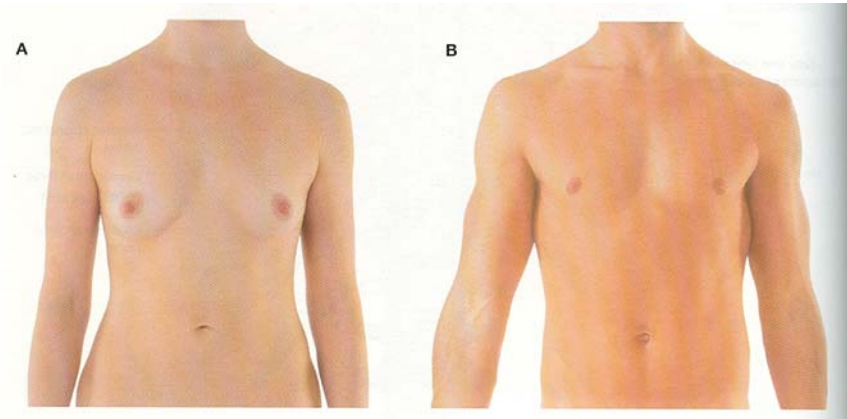


BREAST/ MAMMARY GLAND

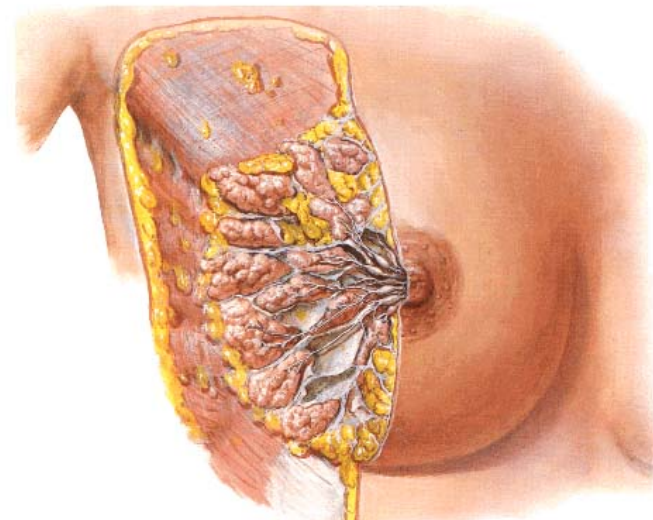
- Modified sweat gland
- Accessory organ of reproductive system
- Well developed after puberty in female
- Provides milk to the newborn

SITUATION

- Superficial
- Auxiliary tail (of spence) in Axilla

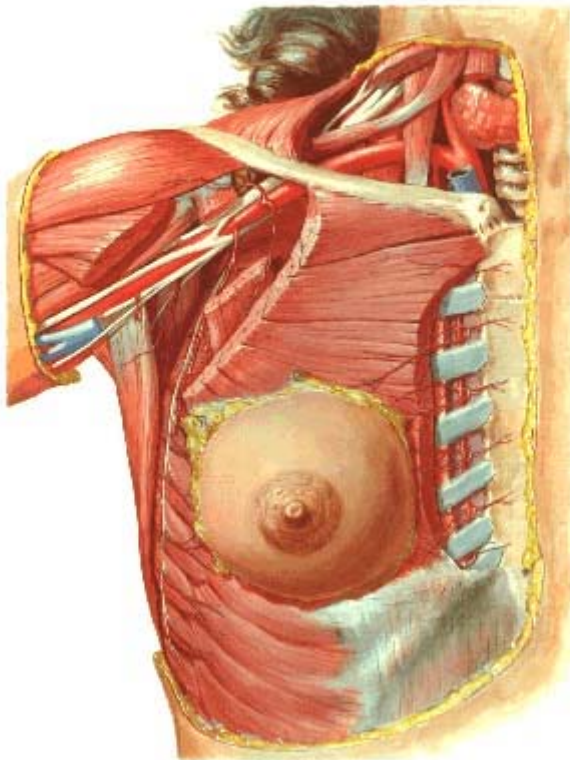


Mammary Gland
Anterolateral Dissection

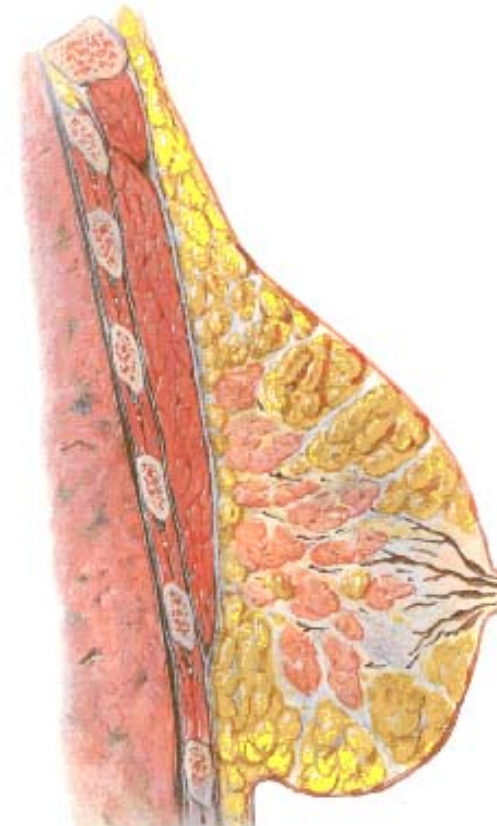


EXTENT

- Vertical : 2nd -6th rib
- Horizontal : Lateral Border of sternum – Mid axillary line



Mammary Gland
Sagittal Section



DEEP RELATIONS

Mammary Gland
Sagittal Section

- Retro mammary space
- Pectoral fascia
- Pectoralis major, Serratus anterior, External oblique abdominis
- Clavipectoral fascia, Pectoralis minor
- 2nd – 6th rib & 2nd – 5th intercostal space with its contents



STRUCTURE OF BREAST

- **SKIN**

Nipple & Areola (no hair & fat)

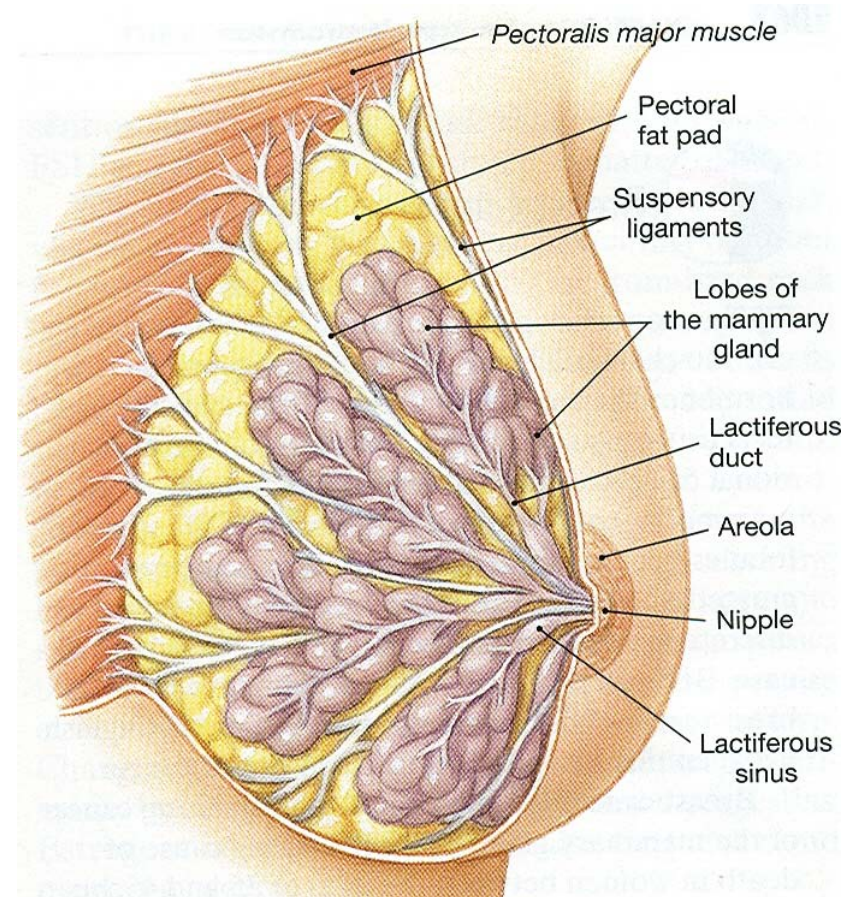
- **PARENCHYMA(15-20 lobes)**

lactiferous duct- l.sinus
–alveolus

- **STROMA**

Fibrous (suspensory ligament)

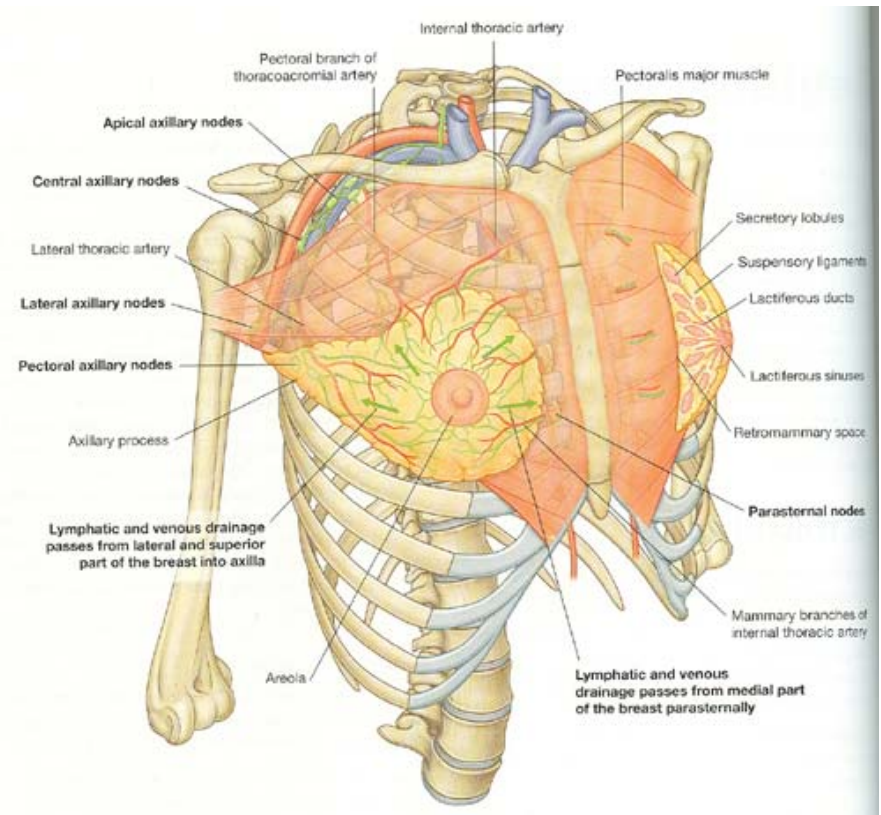
Fat



BLOOD SUPPLY

Arterial: supply from anterior Surface (posterior- Avascular)

- Perforating Branches of internal thoracic artery
- Branches of lat. Thoracic, superior thoracic, acromio thoracic(thoraco acromial)
- Lat. Branches of posterior intercostal artery



VENOUS DRAINAGE

- Follows the arteries
- Converge towards the base of the nipple & forms an anastomotic v. circle
- Venous circle S/F
- Internal thoracic, lower part of neck
Deep-
- Internal thoracic, axillary, posterior intercostal

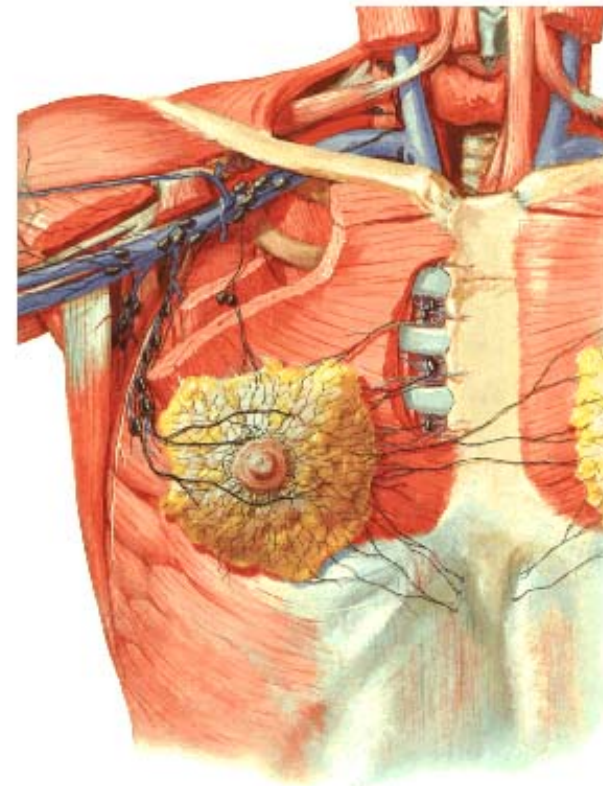
Nerve supply

- Anterior & lateral cutaneous branches of 4th to 6th intercostal nerves
- Milk secretion is controlled by prolactin

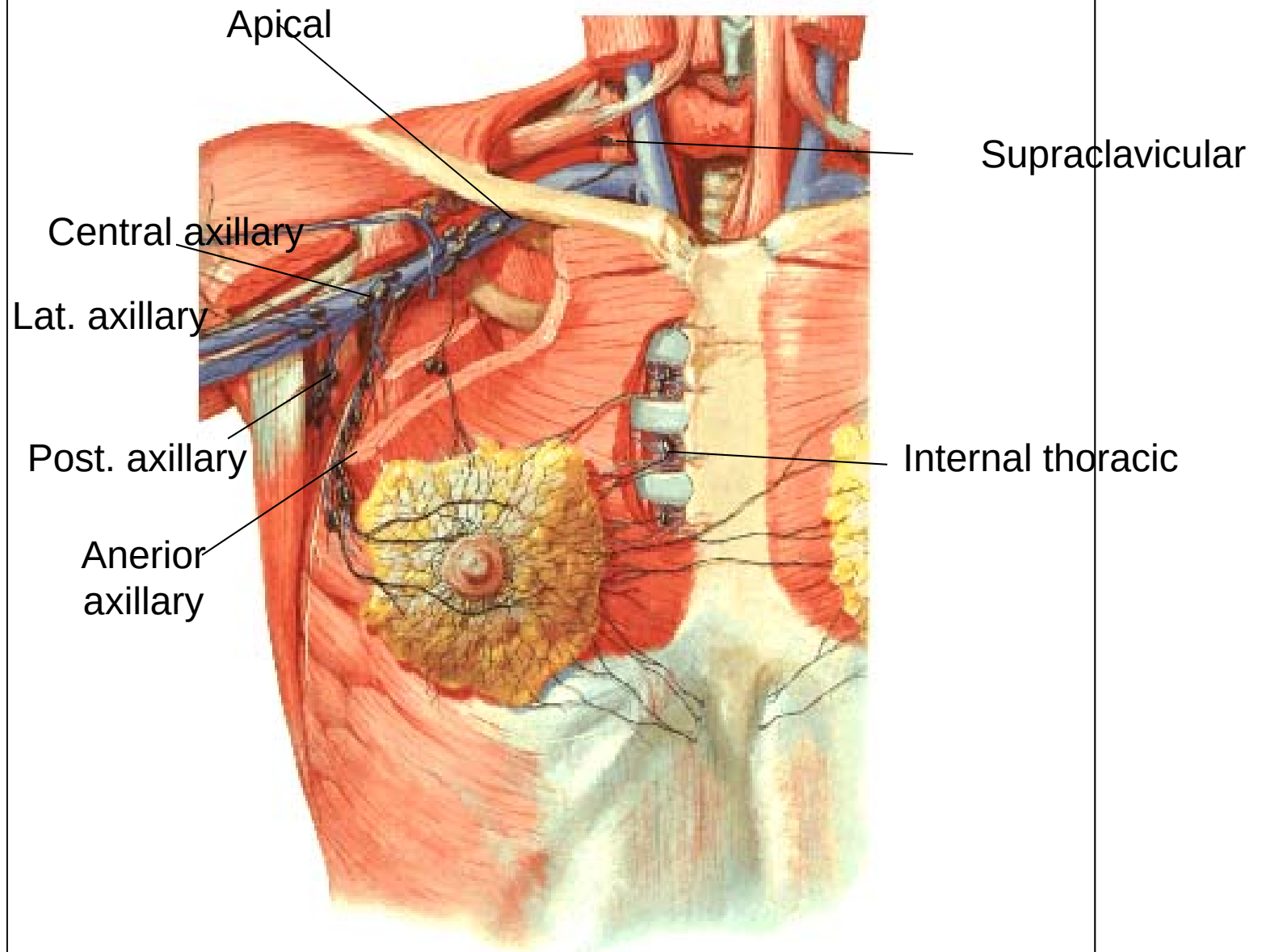
Lymph vessels & nodes

- Superficial lymphatics-
skin except nipple &
areola
- Deep lymphatics-
Parenchyma, nipple &
areola

Lymph Vessels and Nodes of Mammary Gland



Lymph Vessels and Nodes of Mammary Gland

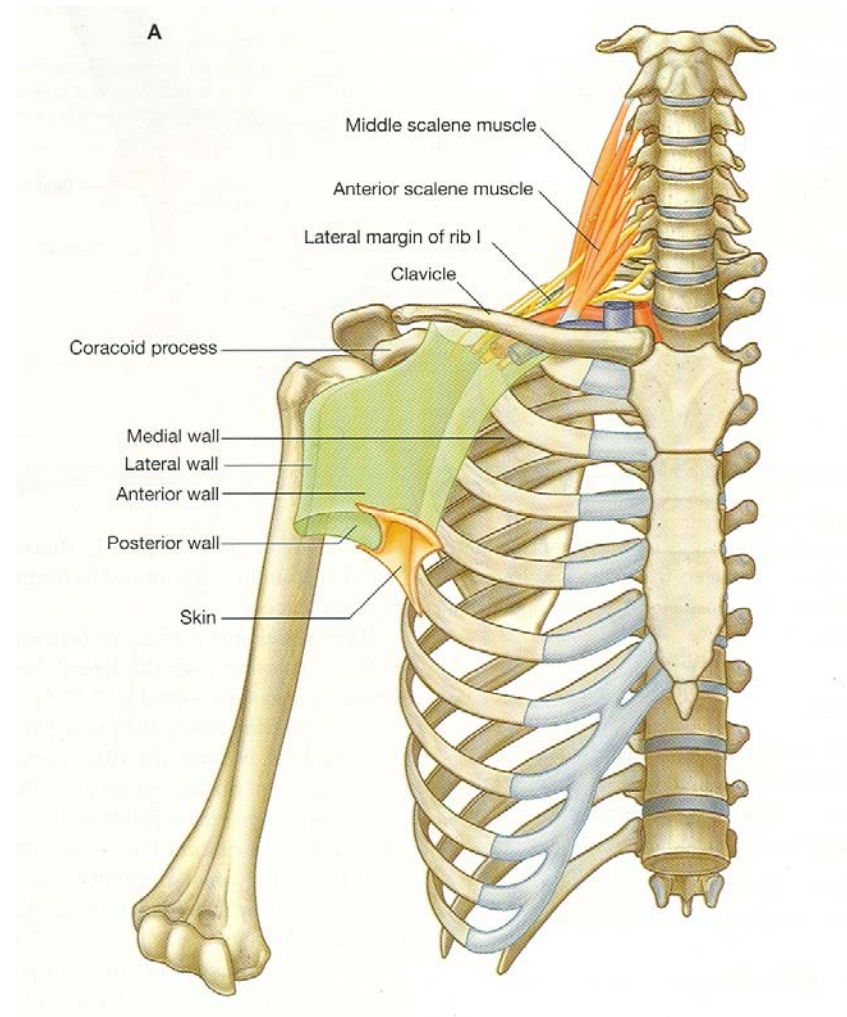


Applied anatomy

- Carcinoma-
 - Puckering of skin
 - Peau d' orange
 - Bilateral spread
 - Dropping into the pelvis
- Abscess- radial incision

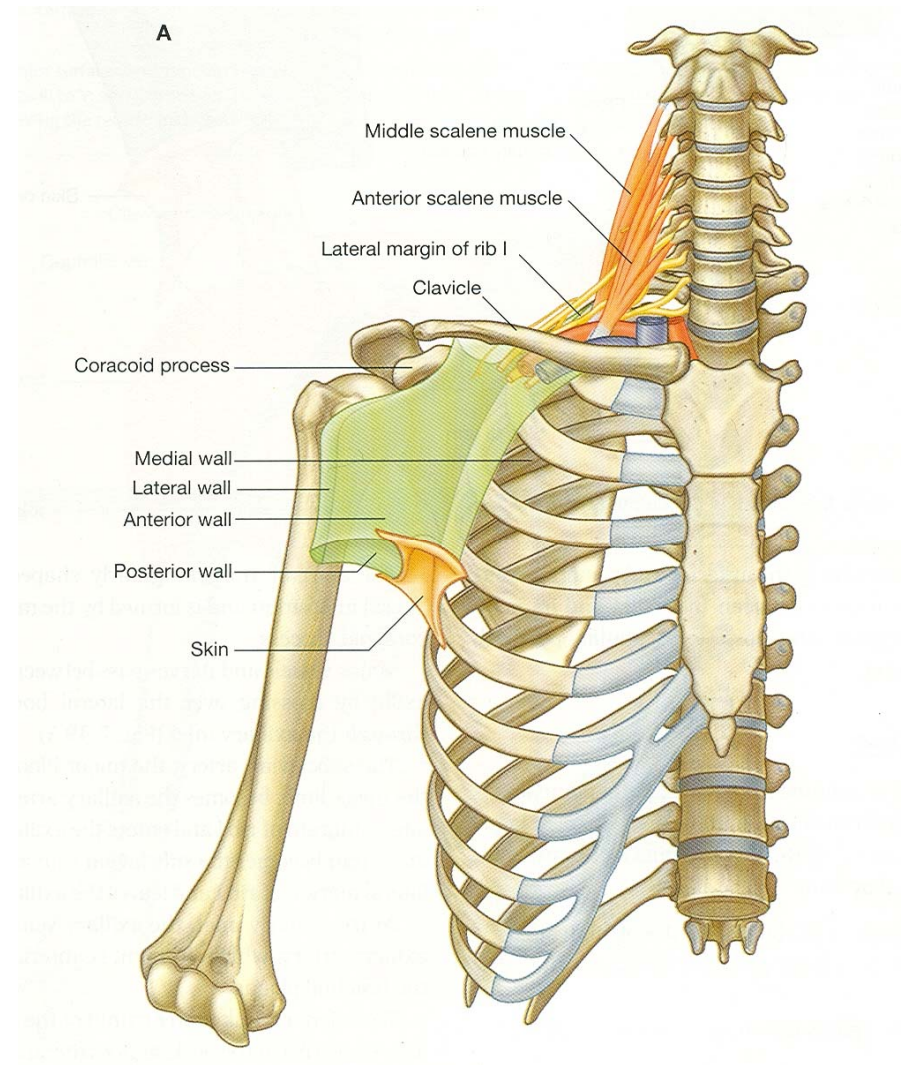
Axilla

- Gateway to the upper limb
- Irregularly shaped pyramidal space
 - Four sides
 - Apex or inlet
 - Floor



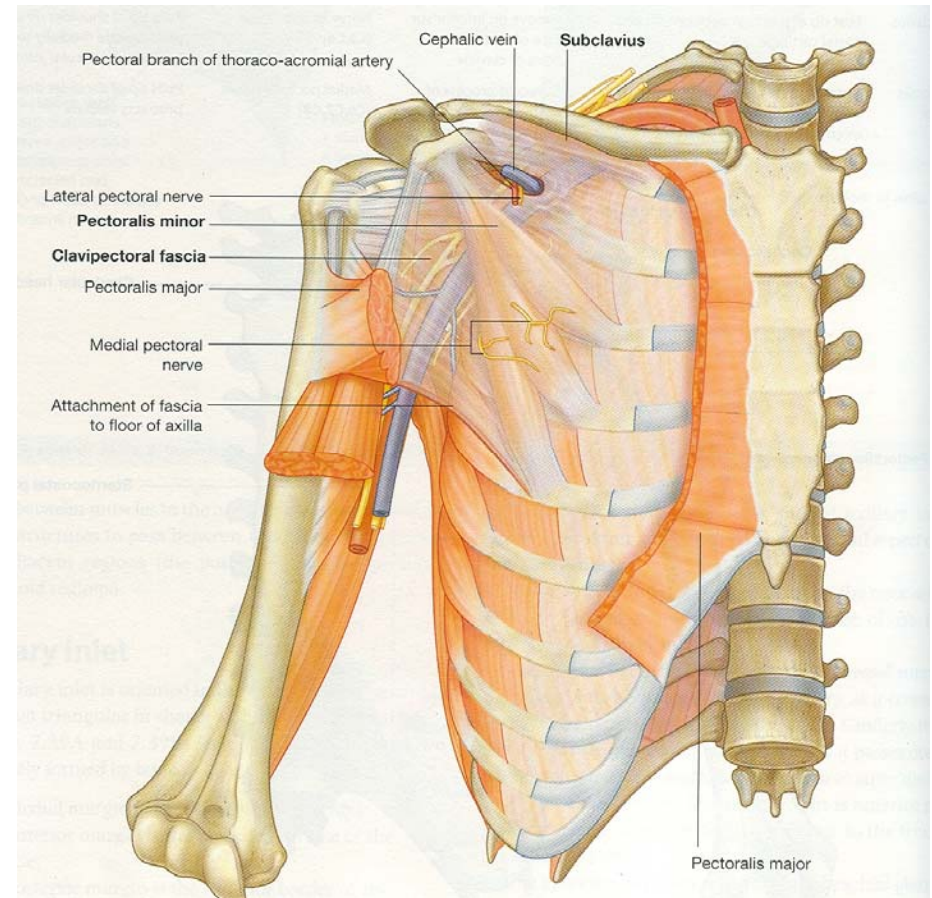
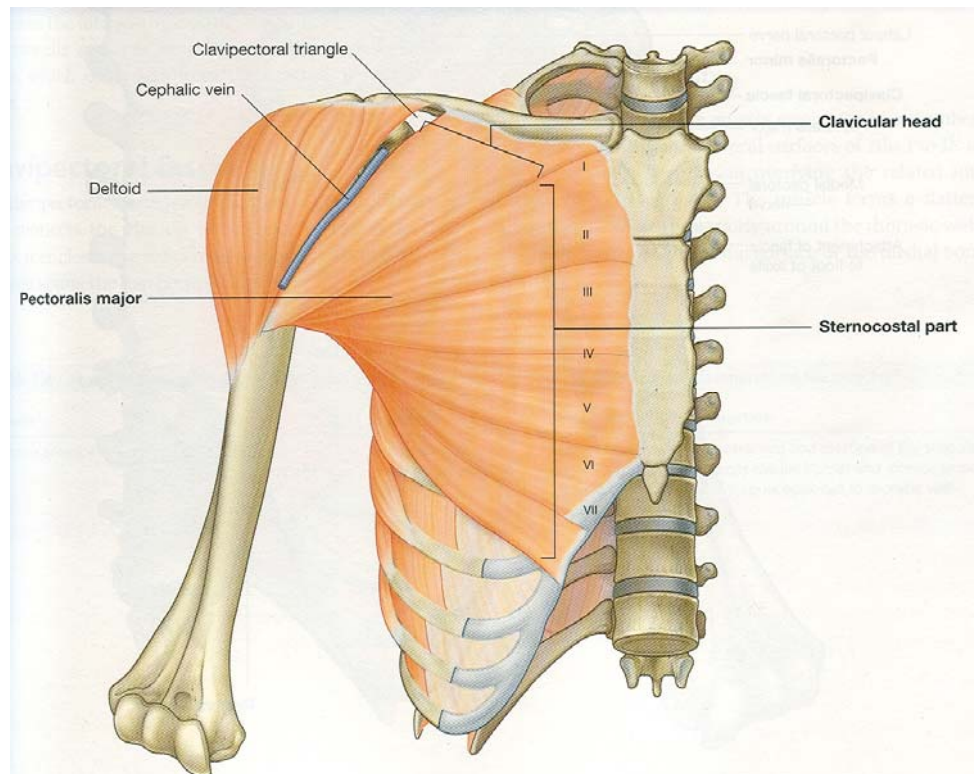
Axillary inlet

- Lateral border of first rib
- Posterior surface of the clavicle
- Superior border of the Scapula



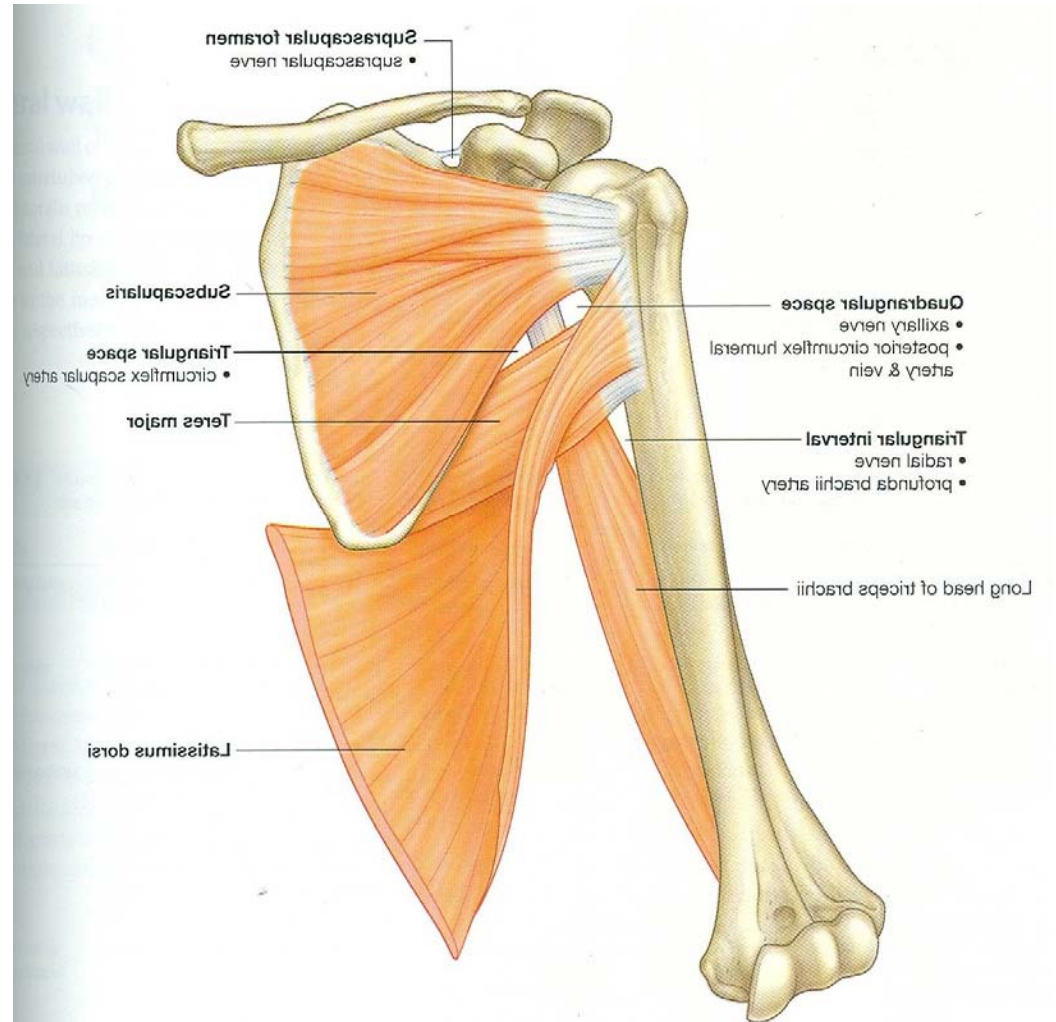
Anterior wall of axilla

- **Pectoralis major**
- **Clavipectoral fascia enclosing pectoralis minor & subclavius**



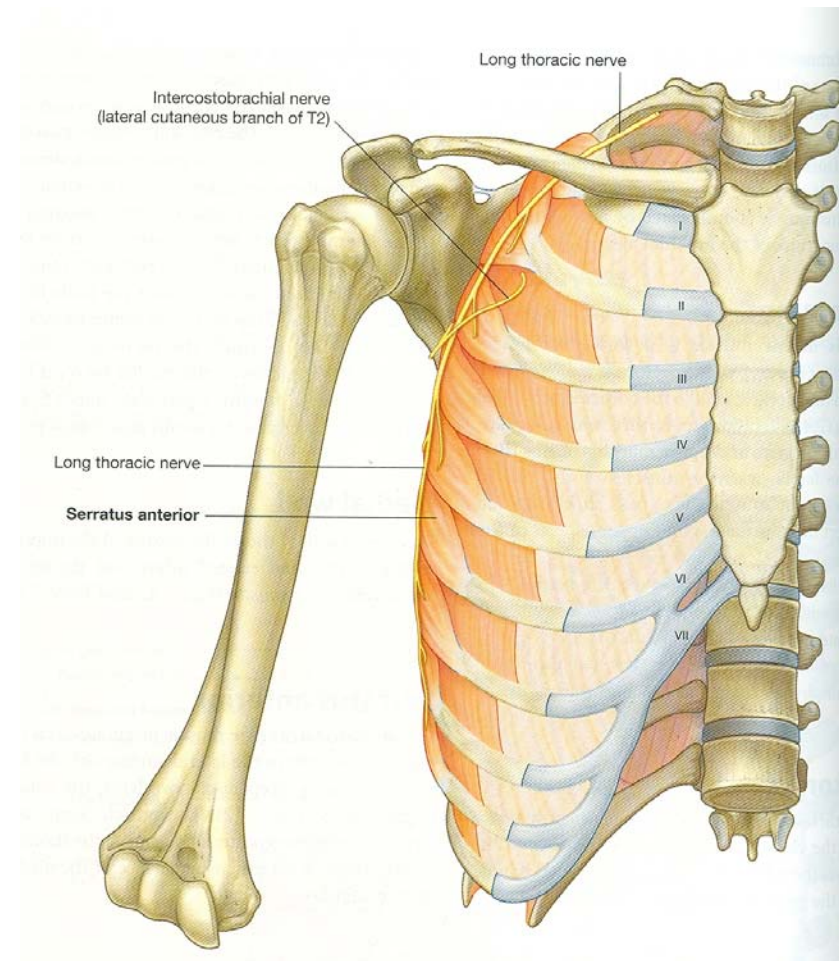
Posterior wall

- Subscapularis
- Lattisimus dorsi, teres major
- Long head of triceps



Medial wall of the axilla

- Upper four ribs with intercostal muscles
- Serratus anterior



Lateral wall

- Upper part of shaft of humerus (bicipital groove)

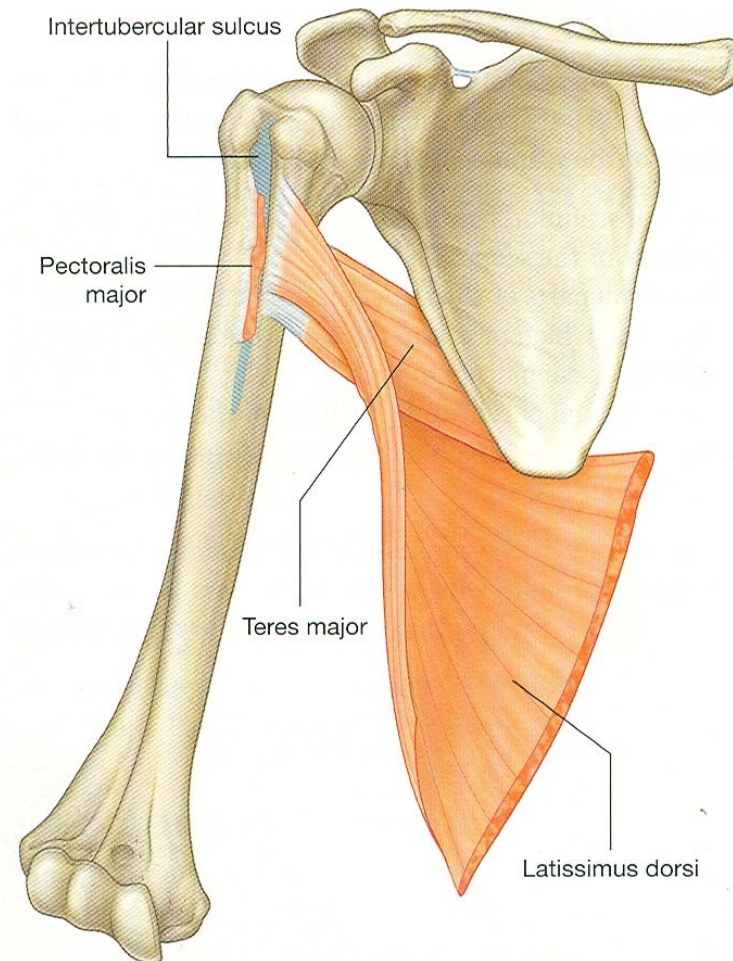
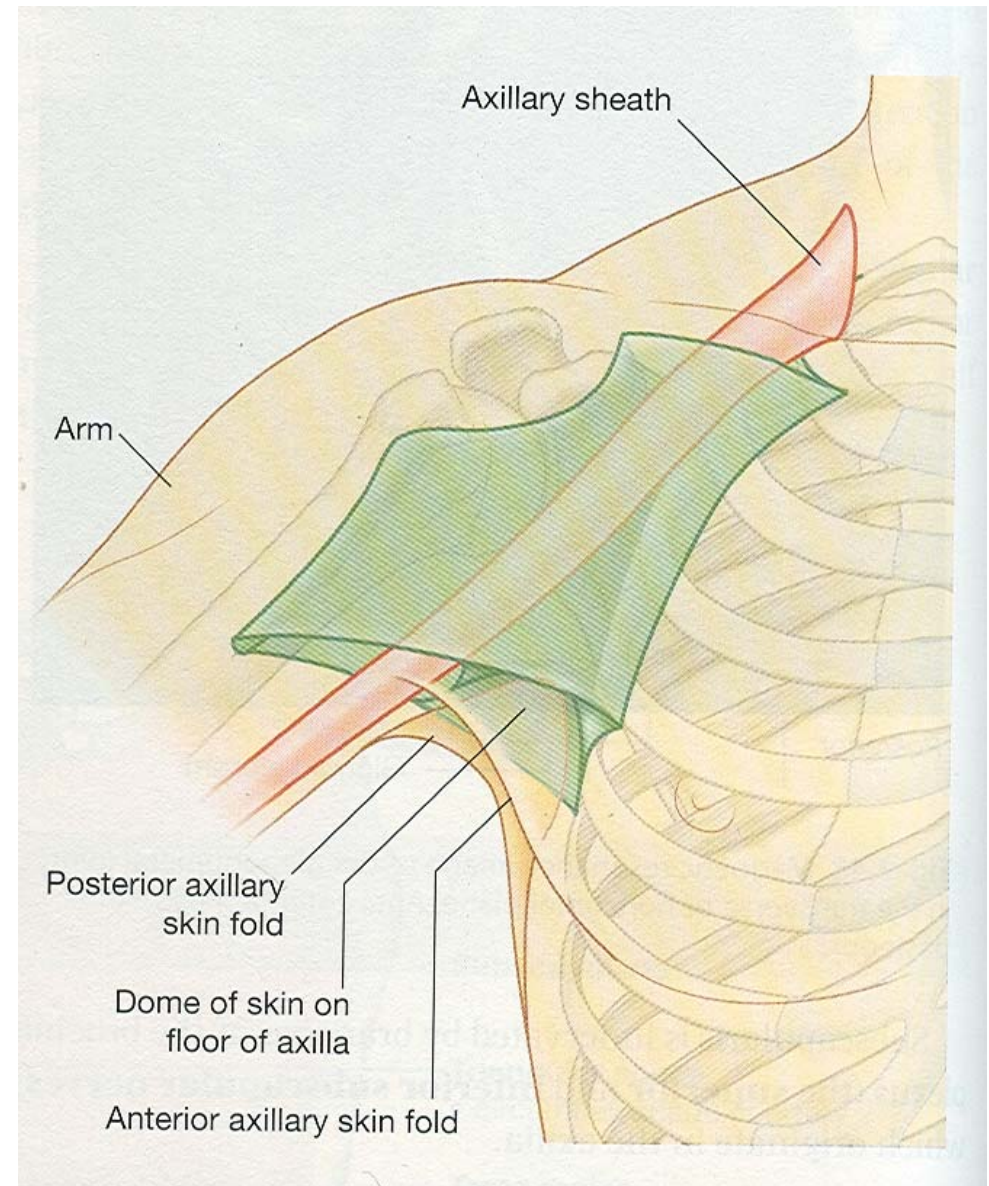


Fig. 7.43 Lateral wall of the axilla.

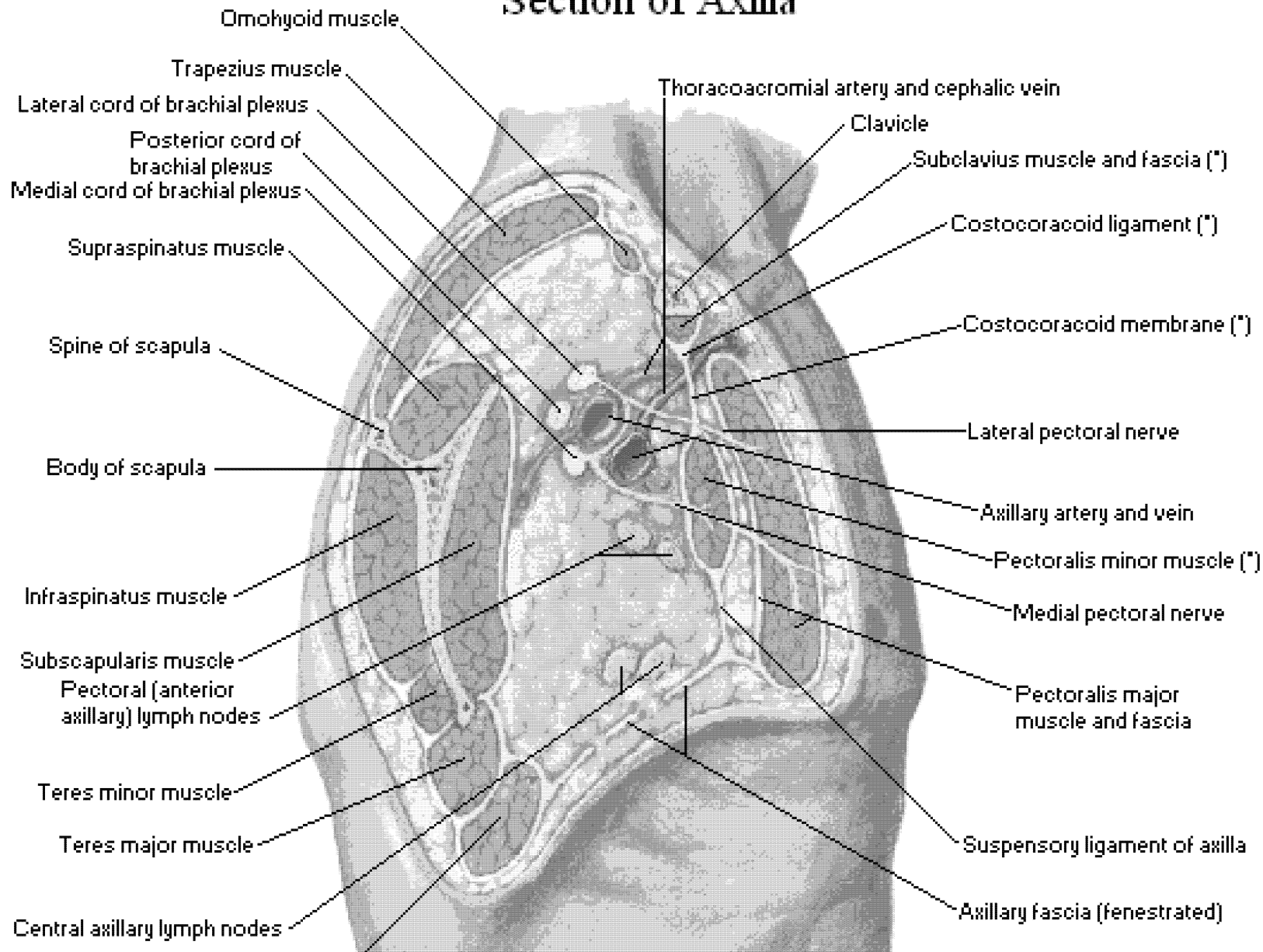
Floor of the axilla

- Fascia & dome of skin
- Supported by clavipectoral fascia

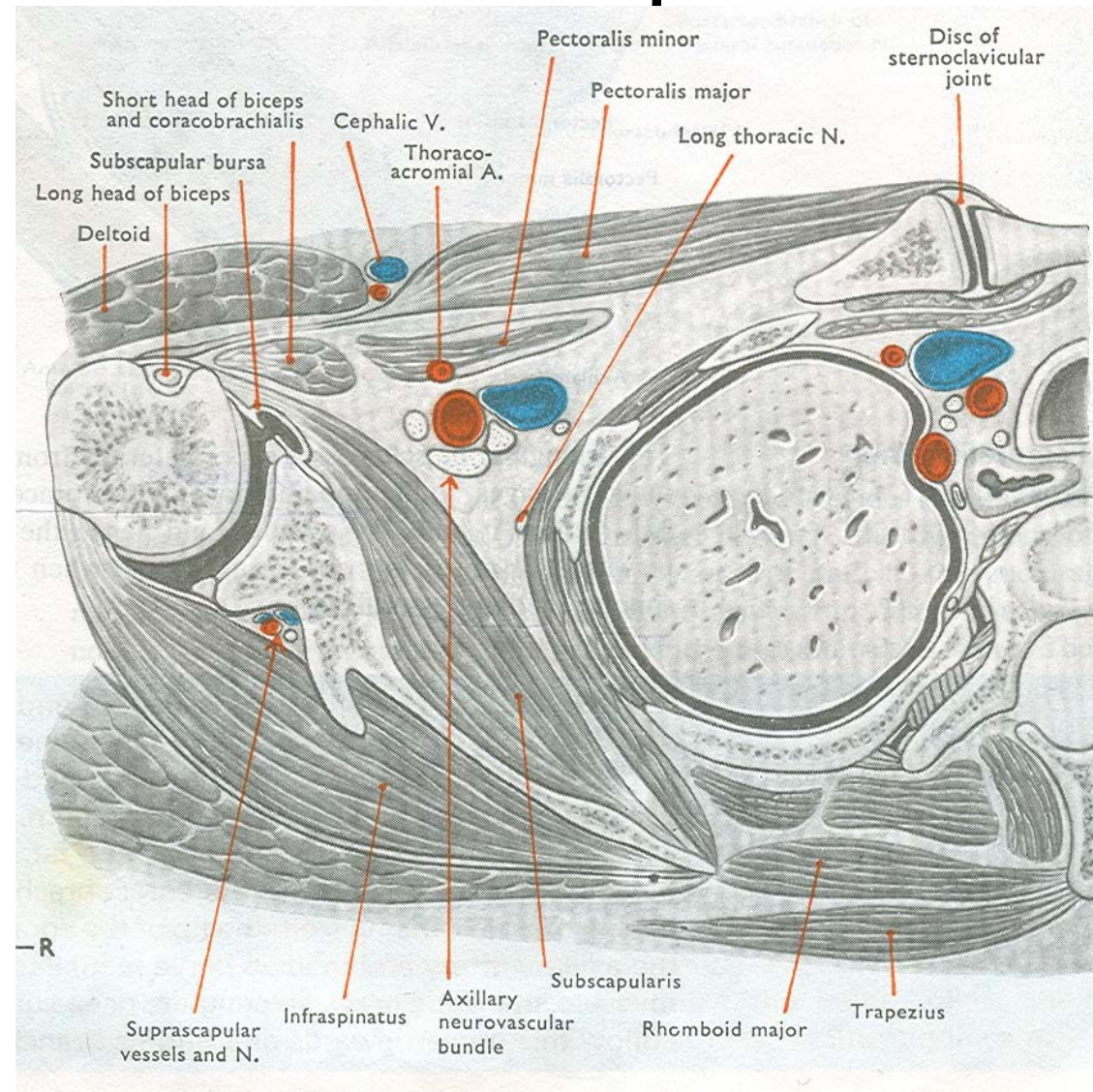


Pectoral, Clavipectoral and Axillary Fasciae

Section of Axilla



Horizontal section at the level of shoulder joint

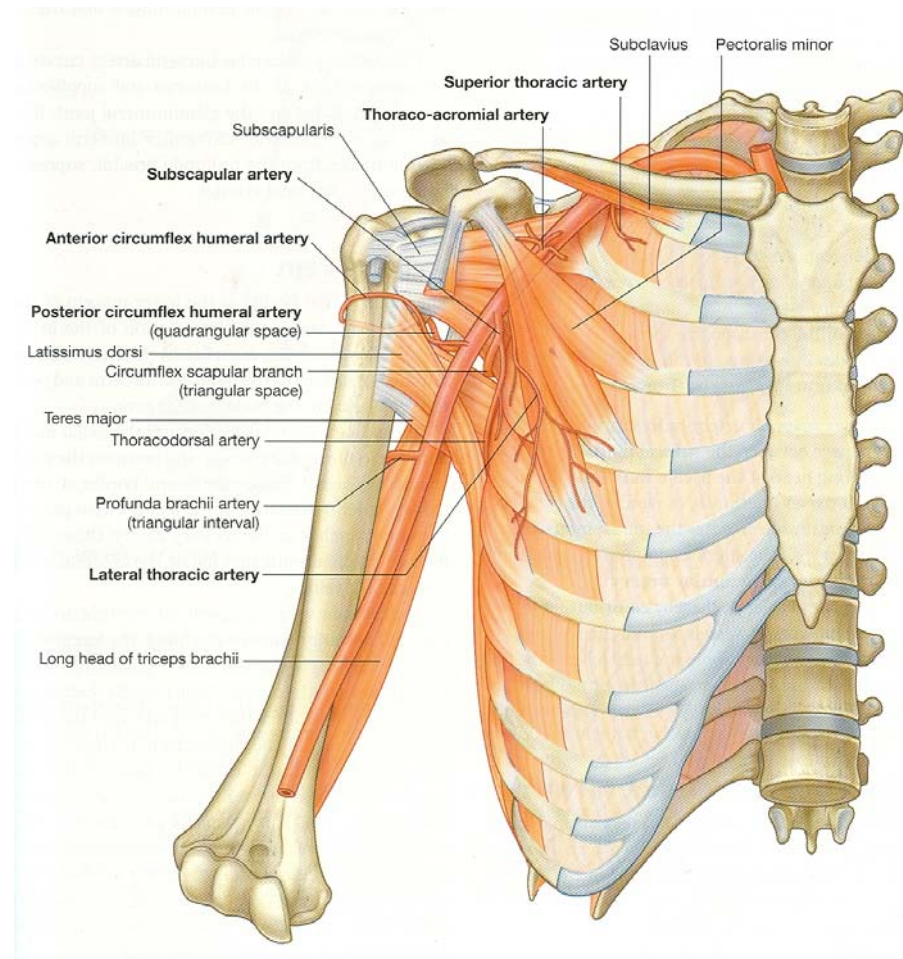


Contents of axilla

- Axillary artery & it's branches
- Axillary vein & it's branches
- Infraclavicular part of brachial plexus
- Axillary lymph nodes & lymphatics
- Long thoracic nerve & intercostobrachial nerves
- Fat & areolar tissue
- Proximal parts of biceps brachii,
coracobrachialis & axillary tail of breast

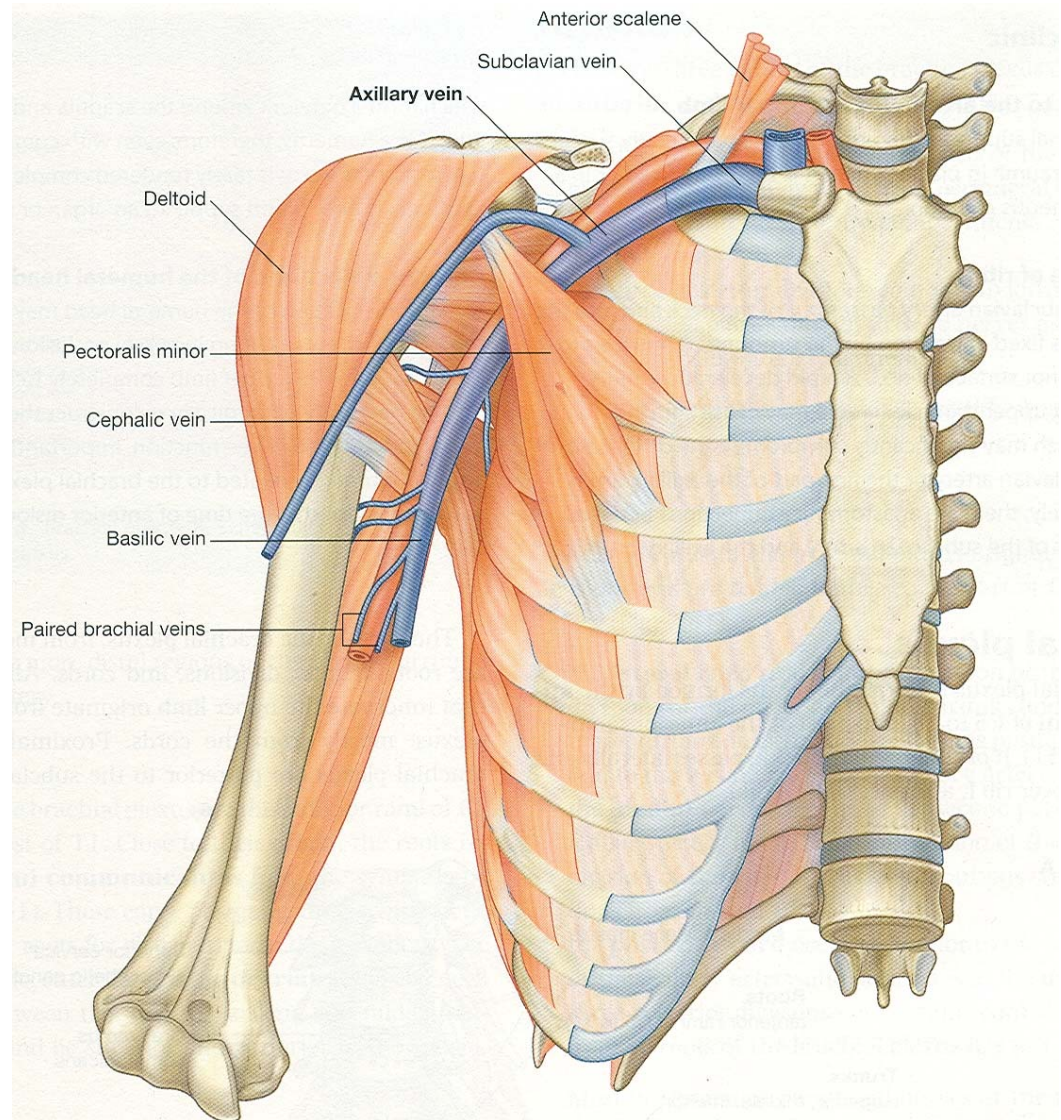
Axillary artery

- Continuation of subclavian artery
- Outer border of first rib to lower border of teres major



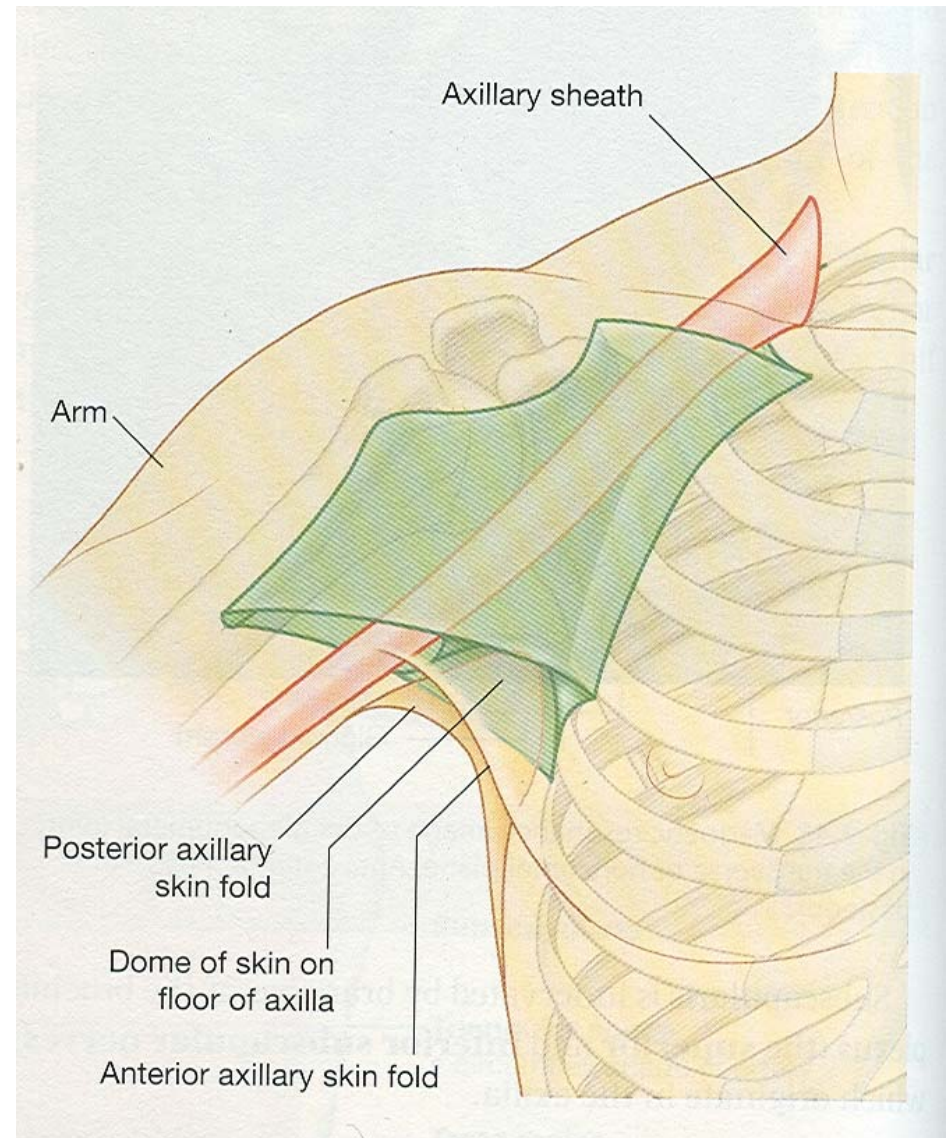
Axillary vein

- Continuation of basilic vein
- Receives tributaries like venae comitantes of brachial artery, cephalic vein, veins corresponding to branches to axillary artery



Axillary sheath

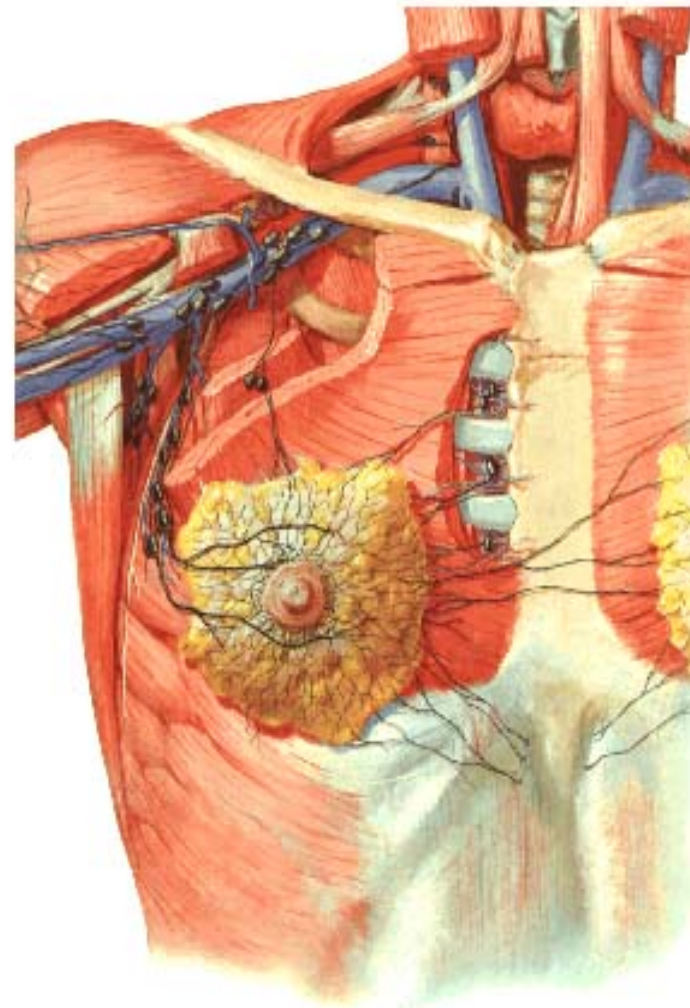
- Derived from prevertebral layer of deep cervical fascia
- Envelops axillary artery & brachial plexus
- Axillary vein is not included



Axillary lymph nodes

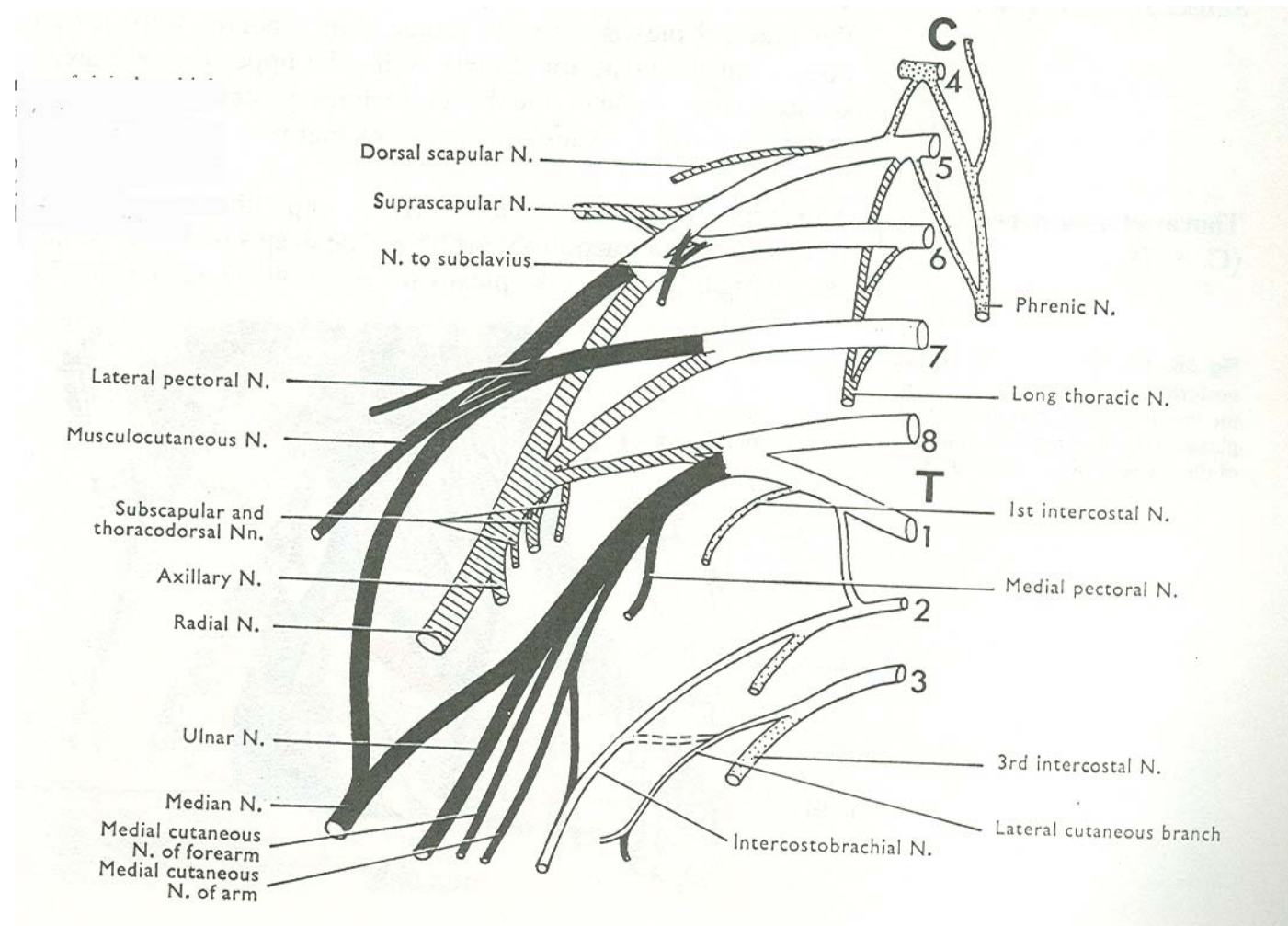
- **Anterior axillary**
- **Posterior axillary**
- **Central group**
- **lateral group**
- **Apical**

Lymph Vessels and Nodes of Mammary Gland



Brachial plexus

- Formed by ant. Primary rami of C₅ – T₁



Brachial plexus

Branches from roots-

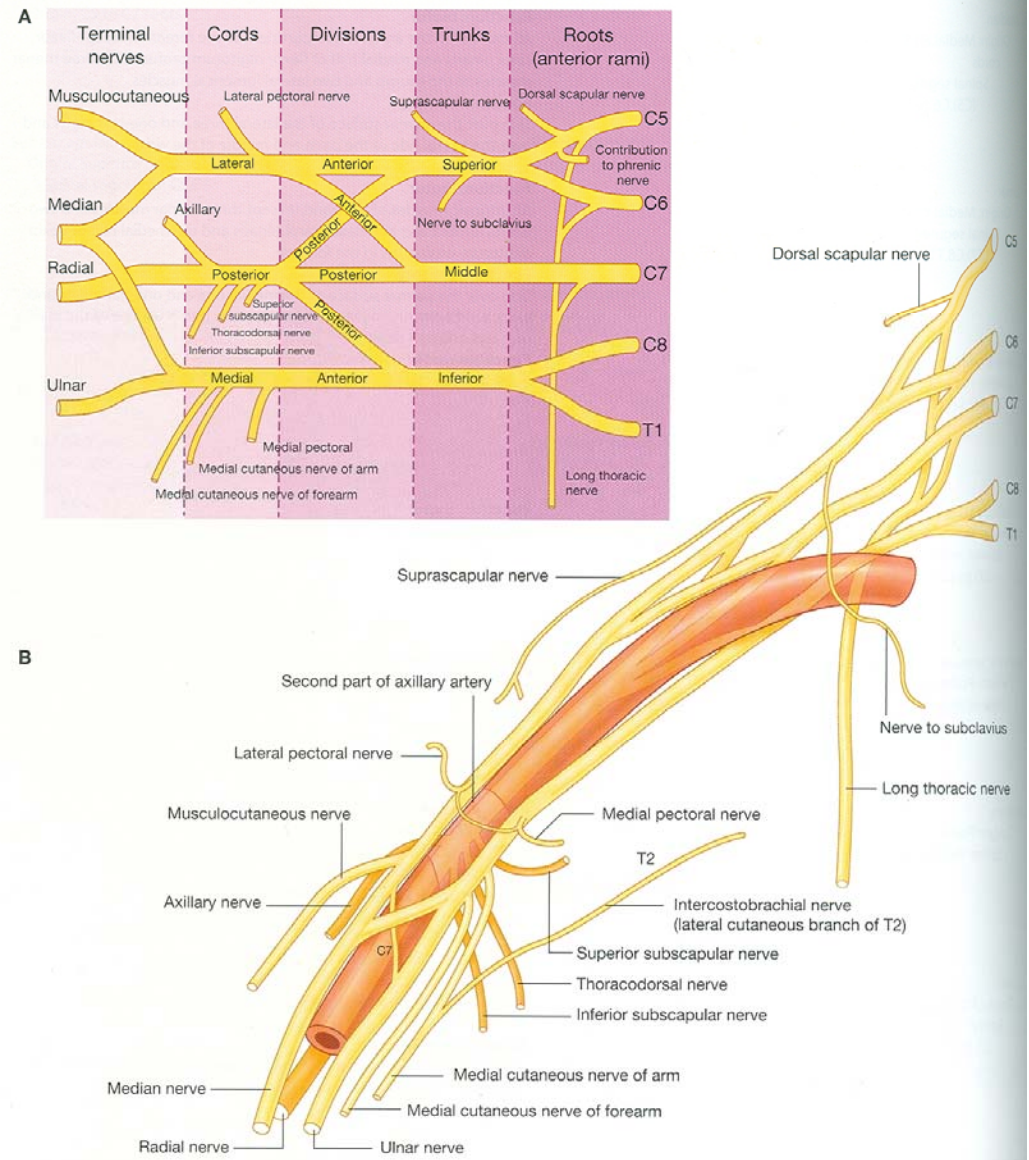
- Long thoracic nerve
- Dorsal scapular nerve

Branches from trunks-

- Suprascapular
- Nerve to subclavius

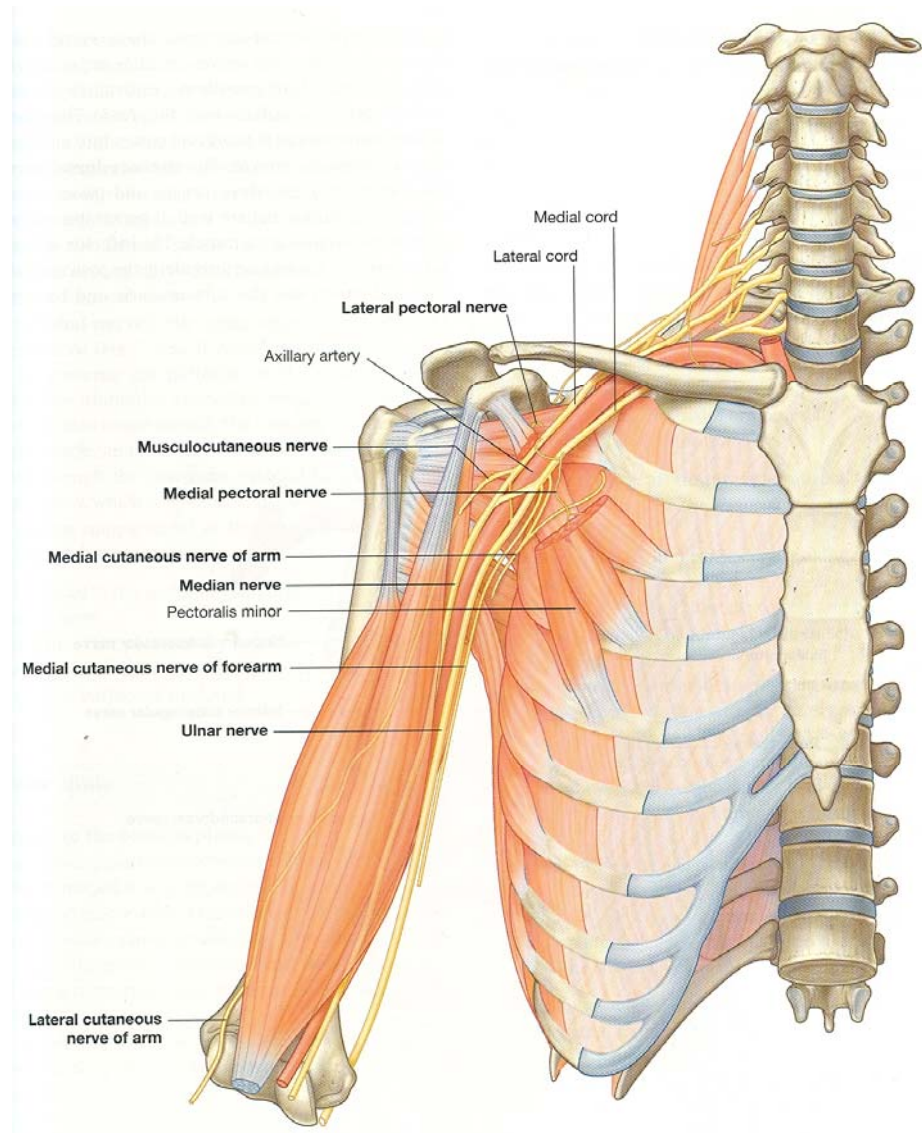
innervates the rhomboid major and minor muscles from their deep surfaces.

muscle.



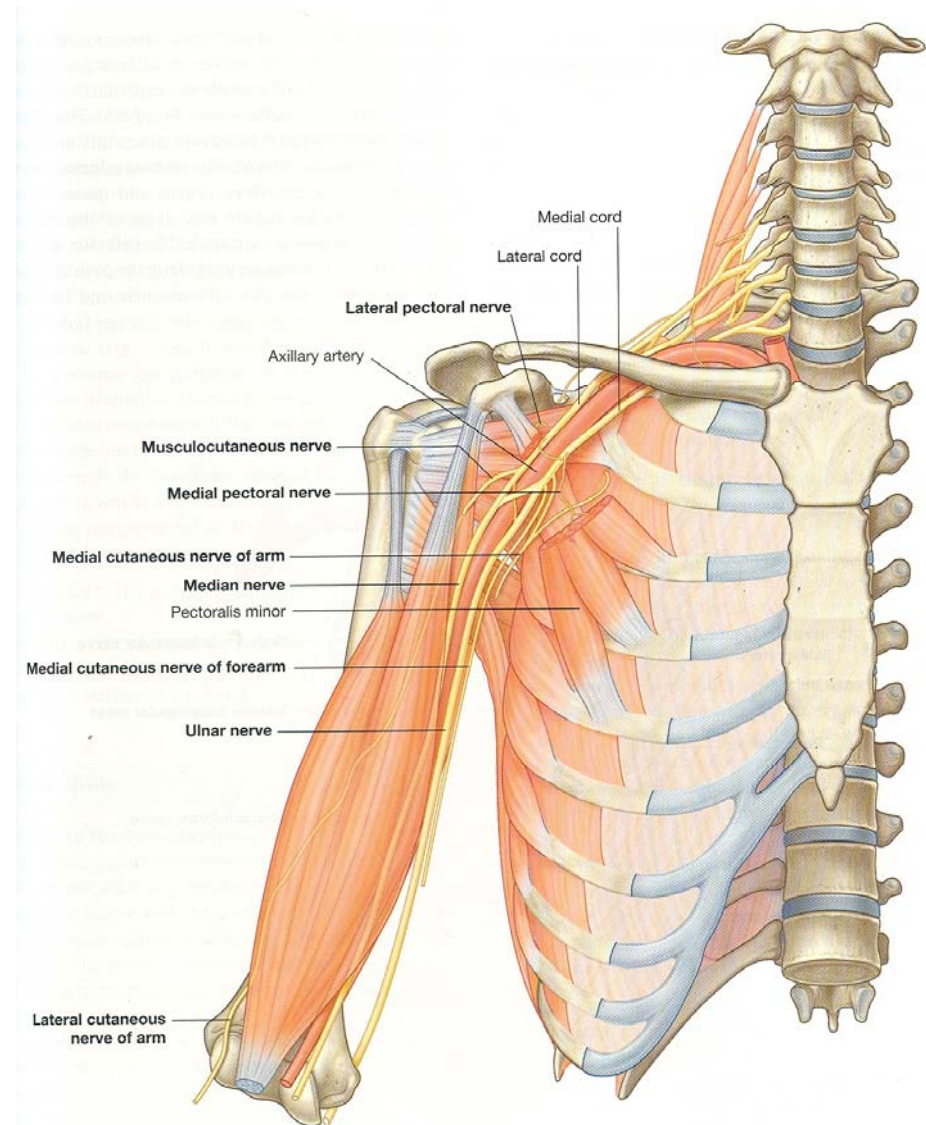
Branches of lateral cord

- Lateral pectoral nerve
- Musculocutaneous nerve
- Lateral root of median nerve



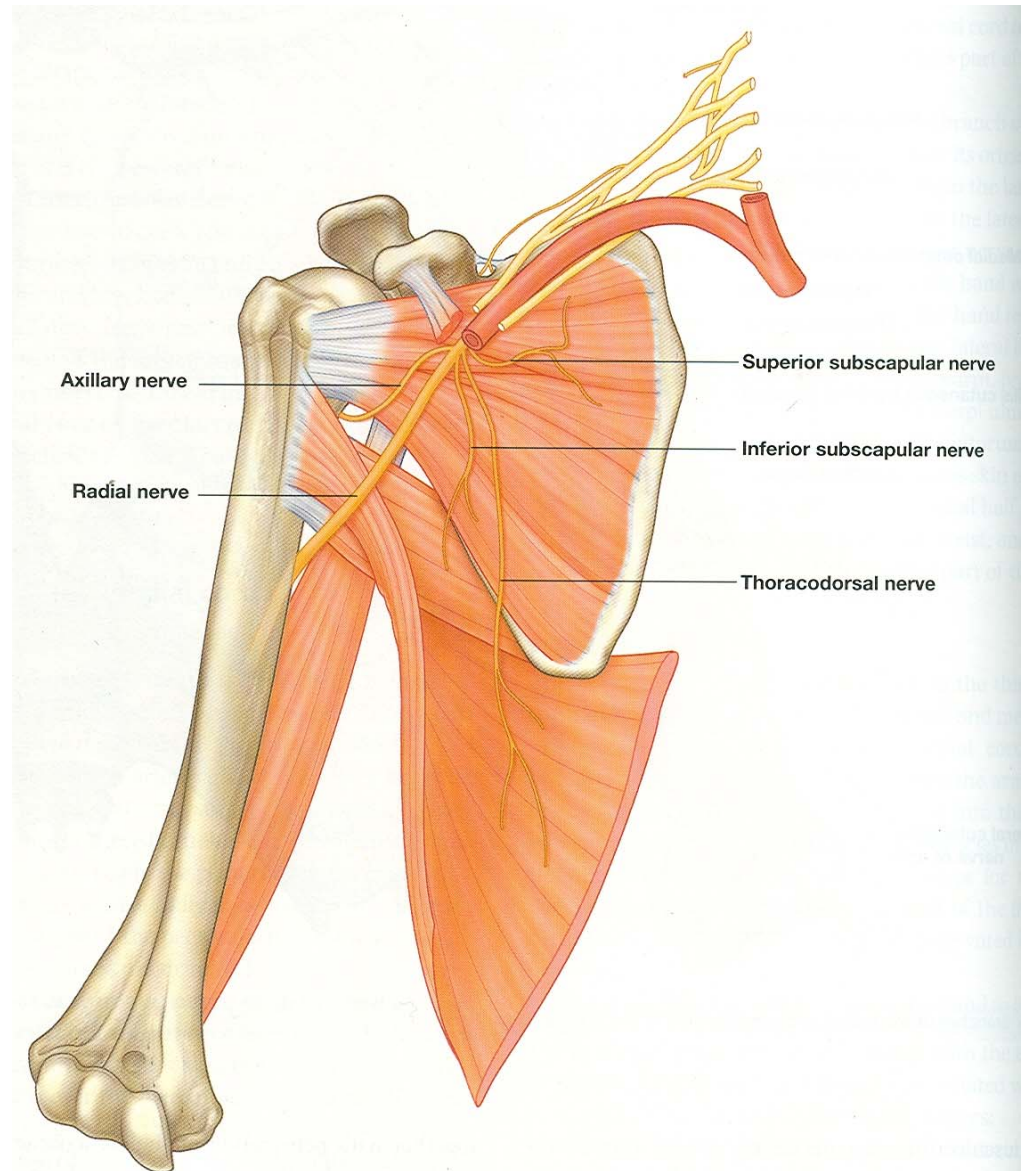
Branches of medial cord

- Medial pectoral nerve
- Medial cutaneous nerve of arm
- Medial cutaneous nerve of forearm
- Ulnar
- Medial root of median



Branches of posterior cord

- **Upper sub scapular**
- **Thoracodorsal**
- **Lower sub scapular**
- **Axillary**
- **Radial**



Other nerve supply of upper limb

- Supraclavicular branches from cervical plexus
- Intercostobrachial nerve (lateral cutaneous branch of second intercostal nerve)

Injuries to brachial plexus

- Erb's paralysis
Injury to upper trunk
- Klumpke's paralysis
Injury to lower trunk
- Injury to nerve to serratus anterior
Winging of scapula

Applied importance of axilla

- Boils
- Axillary lymphadenopathy
- Abscess