

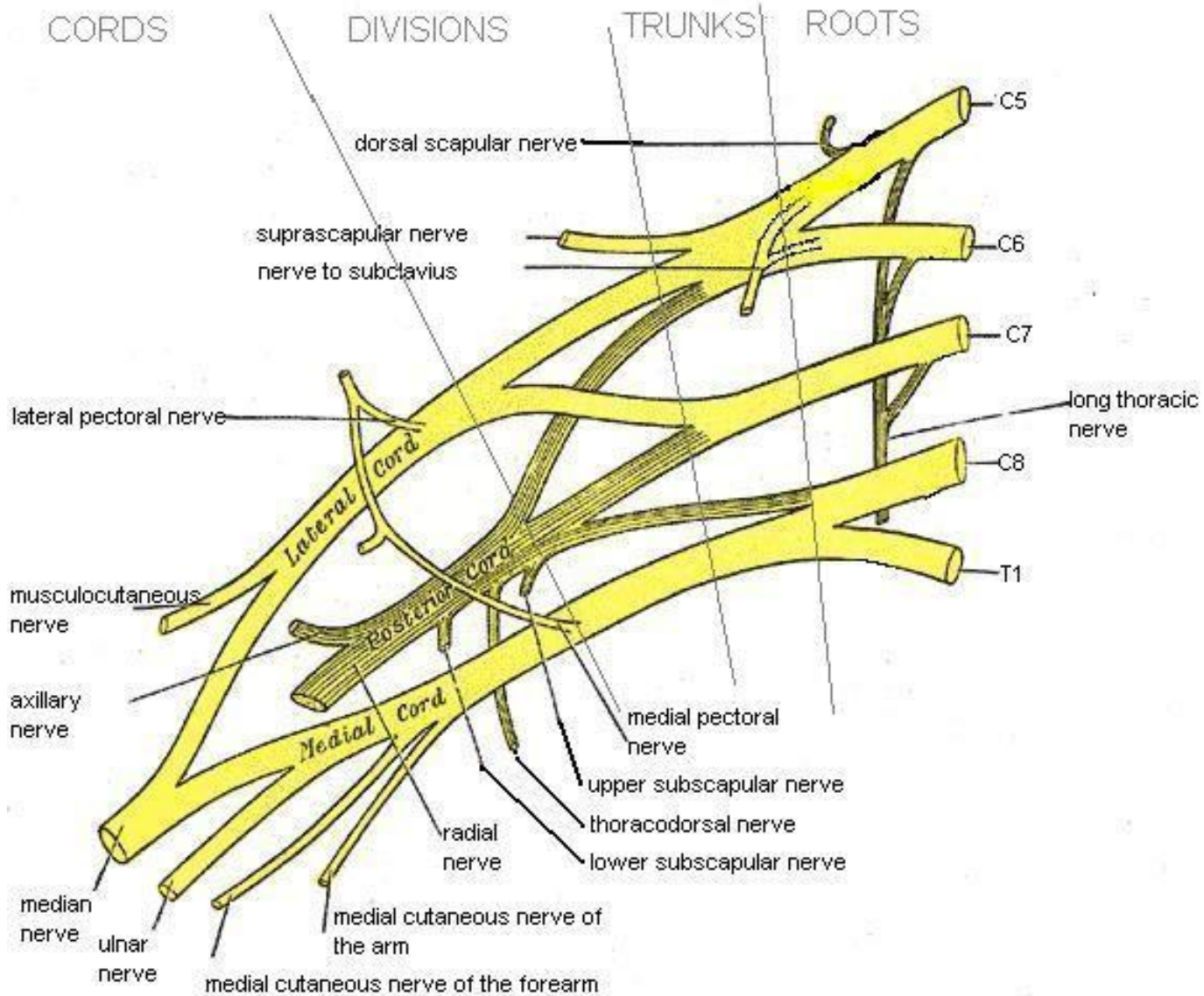
BRACHIAL PLEXUS ANATOMY,



- Brachial plexus is network of nerves that supply sensation and motor function to upper extremity
- Formed by ventral primary rami of lowest four cervical and upper most thoracic nerve (C5-T1)

Anatomy

- Roots - c5 – t1
- Trunks – Upper ,middle and lower
- Division- Anterior and posterior
- Cords – Medial, posterior and lateral
- Branches



commons.wikimedia.org/wiki/File:Brachial_plexus.jpg

Branches

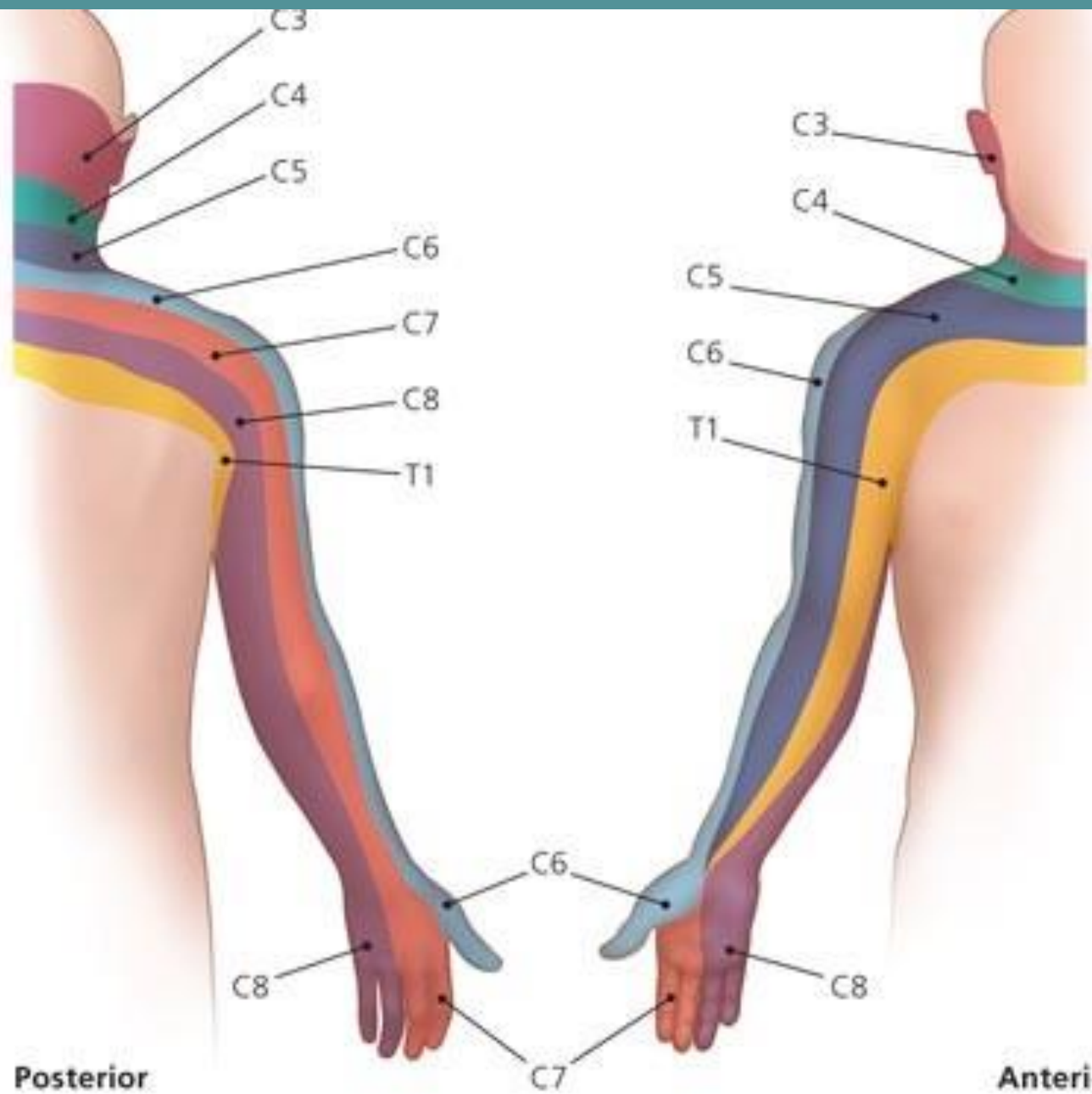
- Roots -
 - phrenic nerve – C3,4,5 – diaphragm
 - Long thoracic n - c5,6,7 – serratus anterior
 - dorsal scapular n – c5 - rhomboidus ,
levator scapulae
- Trunk -
 - suprascapular n – c5- supraspinatus
infraspinatus

Branches of cord

- Lateral cord
 - lateral pectoral nerve
- Medial cord
 - medial cutaneous nerve of arm
 - medial cutaneous nerve of forearm
 - medial pectoral nerve
- posterior cord
 - upper and lower subscapular nerve
 - thoraco-dorsal nerve (c6-8)

- Lateral cord –
musculocutaneous nerve (c5,6,7) and
contribute to medial nerve
- Posterior cord – axillary(c5-6) and radial nerve (c5-t1)
- Medial cord – median nerve contribution and ulnar nerve (c8-T1)

| Roots | Sensory | Motor Deficits | Reflex |
|-------|--|--|-----------|
| C5 | Lateral border upper arm to elbow | Deltoid Supraspinatus Infraspinatus Rhomboids | Biceps |
| C6 | Lateral forearm Thumb, index | Biceps Brachioradialis Brachialis | supinator |
| C7 | Middle finger, Front & back of hand | Triceps Wrist flexors & Extensors Lat.dorsi,Pec major | triceps |
| C8 | Little finger Heel of hand to above wrist | Finger flexor & extensor Flexor Carpi ulnaris | finger |
| T1 | In the axilla | All small hand muscles | none |



Posterior

Anterior

Injuries of brachial plexus

- Most common cause of injury – RTA (70%)
- Obstetrics
- Iatrogenic – positioning , surgical trauma .
- Miscellaneous - radiation , tumors ,neuritis .

Traction Injury



www.msdlatinamerica.com/ebooks/HandSurgery/sid744608.html

Clinical features

- Brachial plexus injury is often seen in conjunction with significant trauma .
- High suspicion for brachial plexus injury should be maintained when pt had shoulder girdle injury , first rib #, axillary artery injury .

Clinical features

- Roots level (pre-ganglionic) –
 - winging of scapula
 - phrenic nerve involvement
 - atrophy of rhomboidus and parascapular muscle
 - horner's syndrome (T1)

- Trunk level –
 - Upper trunk - shoulder elevation and external rotation
 - atrophy of posterior aspect of shoulder (infraspinatus)

- Posterior cord –
wrist extension, elbow extension and
shoulder abduction.
Latissimus dorsi , teres major
- Wrist and finger movement – radial , ulnar and
median nerve .
- Arm & elbow flexion and extension –
musculocutaneous and high radial function

Thank you