

Anatomical aspects of
fractures of bones of upper
and lower limb.

Anatomy

Fracture definition

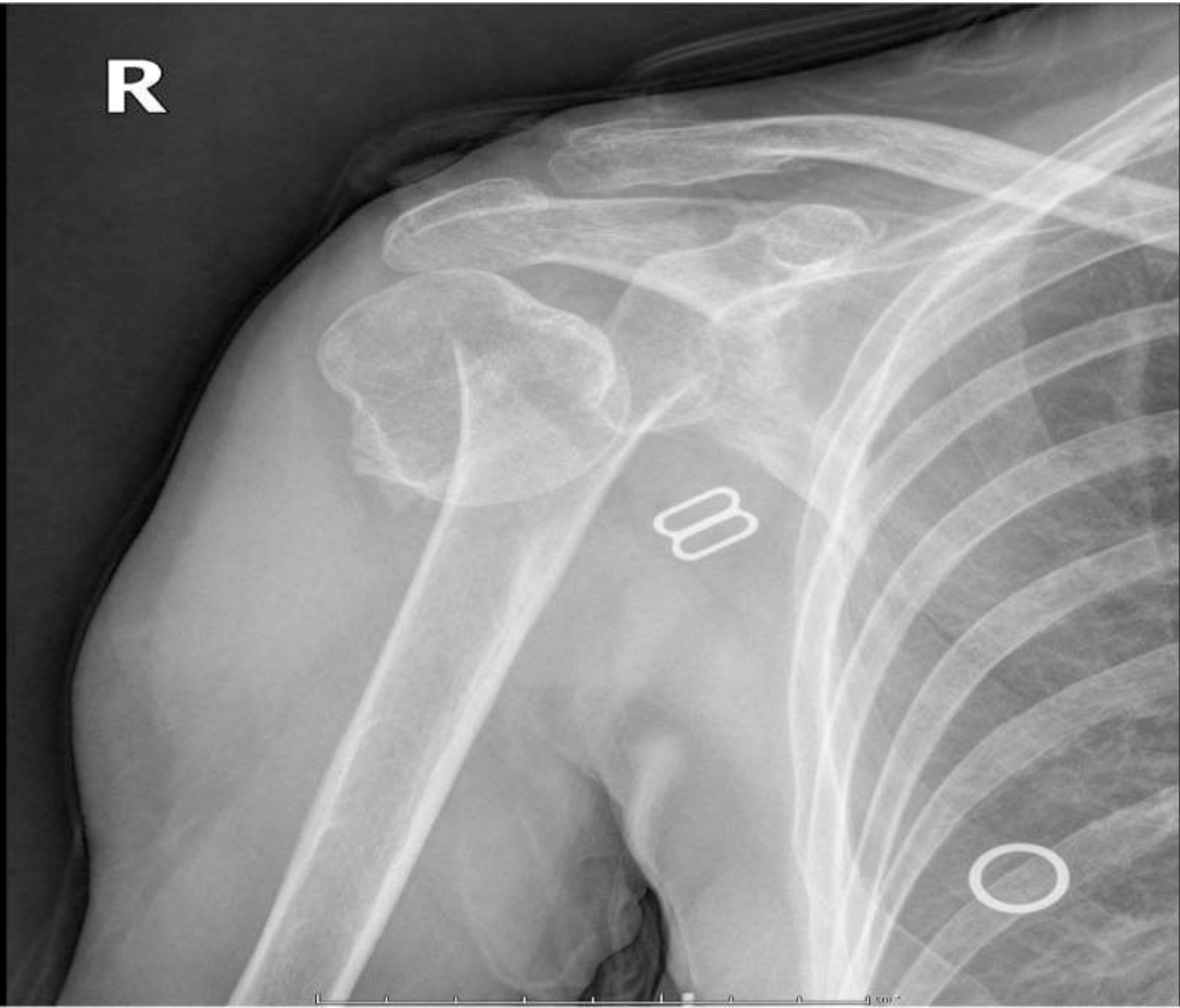
- Breach in the continuity of a bone.

Surgical neck of humerus fracture

- Most common neurologic sequela of **proximal humerus fracture** is the **axillary nerve**. Patients with **axillary nerve injury** present frequently with weakness of the shoulder girdle muscle and numbness or paresthesia in the lateral shoulder area

Surgical neck of humerus fracture

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humeral shaft fractures

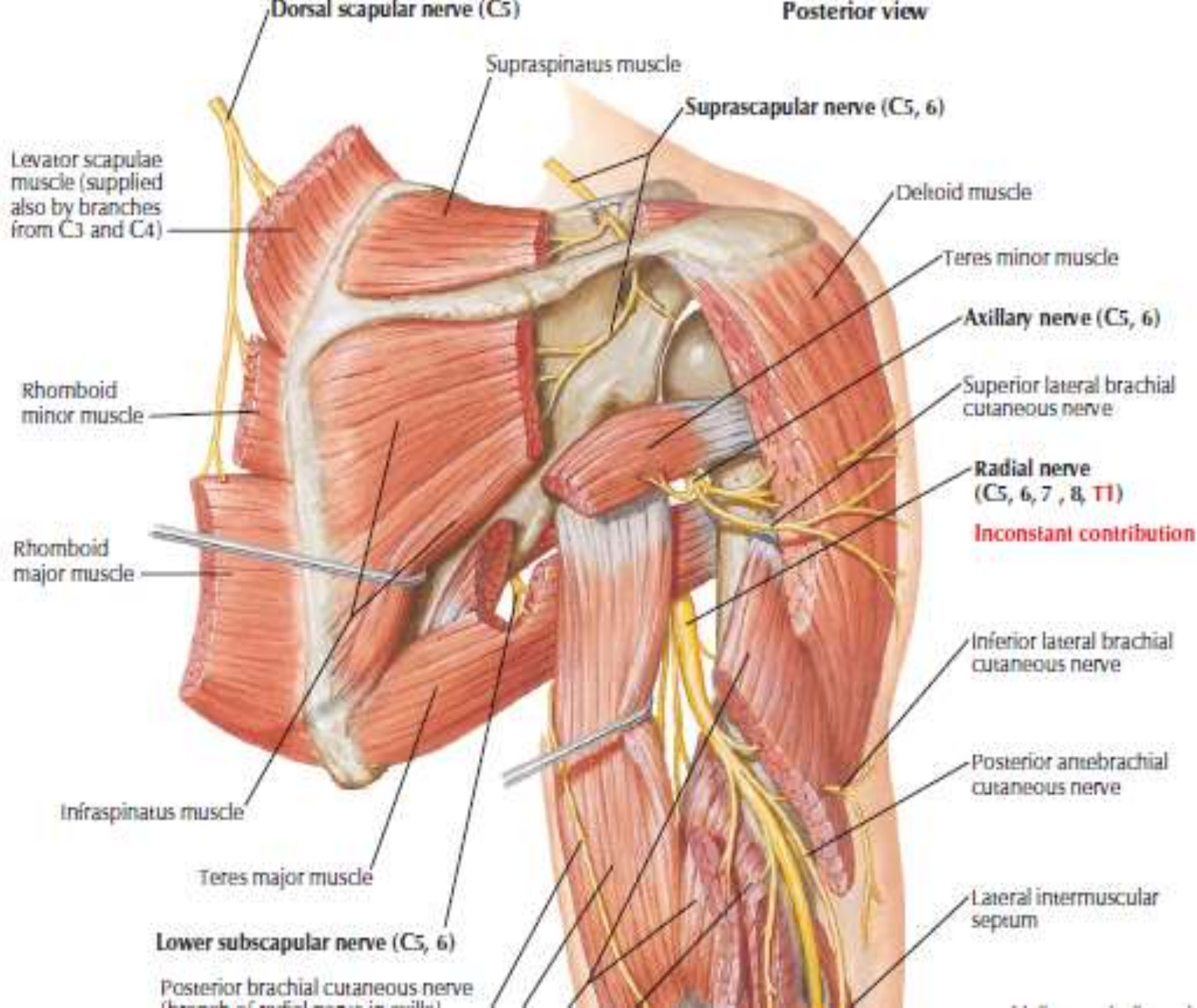
- Most frequently **humeral shaft fractures** occur as a result of a direct blow to the upper arm (transverse **fractures**). Indirect trauma from a fall or a twisting action (e.g. arm wrestling) are also encountered and usually result in spiral or oblique **fractures**

Shaft of humerus fracture





Posterior view



supracondylar humerus fracture

- A **supracondylar humerus fracture** is a **fracture** of the distal **humerus** just above the elbow joint. The **fracture** is usually transverse or oblique and above the medial and lateral condyles and epicondyles. This **fracture** pattern is relatively rare in adults, but is the most common type of elbow **fracture** in children.

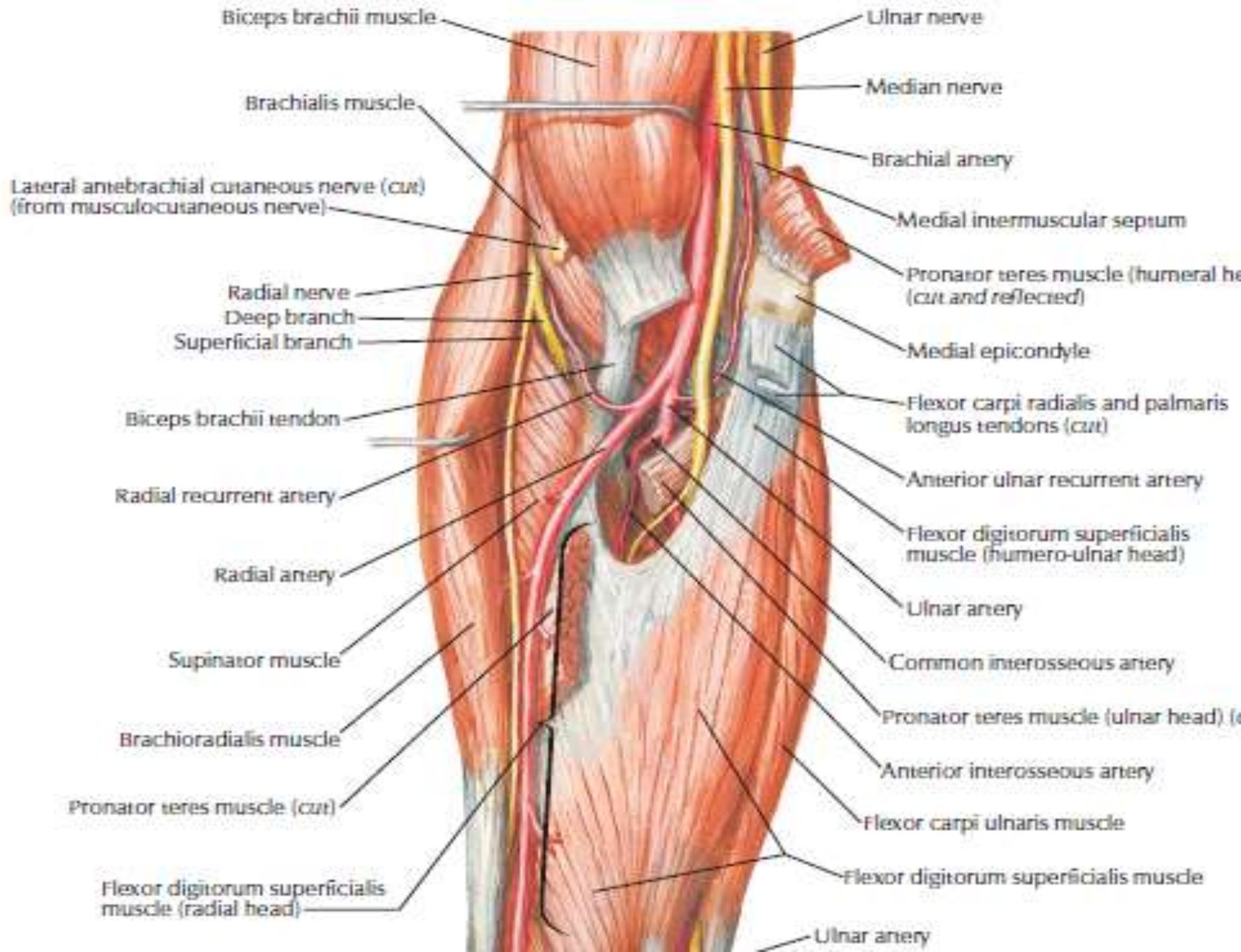
Supracondylar fracture



Right elbow



In extension: anterior view

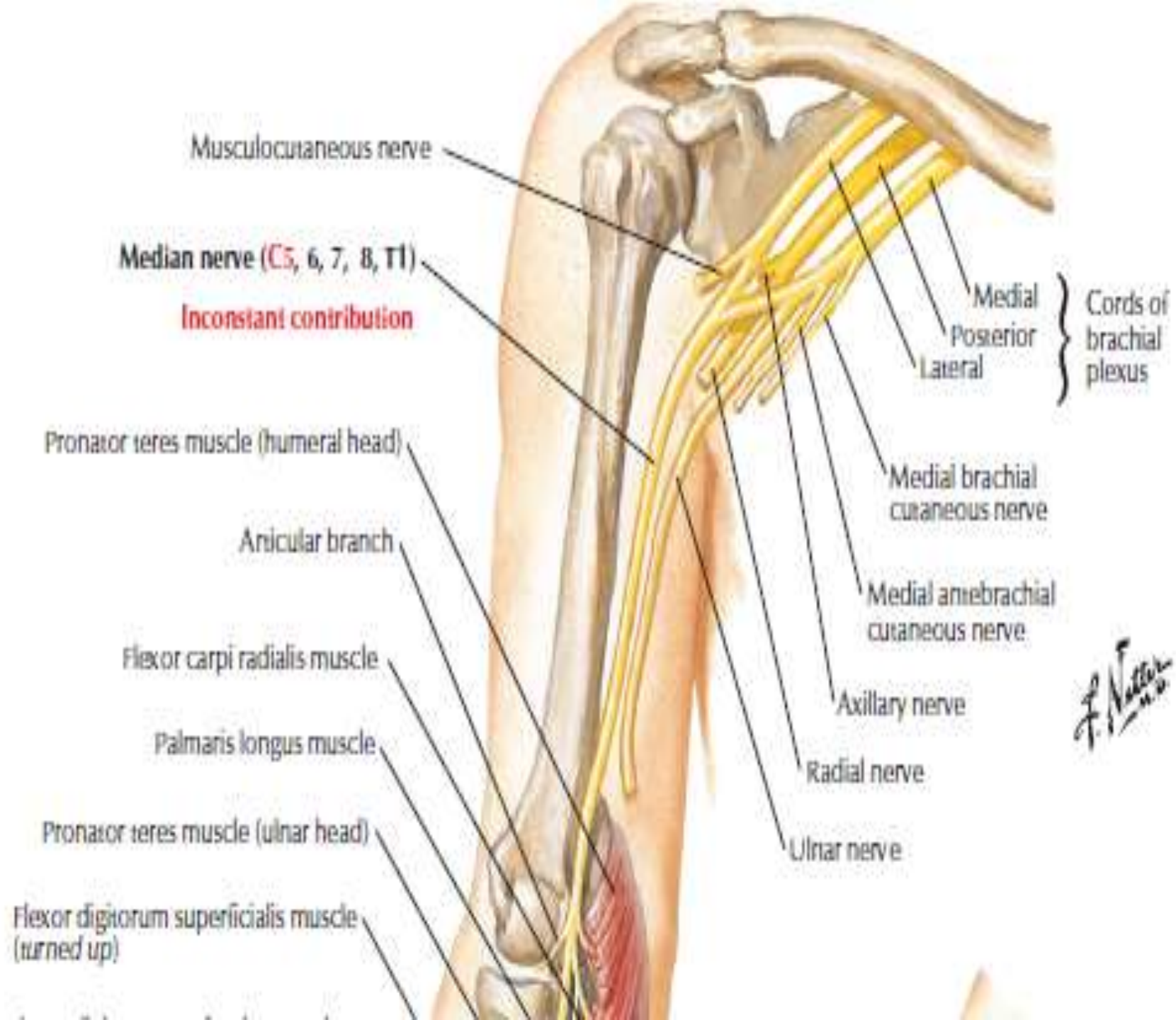


clavicle fracture

- A **clavicle fracture**, also known as a broken collarbone, is a bone **fracture** of the **clavicle**. Symptoms typically include pain at the site of the break and a decreased ability to move the affected arm

Clavicle fracture





Colles' fracture

- A **Colles' fracture** is a type of **fracture** of the distal forearm in which the broken end of the radius is bent backwards. Symptoms may include pain, swelling, deformity, and bruising. Complications may include damage to the median nerve. It typically occurs as a result of a fall on an outstretched hand

Colles fracture



Scaphoid fracture



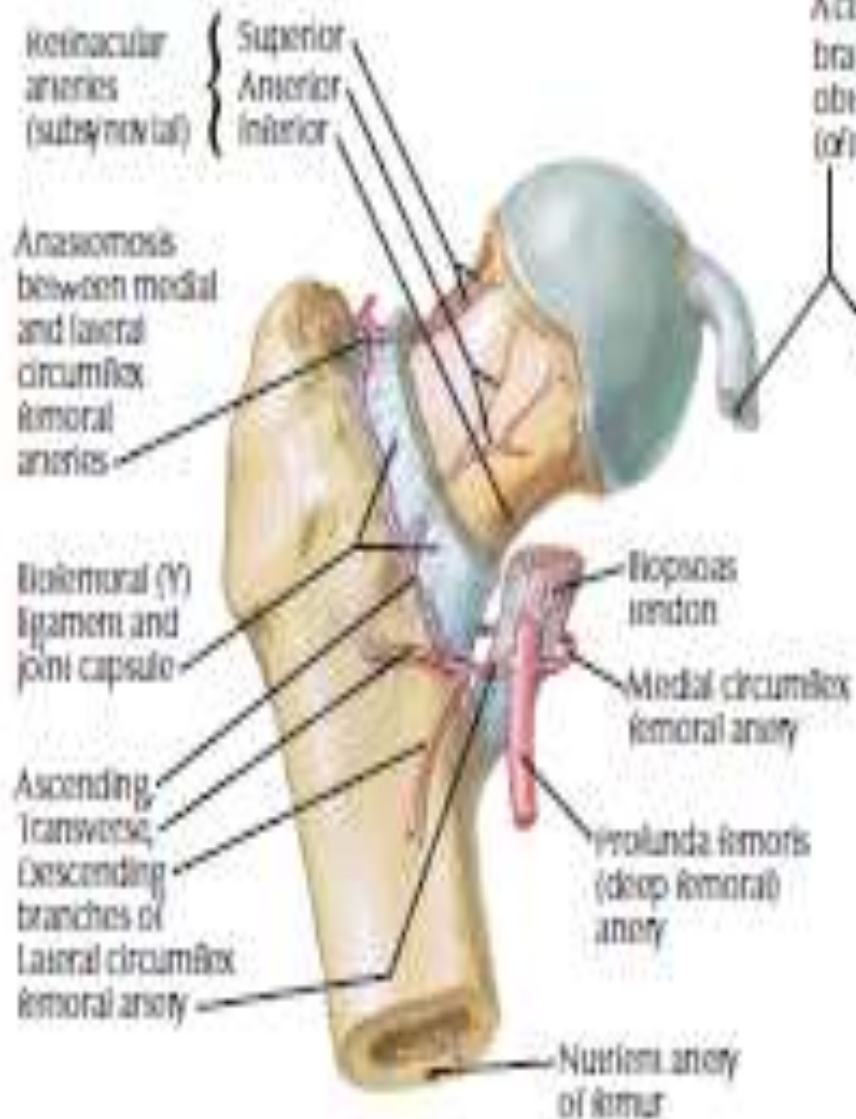
Neck of femur fracture

- A fractured neck of femur (broken **hip**) is a serious injury, especially in older people. It is likely to be life changing and for some people life threatening. It occurs when the top part of the femur (leg bone) is broken, just below the ball and socket joint

Neck of femur fracture



Anterior view



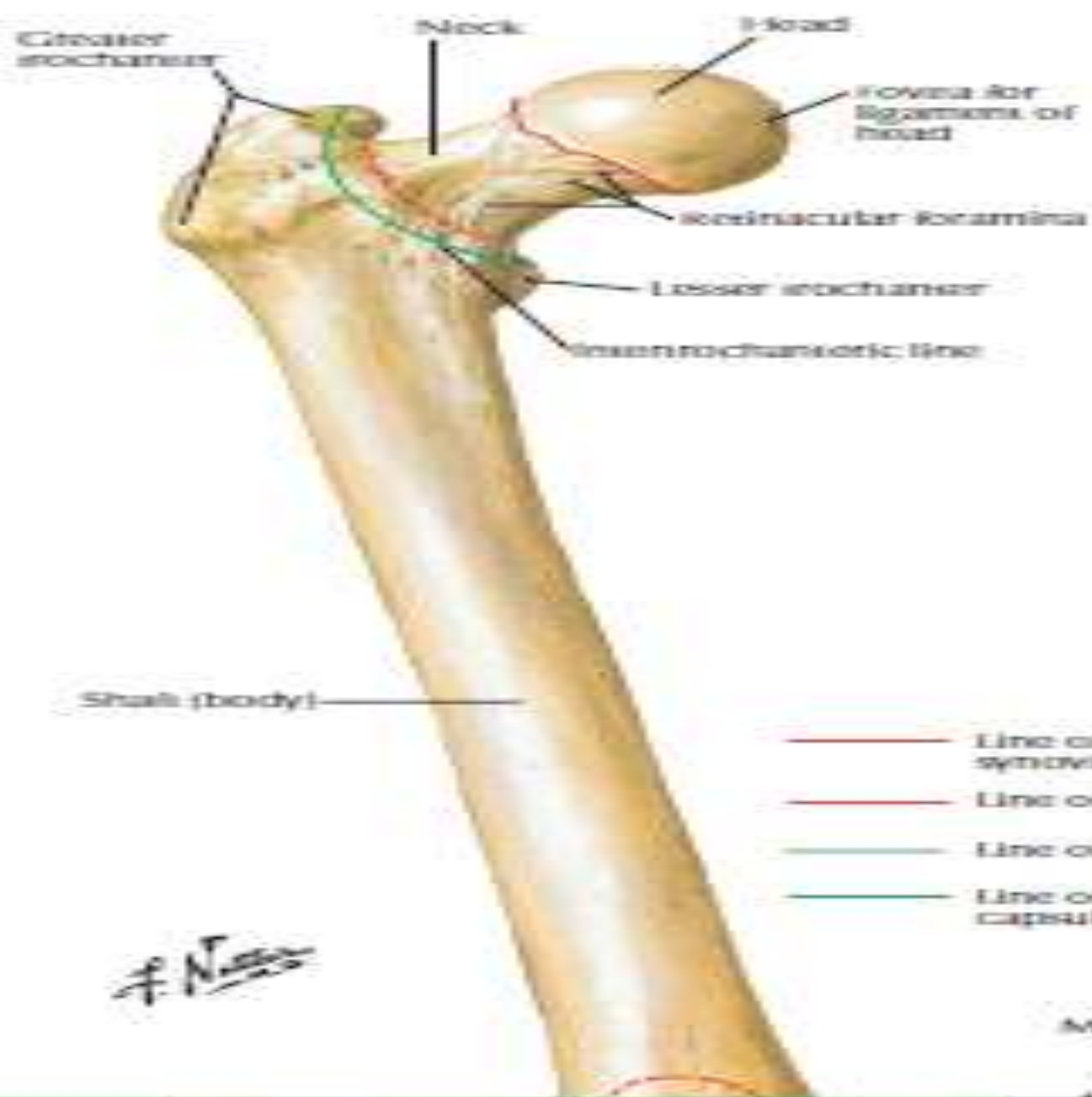
Posterior view



Anterior view in situ

Acetabular branch of obturator artery (often missing)

Anterior view



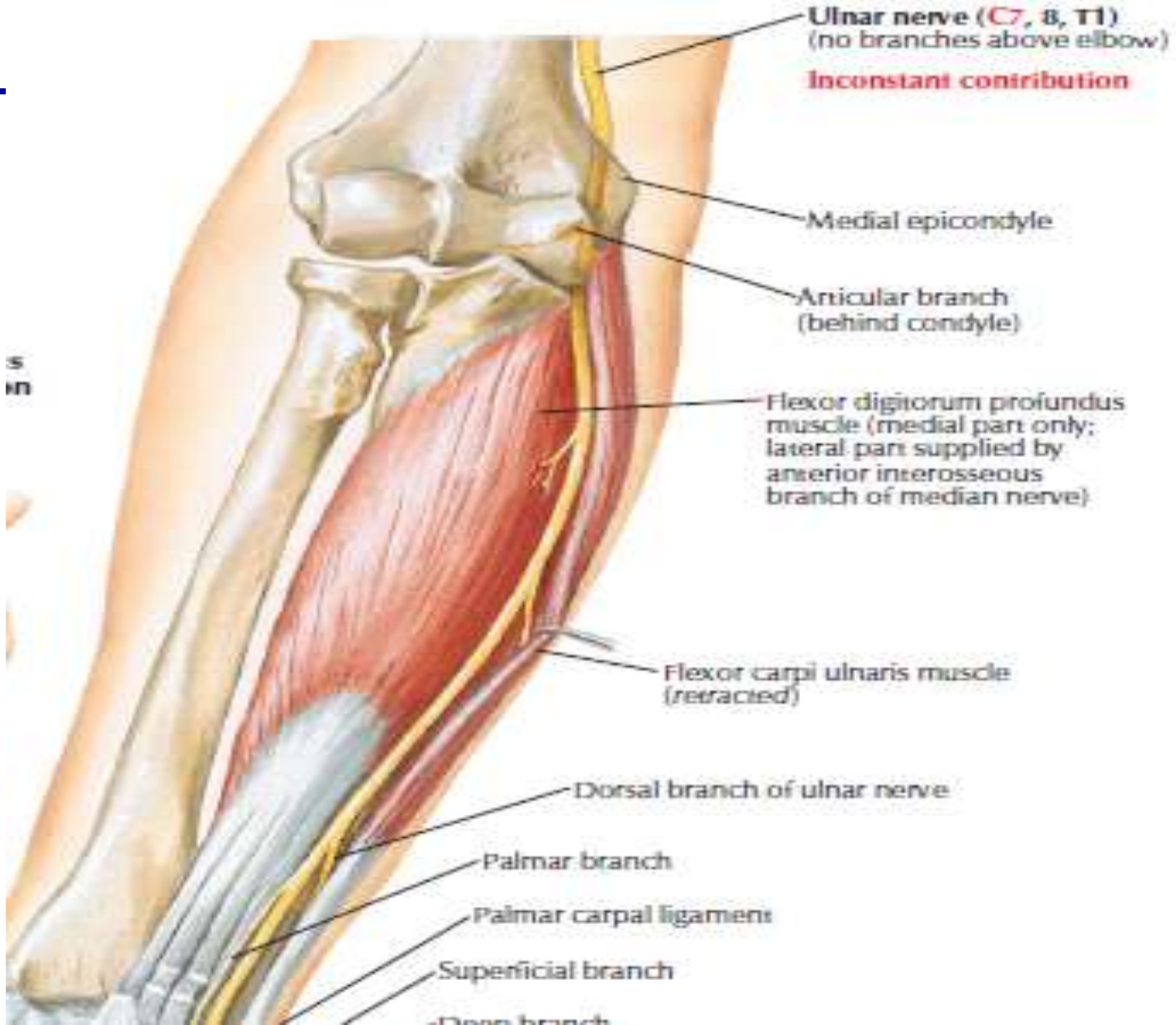
F. N. 2020

medial epicondyle of humerus fracture

- A **medial epicondyle fracture** is an avulsion injury of the attachment of the common flexors of the forearm. The injury is usually extra-articular but can be sometimes associated with an elbow dislocation

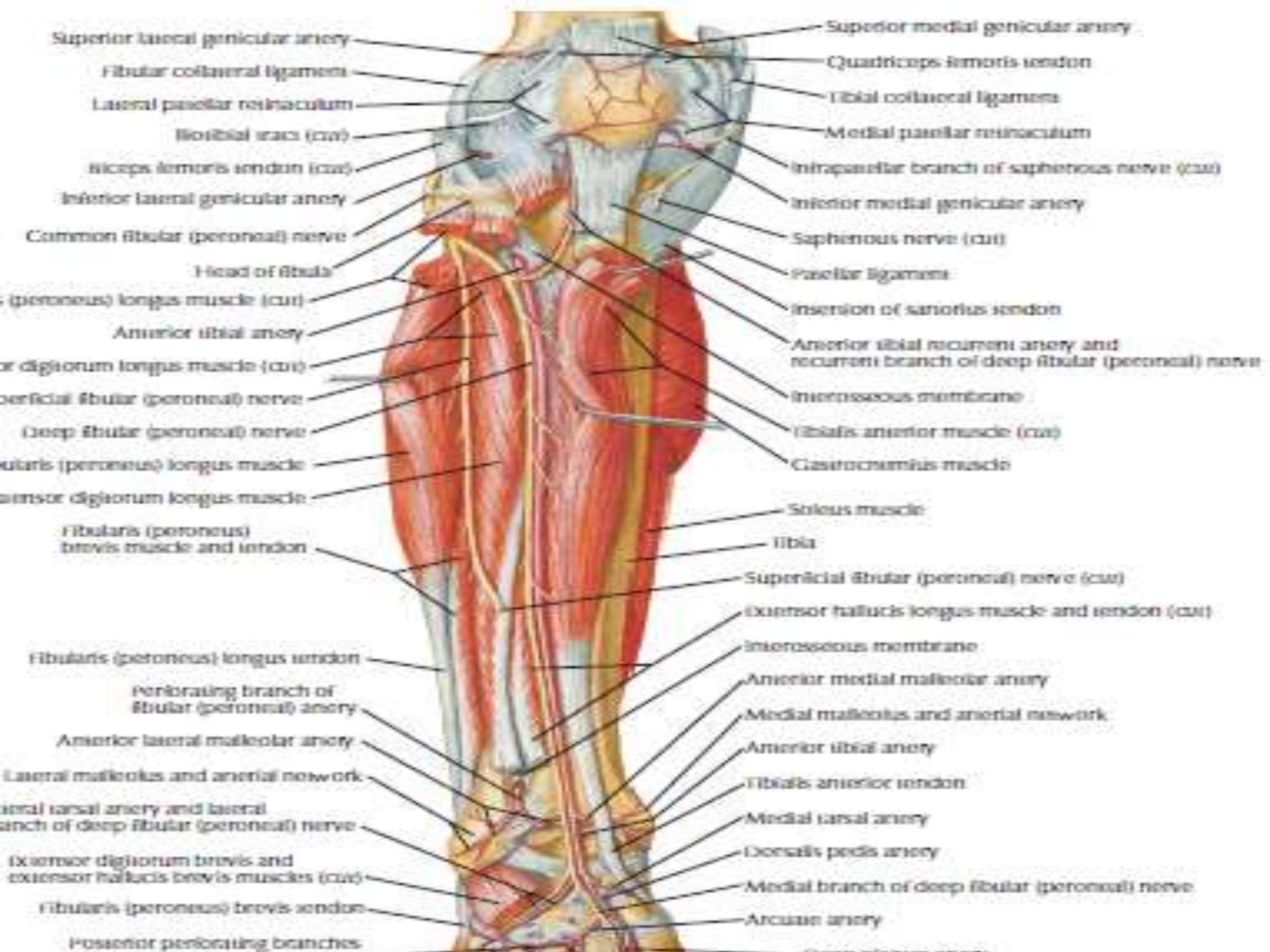
Medial epicondyle fracture





fibular neck fracture

- Common fibular nerve is susceptible to injury from a **fibular neck fracture**, the pressure of a splint, or during surgical repair. This can result in foot drop and sensation abnormalities. Delayed union, nonunion, and arthritis may occur. Among the long bones, the tibia is the most common site of **fracture nonunion**



Superior lateral genicular artery
 Fibular collateral ligament
 Lateral patellar retinaculum
 Iliofibular tract (cut)
 Biceps femoris tendon (cut)
 Inferior lateral genicular artery
 Common fibular (peroneal) nerve
 Head of fibula
 Peroneus longus muscle (cut)
 Anterior tibial artery
 Extensor digitorum longus muscle (cut)
 Superficial fibular (peroneal) nerve
 Deep fibular (peroneal) nerve
 Fibularis (peroneus) longus muscle
 Extensor digitorum longus muscle
 Fibularis (peroneus) brevis muscle and tendon
 Fibularis (peroneus) longus tendon
 Penetrating branch of fibular (peroneal) artery
 Anterior lateral malleolar artery
 Lateral tarsal artery and lateral branch of deep fibular (peroneal) nerve
 Extensor digitorum brevis and extensor hallucis brevis muscles (cut)
 Fibularis (peroneus) brevis tendon
 Posterior penetrating branches

Superior medial genicular artery
 Quadriceps femoris tendon
 Tibial collateral ligament
 Medial patellar retinaculum
 Intrapatellar branch of saphenous nerve (cut)
 Inferior medial genicular artery
 Saphenous nerve (cut)
 Patellar ligament
 Insertion of sartorius tendon
 Anterior tibial recurrent artery and recurrent branch of deep fibular (peroneal) nerve
 Interosseous membrane
 Tibialis anterior muscle (cut)
 Gastrocnemius muscle
 Soleus muscle
 Tibia
 Superficial fibular (peroneal) nerve (cut)
 Extensor hallucis longus muscle and tendon (cut)
 Interosseous membrane
 Anterior medial malleolar artery
 Medial malleolus and arterial network
 Anterior tibial artery
 Tibialis anterior tendon
 Medial tarsal artery
 Dorsalis pedis artery
 Medial branch of deep fibular (peroneal) nerve
 Arcuate artery

Thanks...