

The module: Musculo-Skeletal System

Session: 3

Arm = Brachium

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Arm = Brachium

Objectives :

1. Describe the muscles of anterior compartment
2. Mention the blood vessels supplying the arm
3. Describe the nerves supplying the arm
4. Describe the muscles of the posterior compartment
5. Mention the nerve and blood supply
6. Describe cubital fossa and the contents .



Anterior compartment

LO1

- ❑ the coracobrachialis,
- ❑ brachialis,
- ❑ and biceps brachii muscles-



Biceps brachii

L01

Origin

Short head: tip of coracoid process of scapula;

Long head: supraglenoid tubercle of scapula ,
emerges from the joint through the
intertubercular groove.

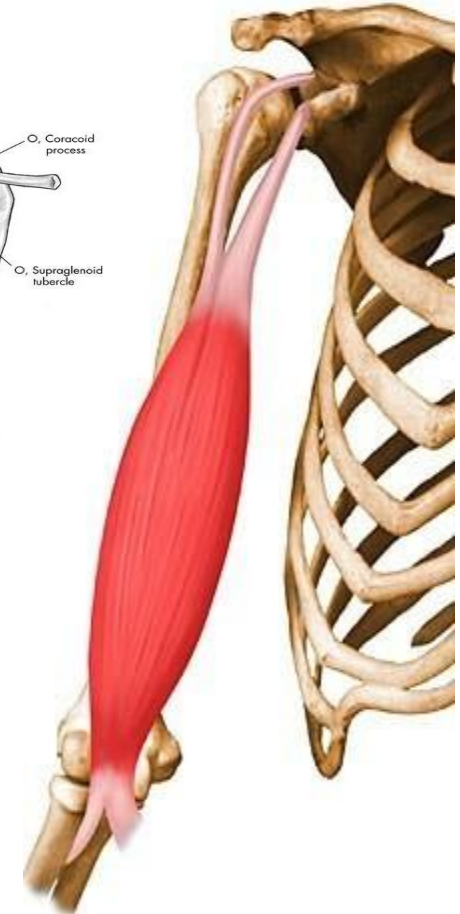
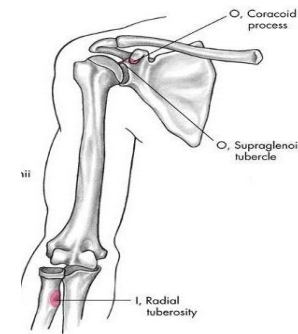
Insertion Tuberosity of radius and fascia of
forearm via bicipital aponeurosis

Action

Supinates forearm and, when it is
supine, flexes forearm
Weak flexion of arm

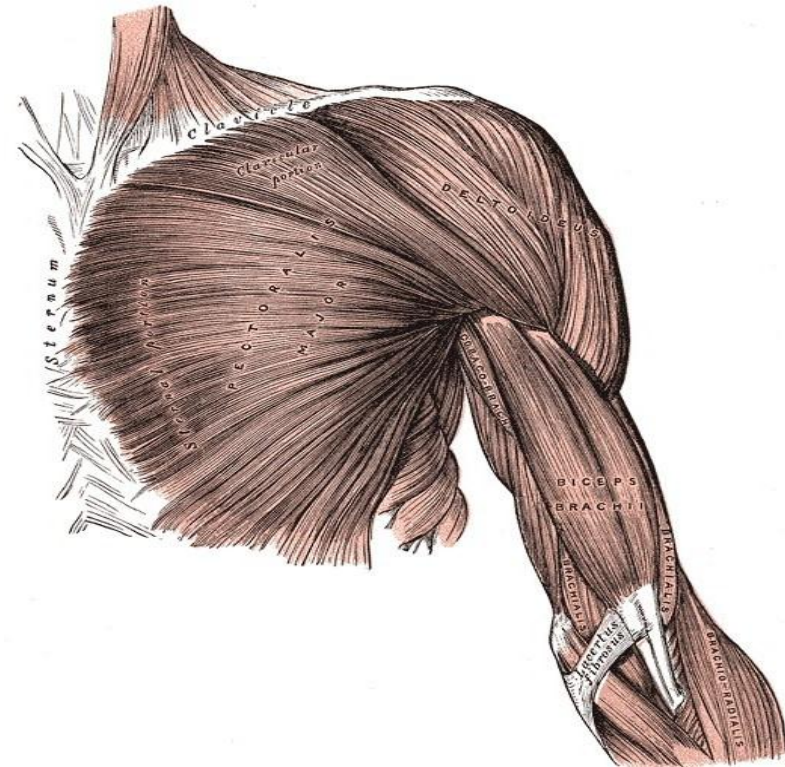
Innervation

Musculocutaneous nerve (C5, C6)



Bicipital aponeurosis

- It is a **broad aponeurosis** of the biceps brachii located in the cubital fossa .
- It separates superficial from deep structures in the fossa.
- It originates from the distal insertion of the biceps brachii and runs across the brachial artery.
- It **helps to protect the brachial artery and the median nerve running underneath(during venipuncture)** from the median cubital vein



Brachialis

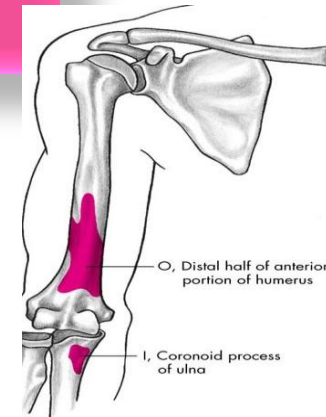
Origin Distal half of anterior surface of humerus

Insertion Coronoid process and tuberosity of ulna

Action Major flexor of forearm- flexes forearm in all positions

Innervation Musculocutaneous nerve (C5, C6)

Arterial Supply Muscular branches of brachial artery, recurrent radial artery



Coracobrachialis

L01

Origin

Tip of coracoid process of scapula

Insertion

Middle third of medial surface of humerus

Action Helps to flex and adduct arm

Innervation Musculocutaneous nerve (C5, C6, C7)

Arterial Supply Muscular branches of brachial artery



Brachial artery

LO2

Begins at the lower margin of the tendon of the Teres major **as continuation of Axillary artery** .

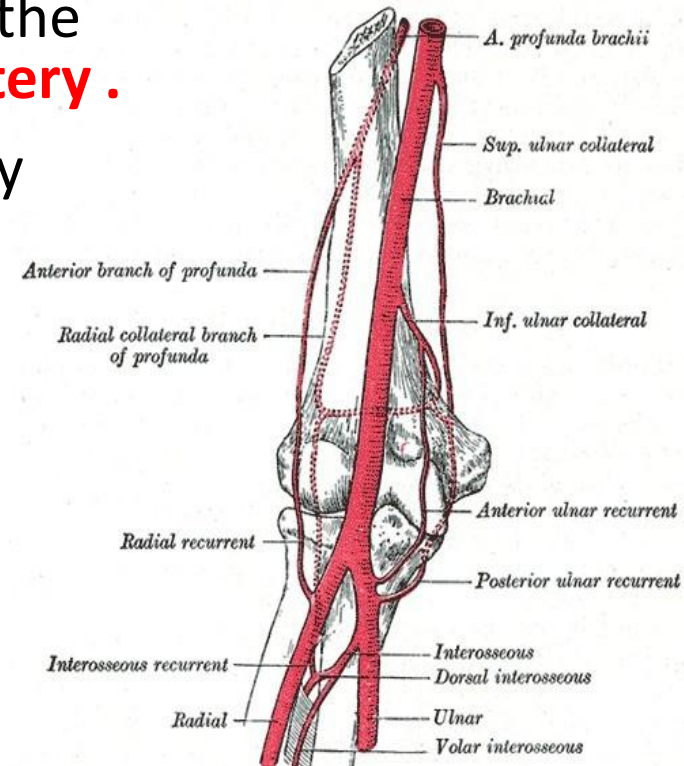
It terminates just below the elbow by dividing into the **radial** and **ulnar arteries**.

Branches Profunda Brachii.

Superior Ulnar Collateral.

Nutrient artery of Humerus

Inferior Ulnar Collateral. Muscular.



Musculocutaneous nerve

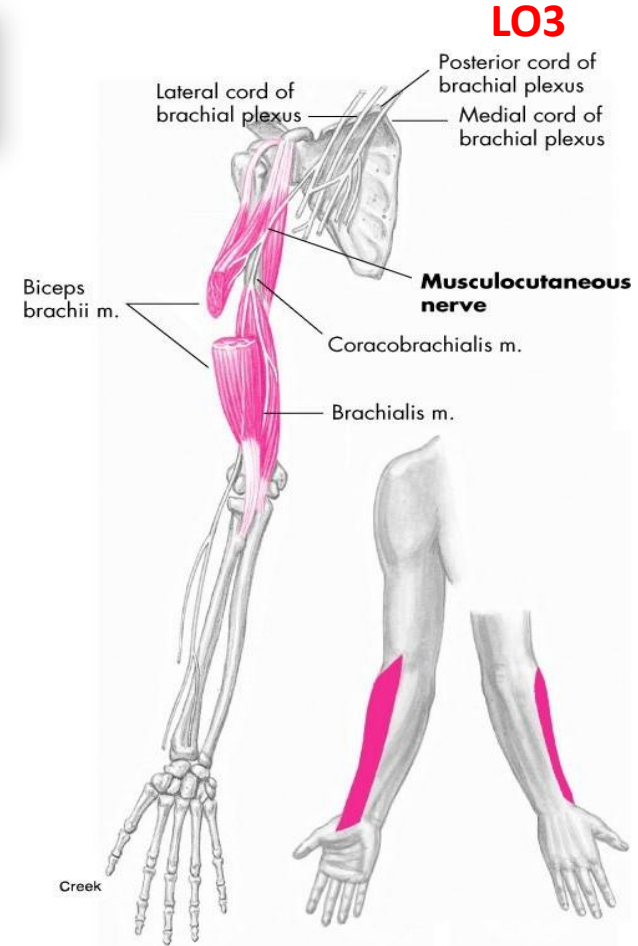
It arises from **lateral cord** of
brachial plexus

It pierces the **coracobrachialis**
and supplies

Biceps brachii Brachialis

Coracobrachialis

It continues as **lateral**
cutaneous nerve of forearm.



Posterior compartment

The triceps brachii muscle.



Triceps brachi

L04

Origin

Long head: infraglenoid tubercle of scapula;

Lateral head: posterior surface of humerus, superior to radial groove;

Medial head: posterior surface of humerus, inferior to radial groove

Insertion

Proximal end of olecranon process of ulna and fascia of forearm

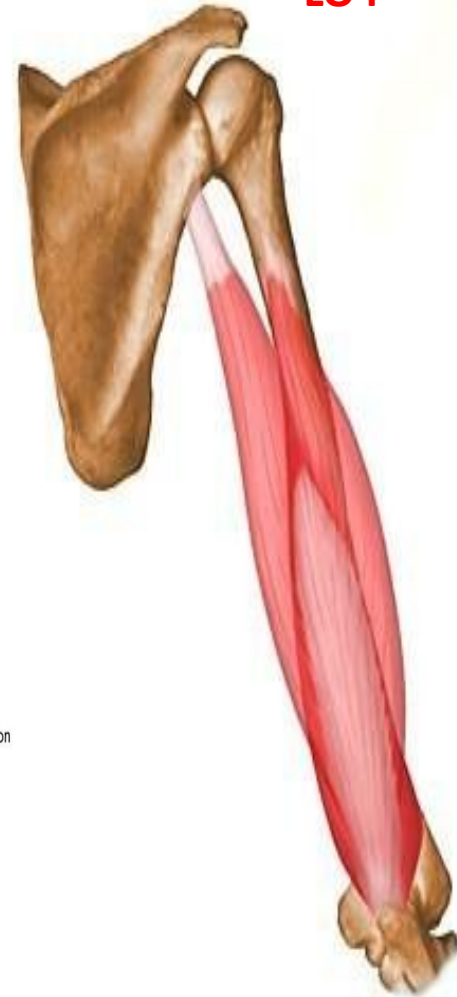
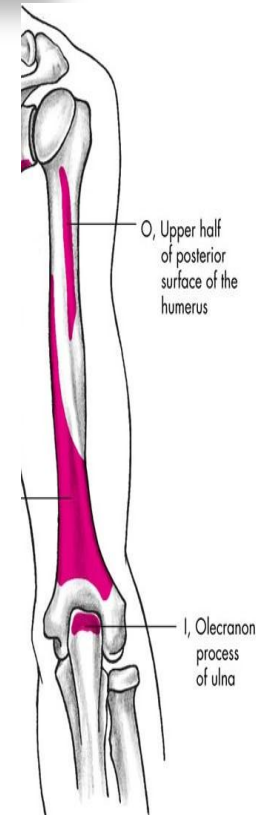
Action

Chief extensor of forearm; long head steadies head of abducted humerus

Innervation Radial nerve (C6, C7, C8)

Arterial Supply

Branches of deep brachial artery



Radial nerve

In the posterior compartment winds in the **spiral groove** of the humerus with the profunda brachii vessels.

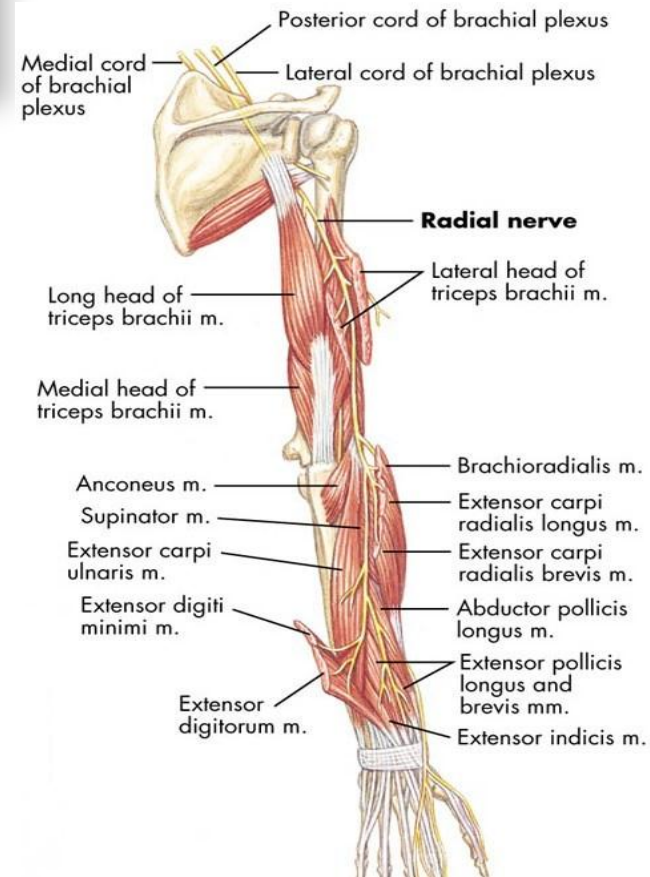
Just above the elbow, it pierces the lateral intermuscular septum and continues downward into the cubital fossa

At the **level of the elbow** (lateral epicondyle), it divides into **superficial and deep branches**.

Superficial branch, a sensory nerve of the hand is a content of cubital fossa.

The **deep branch** of the radial nerve enters the posterior compartment of the forearm.

LO5



Branches of radial nerve

Branches in the axilla

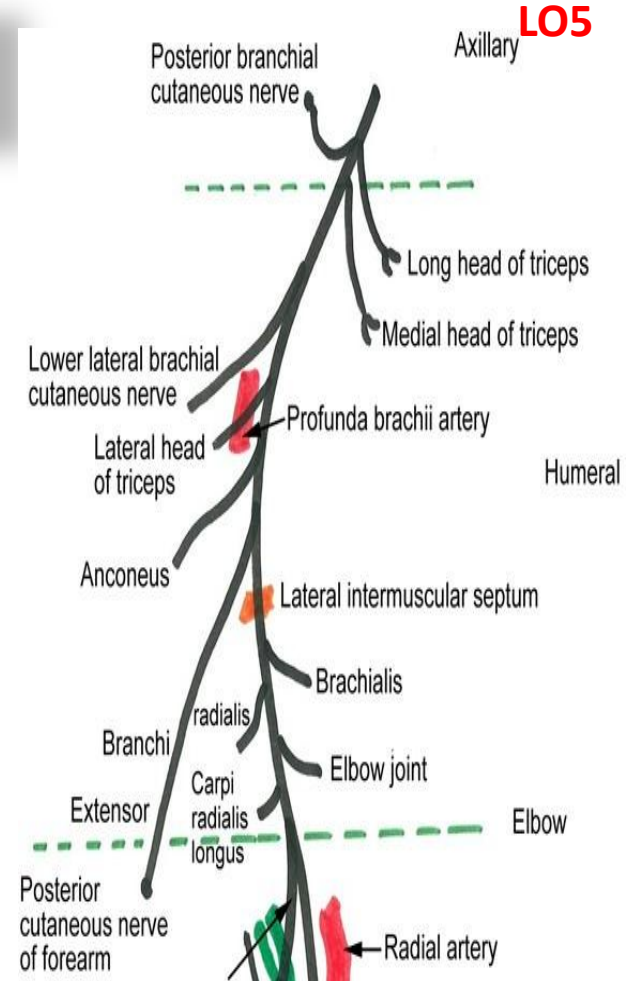
- **Cutaneous branch** - Posterior brachial cutaneous nerve
- **Muscular branches** - Long and medial heads of triceps

Branches in the spiral groove

- **Cutaneous branches** - Lower lateral brachial cutaneous nerve, posterior antebrachial cutaneous nerve
- **Muscular branches** - Lateral and medial heads of the triceps, anconeus

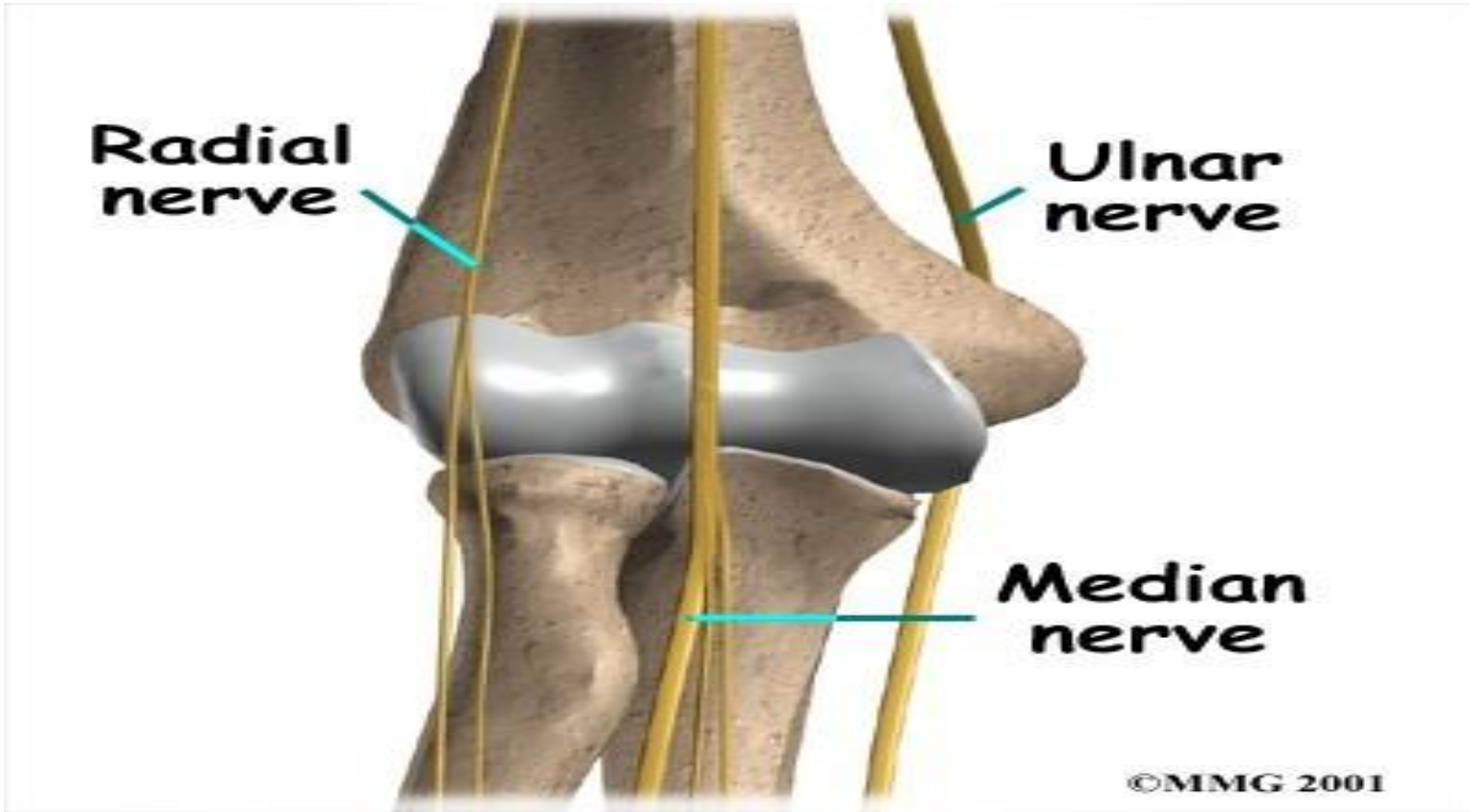
• Branches in the arm

- **Articular branch** - Elbow joint
- **Muscular branches** - Brachialis, brachioradialis, extensor carpi radialis longus



Cubital fossa

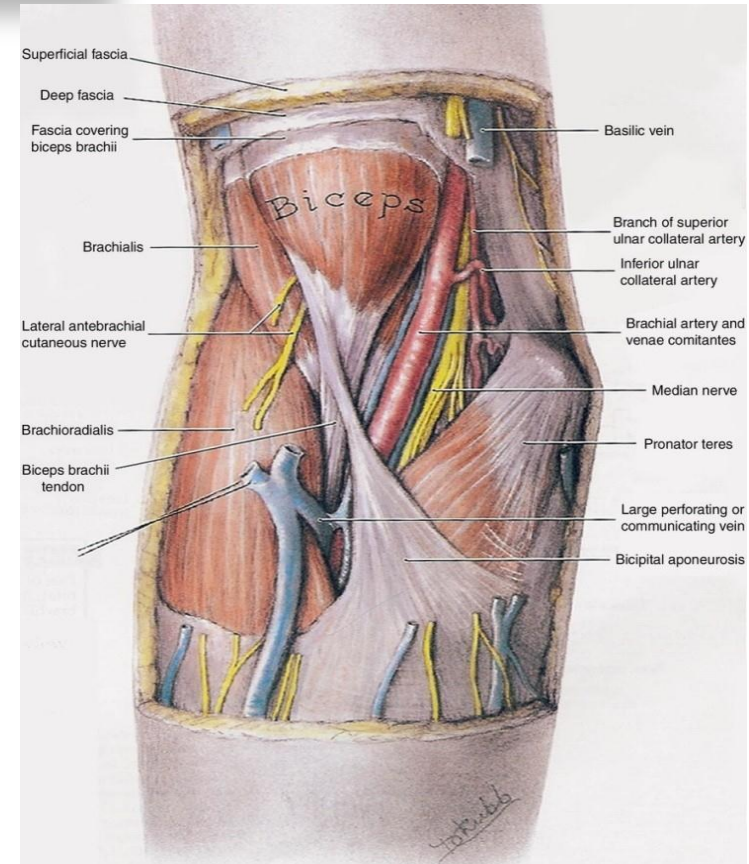
L06



Cubital fossa

LO6

- **Boundaries**
- **Lateral:** Medial border of Brachioradialis
- **Medial:** Lateral border of pronator teres
- **Base:** Imaginary line connecting medial and lateral epicondyles of humerus
- **Apex:** Site of overlap of pronator teres by brachioradialis



Contents

L06

- ❑ Median nerve
- ❑ Brachial artery dividing into radial and ulnar arteries
- ❑ Tendon of biceps brachii
- ❑ Radial nerve and its two terminal branches

