

ANATOMY OF THE ARM

Compartments of the arm:

It is divided into 2 compartments:

- 1- Anterior
- 2- posterior

- How divide the arm into Anterior and posterior?

by:

- ♥ The deep fascia of the arm.
- ♥ The humerus.
- ♥ The lateral and medial intermuscular septa.

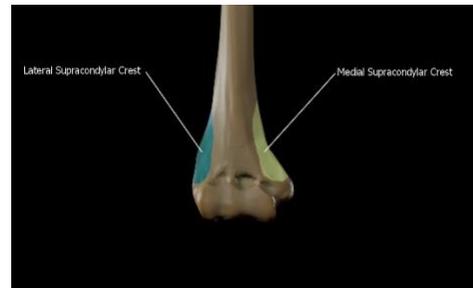
➤ The lateral and medial intermuscular septa:

1- Medial intermuscular septum:-

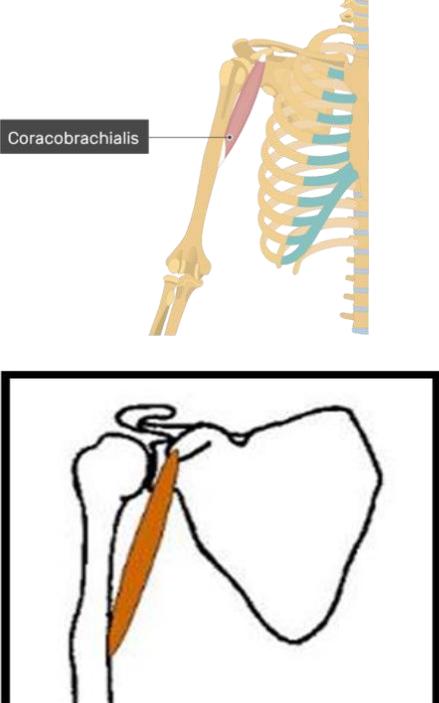
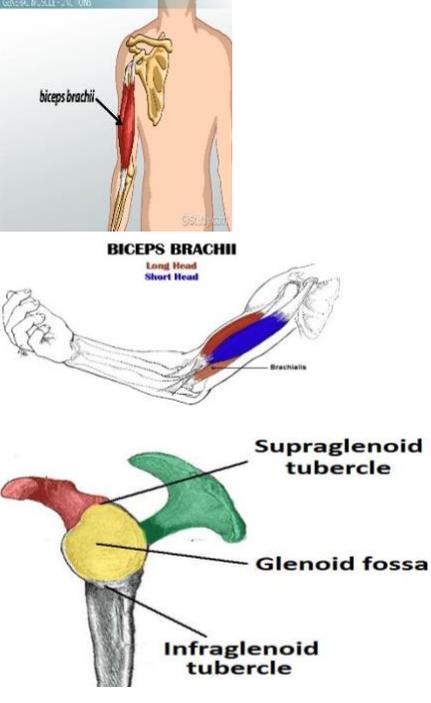
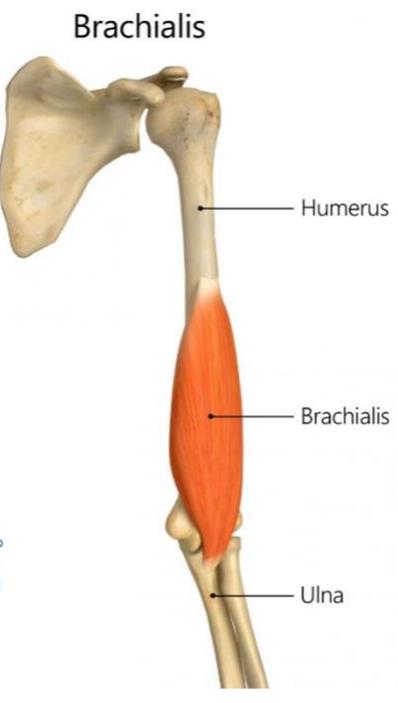
- ✓ It is a fascial sheet that **connects** the medial supracondylar ridge of the humerus with the deep fascia of the arm.
- ✓ It is **pierced** by **ulnar nerve** at the middle of the arm.

2- Lateral intermuscular septum:-

- ✓ It is a fascial sheet that **connects** the lateral supracondylar ridge of the humerus with the deep fascia of the arm.
- ✓ It is **pierced** by **radial nerve** at the junction between middle and lower thirds of the arm



From where	ANTERIOR COMPARTMENT OF THE ARM	POSTERIOR COMPARTMENT OF THE ARM
Cotent \ compartment	<p>1. Flexor muscles:-</p> <ul style="list-style-type: none"> ♥ 3 muscles [BBC] 1- coracobrachialis 2- brachialis 3- biceps brachii. <p>2. Brachial artery and its 2 venae comitantes.</p> <p>3. Basilic vein</p> <ul style="list-style-type: none"> ♥ Located: (at the upper half of the arm). <p>4. Median nerve.</p> <p>5. Ulnar nerve</p> <ul style="list-style-type: none"> ♥ Located: (in the upper half of the arm). ♥ In the arm (anterior) in the forearm (posterior) <p>6. Musculocutaneous nerve.</p>	<p>1. Triceps muscle. (extensor muscle)</p> <p>2. Radial nerve.</p> <p>3. Profunda brachii vessels.</p> <p>4. Superior ulnar collateral vessels.</p> <p>5. Posterior branch of inferior ulnar collateral</p>
		<p>Fig. 12.6</p> <p>Anterior upper limb muscles are flexors.</p> <p>Posterior upper limb muscles are extensors.</p>

From where	ANTERIOR COMPARTMENT OF THE ARM		
Muscles:			
	1-Coracobrachialis muscle	2- Biceps brachii muscle	3- Brachialis muscle:
• Origin	Tip of coracoid process (with short head of biceps brachii).	♣ Short head: (medial) from the tip of coracoid process. ♣ Long head: (lateral) from the supraglenoid tubercle of the scapula (intracapsular, extrasynovial).	- From the lower half of the front of the shaft of humerus - the front of the 2 intermuscular septa.
• Insertion	Middle of medial aspect of the humerus.	♣ Posterior part of the radial tuberosity. ♣ Bicipital aponeurosis into the deep fascia of the cubital fossa.	Coronoid process of ulna.
• Nerve supply	Musculocutaneous nerve.		♥ Musculocutaneous nerve ♥ radial nerve for its lateral part.
• Actions	♥ It helps in flexion ♥ adduction of the arm.	♣ Flexor of the elbow. ♣ Powerful supinator of the flexed forearm. ♣ Long head helps in stabilization of shoulder joint.	The muscle is the main flexor of elbow joint
• Photo			<p style="text-align: center;">Brachialis</p> 

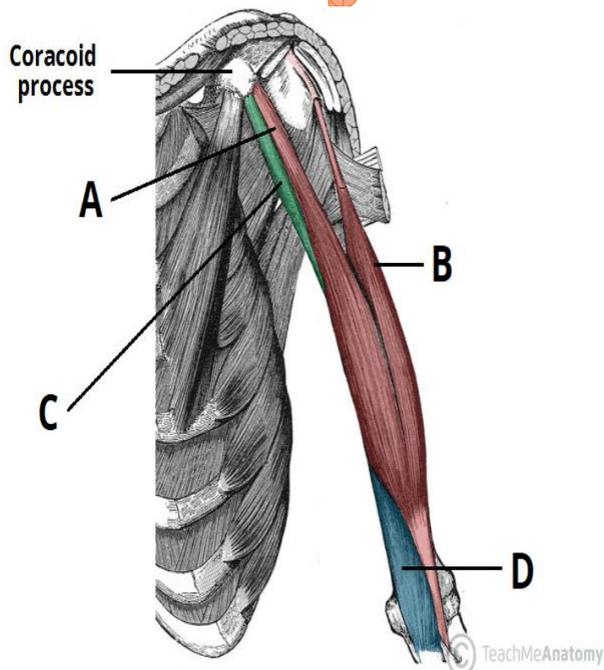
➤ Changes that occur at the level of insertion of coracobrachialis:

- 1- The **ulnar nerve**; pierces the medial intermuscular septum to reach the posterior compartment.
- 2- The **radial nerve & profunda brachii artery**; descend on the back of humerus through the spiral groove.
- 3- The **median nerve**, crosses in front of brachial artery from lateral to medial.
- 4- The **basilic vein**; pierces the deep fascia to ascend medial to brachial artery.
- 5- The **medial cutaneous nerve** of the arm and forearm; pierces the deep fascia to pass through the superficial fascia.
- 6- The **nutrient artery** of the humerus enters into the bone.

**** Note to Biceps brachii muscle**

• N.B.:

The bicipital aponeurosis separates the brachial artery from median cubital vein.



A- Short head of Biceps brachii muscle

B- long head of Biceps brachii muscle

C- Coracobrachialis muscle

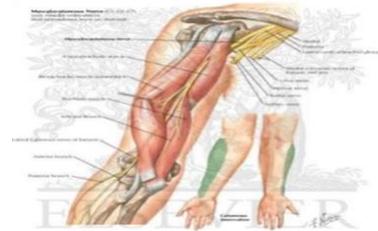
D- Brachialis muscle

▼ **Musculocutaneous nerve (C5, 6, 7)**

• **Origin:** It is a branch of the lateral cord of brachial plexus

• **Course & relations:**

- The nerve **descends** lateral to 3rd part of axillary artery. then **pierces** the coracobrachialis.
- It **pass** between biceps and brachialis
- Then **pierce** the deep fascia to be superficial



• **Termination:** It **terminates** by continuing as the lateral cutaneous nerve of the forearm

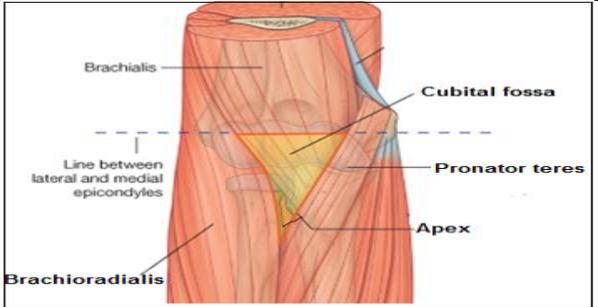
• **Branches:**

• **Muscular branches to:**

1. 2 heads of biceps brachii.
2. Coracobrachialis.
3. The greater part of brachialis.

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From where	POSTERIOR COMPARTMENT OF THE ARM	
Triceps muscle		
<p>• Origin</p>	<ul style="list-style-type: none"> ♣ Long head; from the infraglenoid tubercle. ♣ Lateral head; from back of humerus above the spiral groove. ♣ Medial head; from back of humerus below the spiral groove. 	
<p>• Insertion</p>	<p>Olecranon process of ulna.</p>	
<p>• Nerve supply</p>	<p>Radial nerve.</p>	
<p>• Actions</p>	<ul style="list-style-type: none"> ♣ Main extensor of the elbow. ♣ Long head shares in stability of shoulder. ♣ The long head helps in adduction of abducted arm. 	
<p>• Photo</p>		

From where	CUBITAL FOSSA	
Def	a triangular depression in the front of the elbow. 	
• Boundaries	♣ Medial boundary ; pronator teres muscle. ♣ Lateral boundary ; brachioradialis muscle.	
• Base	<ul style="list-style-type: none"> ♥ Directed upwards (superior) ♥ Formed by an imaginary line connecting the 2 humeral epicondyles. 	
• Apex	<ul style="list-style-type: none"> ♥ Directed downwards (inferior) ♥ Formed by the point of overlap of brachioradialis over pronator teres. 	
• Roof	<p>is formed by:</p> <ul style="list-style-type: none"> ♣ Skin. ♣ Superficial fascia Containing: <ul style="list-style-type: none"> 1- median cubital vein 2- parts of basilic and cephalic veins 3- medial and lateral cutaneous nerves of forearm. ♣ Deep fascia. ♣ Bicipital aponeurosis. 	
• Floor	<ul style="list-style-type: none"> • Brachialis muscle (medially) • supinator muscle (laterally) 	
• Contents	<p>From lateral to medial</p> <ul style="list-style-type: none"> ♣ Biceps tendon. ♣ Median nerve. ♣ Brachial artery. ♣ Radial nerve 	

