| Muscle           | Origin   | Insertion   | Innervation                                | Action  | Image |
|------------------|--|---|--|---|-------|
|                  | An   | terior compartment  | of the arm (BBC Gro                        | up)   |       |
| Biceps brachii   | It has two heads;<br>long and short<br>• Origin of the<br>long head:<br>Supraglenoid<br>tubercle of<br>scapula<br>• Origin of the<br>short head:<br>Coracoid process<br>of scapula | Radial tuberosity<br>(round tendon),<br>the main<br>insertion and<br>bicipital<br>aponeurosis into<br>deep fascia of<br>forearm | • Blood supply:<br>Brachial artery         | Supinator of<br>Forearm (at the<br>superior and<br>inferior<br>radioulnar joints)<br>and strong flexor<br>of elbow joint;<br>weak flexor of<br>shoulder joint |       |
| Coracobrachialis | Coracoid process<br>of scapula   | Medial aspect of shaft of humerus   | • Nerve supp:<br>Musculocutaneous<br>nerve | Flexes arm and<br>also weak<br>adductor   |       |
| Brachialis       | Front of lower<br>half of humerus  | Coronoid process<br>of ulna   |  | Flexor of elbow<br>joint  |       |

• Structures passing through the anterior compartment:

1. Musculocutaneous nerve

- 2. Median nerve
- 3. ulnar nerve
- 4. Brachial artery

5. basilic vein

6. The radial nerve is present in the lower part of the compartment.

• You may think that the short head is longer, however, you need to understand that part of the tendon of the long head is hidden by the capsule of the shoulder joint which make you think the that the tendon of the short head is loner which is not true.

• Notice that the coracoid process gives attachment to 3 muscles: pectoralis minor, biceps brachii (short head) and coracobrachialis.

**Musculocutaneous nerve:** 

• Root: C 5, 6, 7

- It is the nerve of the anterior compartment of the arm
- Course:-
- 1) It passes through coracobrachialis
- 2) It emerges to pass between biceps and brachialis
- 3) In the cubital fossa it lies at the lateral margin of the biceps tendon where it continues as the lateral cutaneous nerve of the forearm

| Posterior compartment of the arm |                |   |                              |  |  |  |
|----------------------------------|----------------|---|------------------------------|--|--|--|
| long head<br>Triceps bra         | от             | Infraglenoid<br>tubercle of<br>scapula                      |                              | <ul> <li>Blood supply:<br/>1.Profunda<br/>brachii</li> </ul> | • Extensor of  |  |
| lateral head<br>Triceps bra      | l <b>of</b> po | Upper half of<br>osterior surface<br>of shaft of<br>humerus | Olecranon<br>process of ulna | 2. Ulnar<br>collateral arteries                              | elbow joint<br>arteries<br>• the long head<br>of the triceps<br>acts on the<br>shoulder joint as<br>an adductor of<br>the arm. |  |
| medial head<br>Triceps bra       | l of po        | Lower half of<br>osterior surface<br>of shaft of<br>humerus |                              | • Nerve supply:<br>Radial nerve                              |  |  |

• Structures passing through the posterior compartment:

1. Radial nerve

2. ulnar nerve

• Do net get confused about brachialis innervation, it is mainly innervated by the musculocutaneous with a little contribution from the radial nerve

| Radial nerve                                 |   |                                      |  |  |
|--|---|--------------------------------------|--|--|
| In the axilla                                | <ul> <li>Motor (muscular branches): to Long and medial heads of the triceps</li> <li>Sensory (cutaneous): Posterior cutaneous nerve of the arm</li> </ul>   |                                      |  |  |
| In the spiral<br>groove (radial)             | <ul> <li>It gives muscular branches to the Lateral and medial heads of the triceps and to the anconeus.</li> <li>Sensory nerves:         <ul> <li>The lower lateral cutaneous nerve of the arm</li> <li>The posterior cutaneous nerve of the forearm</li> </ul> </li> </ul> |                                      |  |  |
| In the anterior<br>compartment of<br>the arm | <ul> <li>The brachialis muscle</li> <li>the brachioradialis muscle</li> <li>the extensor carpi radialis longus muscle</li> <li>Articular branches to the elbow joint</li> </ul>   | (We will take more details later on) |  |  |

|   | Brachial Artery  |  |  |  |  |
|---|--|--|--|--|--|
| Course  | <ul> <li>Begins: at the lower border of the teres major muscle as the continuation of the axillary artery</li> <li>Terminates: opposite the neck of the radius by dividing into: 1-The radial artery 2-The ulnar artery</li> </ul> |  |  |  |  |
| Branches:-                                    |  |  |  |  |  |
| 1. The nutrient<br>artery                     | to the humerus   |  |  |  |  |
| 2. The profunda<br>artery                     | arises near the beginning of the brachial artery and follows the radial nerve into the spiral groove of the humerus  |  |  |  |  |
| 3. The superior<br>ulnar collateral<br>artery | arises near the middle of the upper arm and follows the ulnar nerve  |  |  |  |  |
| 4. The inferior<br>ulnar collateral<br>artery | arises near the termination of the artery  |  |  |  |  |
| ·   |  |  |  |  |  |





Axillary pulse: axillary artery in the axilla lateral to the apex of the dome of skin covering the floor of the axilla





## Brachial pulse in the cubital fossa: brachial artery **medial to the tendon of the biceps brachi**

**muscle**. This is the position where a stethoscope is placed to hear the pulse of the vessel when taking a blood pressure reading

Done by:

## Waseem Aldemeri