

Vascular Anatomy of the upper limb

Objectives

- **Identify** the origin of the vascular supply for the upper limb.
- **Describe** the main arteries and their branches of the arm, forearm & hand.
- **Describe** the vascular arches for the hand.
- **Describe** the superficial and deep veins of the upper limb.

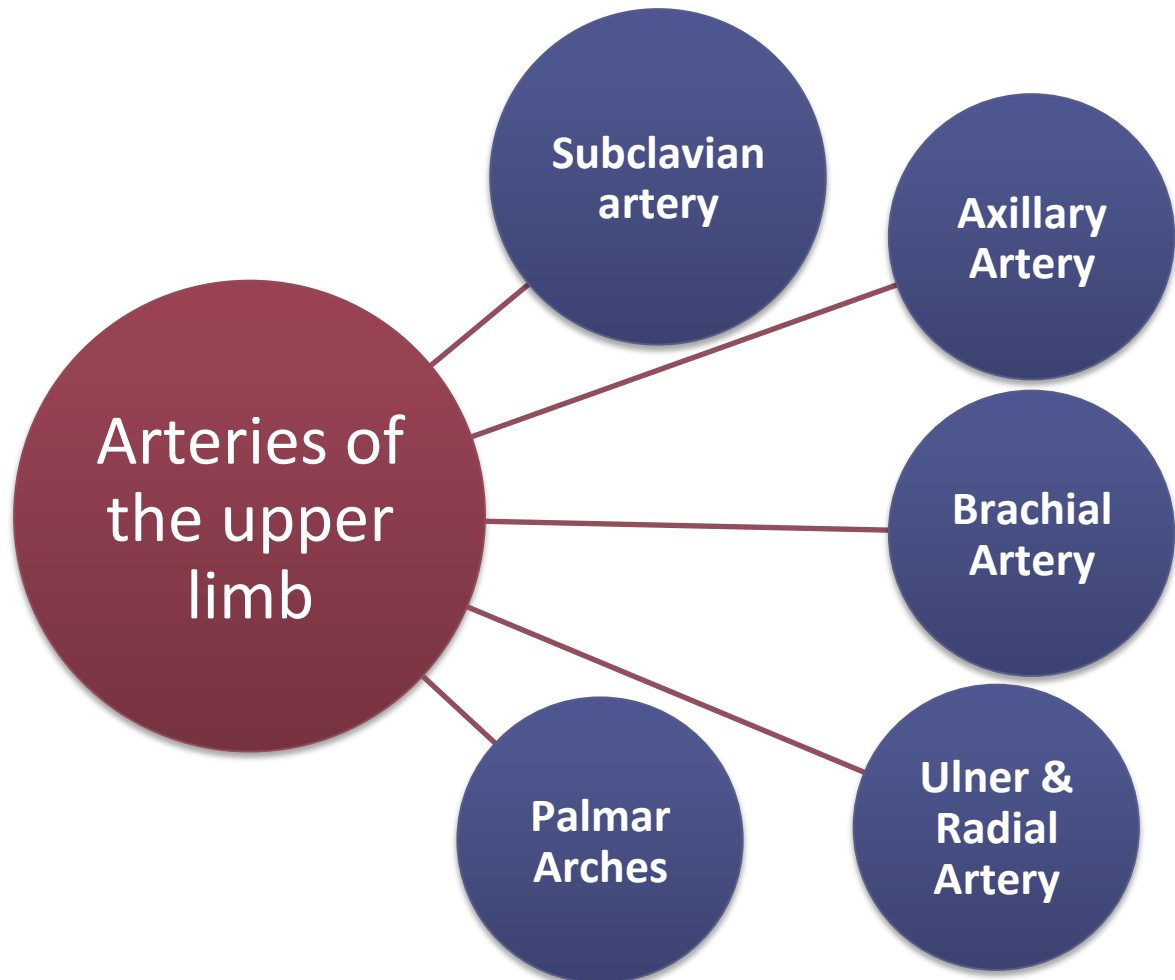
Color Index

- Red : Important.
- Violet: Explanation.
- Gray: Additional Notes.

Other colors are for
Coordination

Say " bsm Allah " then start

Mind Map

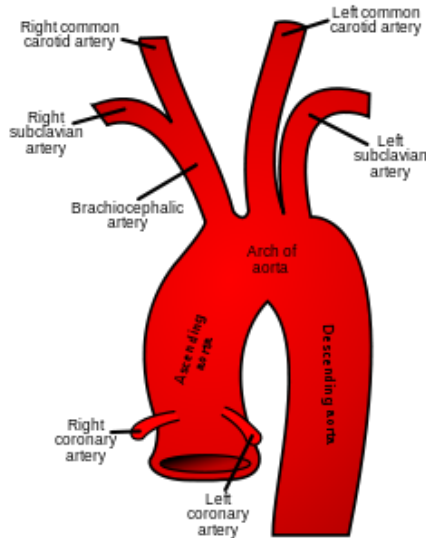


For more clarification about this lecture:

[Helping file for the upper limb arteries and veins, which is uploaded in the download center](#)

• Subclavian artery

The **right** artery originates from **the brachiocephalic artery**.

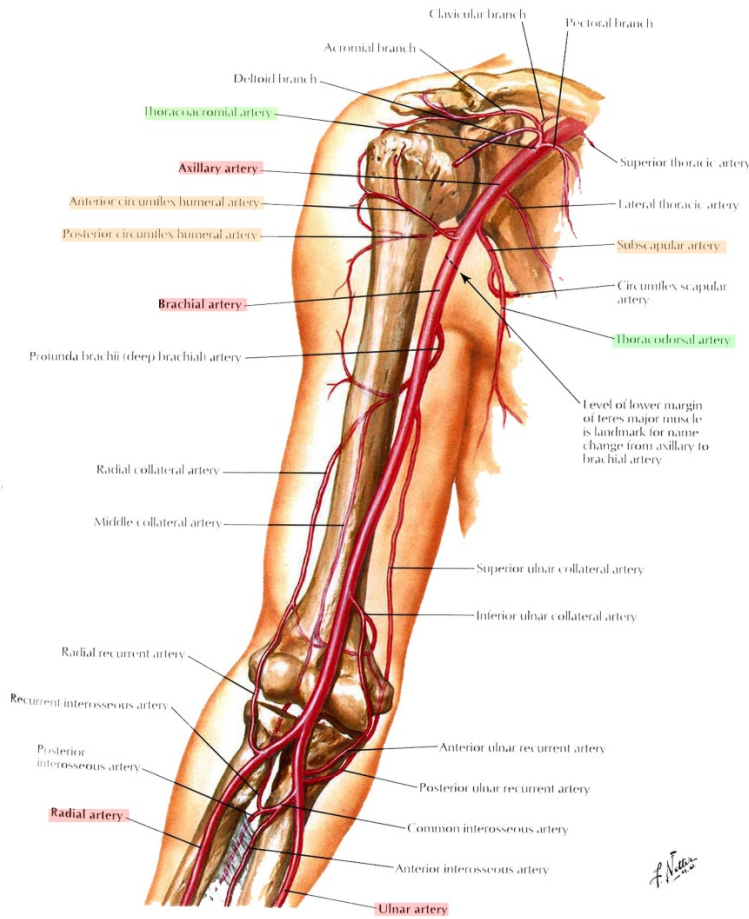


The **left** artery originates from the arch of the aorta

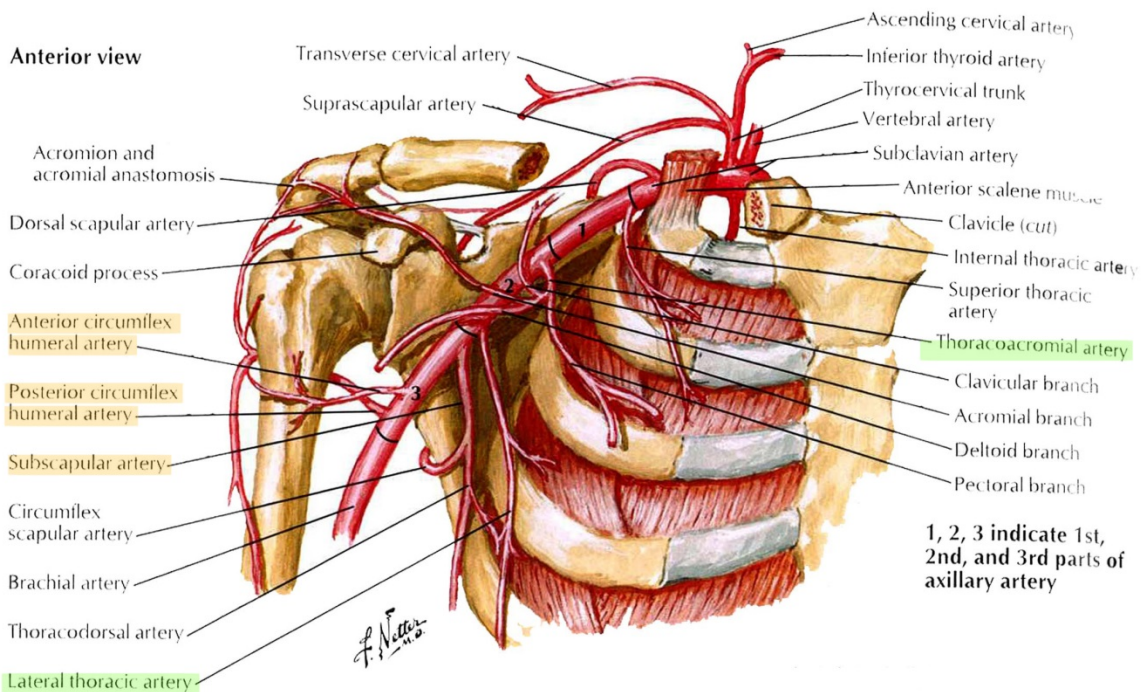
- Continues as Axillary artery at the lateral border of the 1st rib.

• The Axillary Artery

- **Origin:** Begins at the lateral border of the 1st rib as continuation of the subclavian artery.
- Continues as brachial artery at lower border of teres major muscle.
- **Relation:** Is closely related to the cords of brachial plexus and their branches
- Is enclosed within the Axillary sheath.
- Is crossed anteriorly by the pectoralis minor muscle, and is divided into three parts; 1st, 2nd & 3rd.



Anterior view



The part of the Axillary Artery	The 1st part	• The 2nd part	• The 3rd part
Site	Extends from the lateral border of 1 st rib to upper border of the pectoralis minor muscle.	Lies behind the pectoralis minor muscle	Extends from the lower border of pectoralis minor muscle to the lower border teres major muscle.
Related to	<p>Anteriorly: to the pectoralis major muscle</p> <p>Laterally: to the cords of the brachial plexus.</p>	<p>medially, laterally, and posteriorly: to the corresponding cord of the brachial plexus</p>	<p>medially, laterally, and posteriorly: to the branches of the cords of the brachial plexus</p>
Branches	<p>ONE branch:</p> <p>Highest thoracic artery</p>	<p>TWO branches:</p> <p>1- <u>Thoracoacromial.</u></p> <p>2- <u>Lateral thoracic.</u></p>	<p>THREE Branches:</p> <p>1- Subscapular</p> <p>2- Anterior circumflex humeral</p> <p>3- Posterior circumflex humeral.</p>

• The Brachial Artery

Site:

Is a continuation of the axillary artery at the lower border of teres major muscle.

Function:

- 1- Provides main arterial supply for the arm.
- 2- Terminates opposite neck of radius by dividing into radial & ulnar arteries.

Relations:

Anteriorly	Posteriorly	Medially	Laterally
1- crossed from above downward by medial cutaneous nerve of the forearm. 2- median nerve 3- bicipital aponeurosis	1- triceps. 2- coraco-brachialis. 3- brachialis.	1- basilic vein 2- ulnar and median nerves.	coracobrachialis and biceps muscles.

Multiple Choice Questions

1. The brachial artery divides into its terminal branches:

- a. At the level of the neck of the radius.
- b. Midway between the medial and lateral epicondyles of the humerus
- c. At the lower border of the pronator teres muscle.
- d. Behind the flexor digitorum superficialis muscle.
- e. Behind the medial epicondyle of the humerus.

Q2: Which one of the following that the branch accompanied with Axillary nerve?

- a. Lateral thoracic.
- b. Highest thoracic artery
- c. Anterior circumflex humeral
- d. Posterior circumflex humeral.

Q2: The bicipital aponeurosis is to Brachial artery?

- a. Anterior.
- b. Posterior
- c. Medial
- d. Lateral

Q Ans. :

1- A 2- D 3-
B