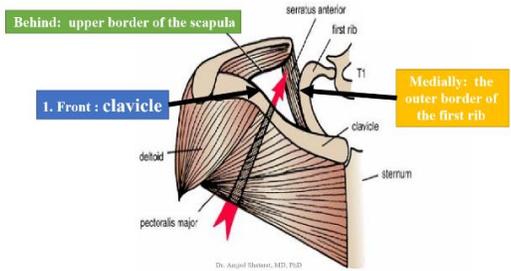


The Axilla

- ✓ It is a pyramid shaped space between the upper part of the arm and the side of the chest
- ✓ It forms an important passage for nerves, blood, and lymph vessels as they travel from the root of the neck to the upper limb
- ❖ **Apex (cervico-axillary canal):** The upper end of the axilla

Boundaries:

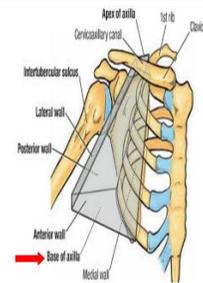
Front	clavicle
Behind	upper border of the scapula
Medially	the outer border of the first rib



❖ Base of the Axilla

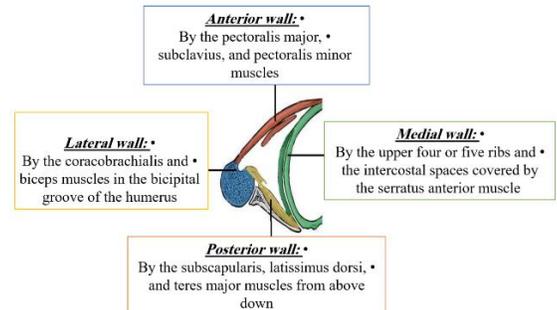
Boundaries:

Front	pectoralis major muscle (anterior axillary fold)
Behind	by the tendon of latissimus dorsi and the teres major muscle (the posterior axillary fold)
Medially	chest wall



❖ Walls of the Axilla

Anterior wall	By the pectoralis major, subclavius, and pectoralis minor muscles
Lateral wall	By the coracobrachialis and biceps muscles in the bicipital groove of the humerus
Medial wall	By the upper four or five ribs and the intercostal spaces covered by the serratus anterior muscle
Posterior wall	By the subscapularis, latissimus dorsi, and teres major muscles from above down



❖ Contents of the Axilla

- 1-Axillary artery and its branches
- 2-Axillary vein
- 3-Lymph vessels and lymph nodes
- 4- Brachial plexus

Axillary artery

❖ Course

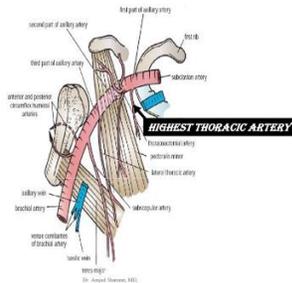
Begins: at the lateral border of the 1st rib as a continuation of the subclavian artery	Ends: at the lower border of the teres major muscle, where it continues as the brachial artery
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Throughout its course, the artery is closely related to the cords of the brachial plexus and their branches and is enclosed with them in a connective tissue sheath called THE AXILLARY SHEATH

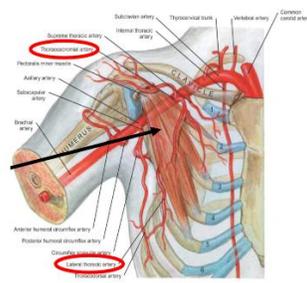
❖ The Pectoralis minor muscle crosses in front of the axillary artery and divides it into three parts:-

Name of the part	Relations	branches
The first part of the axillary artery	Extends from the lateral border of the 1st rib to the upper border of the pectoralis minor Relations: ✓ Laterally: The three cords of the brachial plexus ✓ Medially: The axillary vein	The highest thoracic artery which is a small artery that runs along the upper border of the pectoralis minor
The second part of the axillary artery	This lies behind the pectoralis minor muscle Relations: ✓ Anteriorly: The pectoralis minor the pectoralis major and the skin ✓ Posteriorly: The posterior cord of the brachial plexus The subscapularis muscle ✓ Laterally: The lateral cord of the brachial plexus ✓ Medially: The medial cord of the brach	1) The thoracoacromial artery 2) The lateral thoracic artery
The third part of the axillary artery	This extends from the lower border of the pectoralis minor to the lower border of the teres major.	1) The subscapular artery: runs along the lower border of the subscapularis muscle 2) posterior circumflex humeral artery 3) anterior circumflex humeral artery (both circumflex arteries wind around the front and the back of the surgical neck of the humerus, respectively)

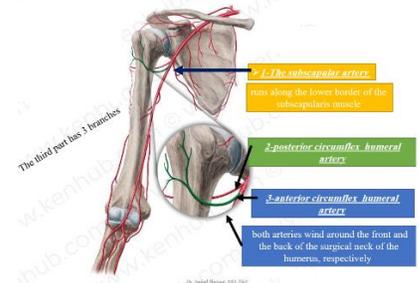
Picture for the first part



Picture for the second part

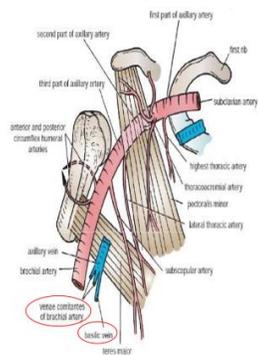


Picture for the third part



The axillary vein

Formation	course	tributaries
Formed at the lower border of the <u>teres major</u> muscle by the union of the <u>venae comitantes</u> and the <u>basilic vein</u>	Runs upward on the medial side of the axillary artery and ends at the lateral border of the 1st rib by becoming the subclavian vein.	The vein receives tributaries, which correspond to the branches of the axillary artery, and the cephalic vein



➤ The vein receives tributaries, which correspond to the branches of the axillary artery, and the cephalic vein



The Brachial plexus

formed in the posterior triangle of the neck by the union of the anterior rami of the 5th, 6th, 7th, and 8th cervical and the 1st thoracic spinal nerves

❖ Branches of the roots

1. Dorsal scapular nerve (C5)
2. Long thoracic nerve (C5, 6, 7)

❖ Branches of the trunks (upper trunk only)

1. Suprascapular nerve (C5,6)
2. Nerve to subclavius (C5,6)

(The nerve to the subclavius (C5 and 6) supplies the subclavius muscle. It is important clinically because it may give a contribution (C5) to the phrenic nerve; this branch, when present, is referred to as the accessory phrenic nerve.)

❖ Branches of the cords

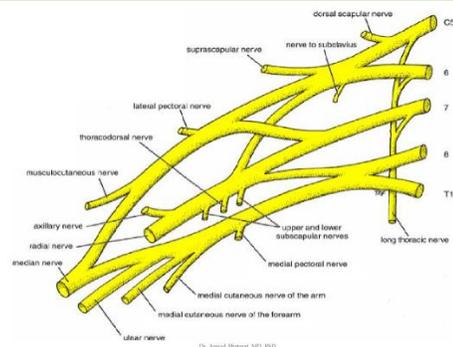
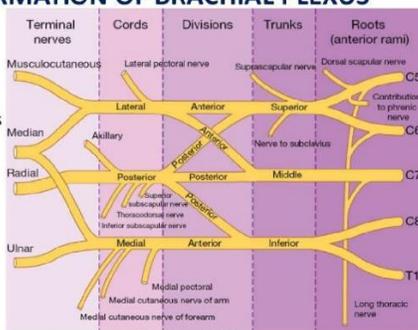
Lateral Cord	Posterior Cord	Medial Cord
<ol style="list-style-type: none"> 1. Lateral pectoral nerve 2. Musculocutaneous nerve (C5,C6,C7) 3. Lateral root of median nerve 	<ol style="list-style-type: none"> 1. Upper subscapular nerve 2. Thoracodorsal nerve 3. Lower subscapular nerve 4. Axillary nerve (C5,C6) 5. Radial nerve (C5,C6,C7,C8,T1) 	<ol style="list-style-type: none"> 1. Medial pectoral nerve 2. Medial cutaneous nerve of arm 3. Medial cutaneous nerve of forearm 4. Ulnar nerve (C7,C8,T1) 5. Medial root of median nerve

Five major nerves arise from the brachial plexus:

- The **musculocutaneous, median** and **ulnar** nerves contain **anterior** division fibers and innervate muscles in the anterior arm, anterior forearm, and palmar compartments that function mainly as flexors
- The **axillary** and **radial** nerves contain **posterior** division fibers and innervate muscles in the posterior arm and posterior forearm compartments that function mainly as extensors

FORMATION OF BRACHIAL PLEXUS

- Roots
- Trunks
- Divisions
- Cords
- Nerves



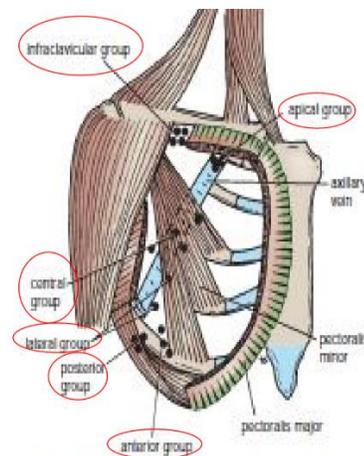
The axillary lymph nodes

(20 to 30 in number) drain lymph vessels from:

- ✓ the lateral quadrants of the breast
- ✓ The superficial lymph vessels
- ✓ the thoracoabdominal walls above the level of the umbilicus
- ✓ the vessels from the upper limb.

The lymph nodes are arranged in six groups:

- 1) Anterior (pectoral) group
- 2) Posterior (subscapular) group
- 3) Lateral group
- 4) Central group
- 5) Infraclavicular (deltopectoral) group
- 6) Apical group



Done by: Waseem Aldemeri

Reference: Dr.Amjad Shatarat slides

(Please Contact me via waseemaldemeri@gmail.com if there is any mistakes)