



# ANATOMY TEAM

Lecture 7 - pectoral region & Axilla

تنويه: هذا العمل لا يعتبر مصدر أساسي للمذاكرة وإنما هو للمراجعة فقط ، ولا يوجد أي اختلاف بين سلايد  
الاولاد والبنات

## Identify and describe the muscles of the pectoral region

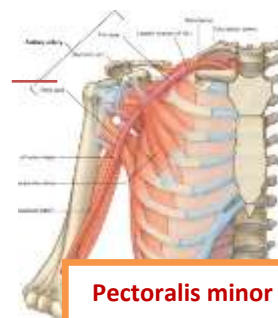
	Origin	Insertion	Nerve supply	Action
<b>Pectoralis major</b>	<u>Clavicular head</u> <u>Sternocostal head</u>	Lateral lip of bicipital groove	Medial & lateral pectoral nerves	<u>Adduction and medial rotation</u> of the arm  #Clavicular head helps in <u>flexion of arm</u> (shoulder)
<b>Pectoralis minor</b>	From 3 <sup>rd</sup> , 4 <sup>th</sup> , & 5 <sup>th</sup> ribs close to their costal cartilages	Coracoid process	Medial pectoral nerve	Depression of the shoulder Draw the ribs upward and outwards during deep inspiration
<b>Subclavius</b>	From 1 <sup>st</sup> rib at its costal cartilage	Subclavian groove in the middle 1/3 of the inferior surface of clavicle	Nerve to subclavius from upper trunk of brachial plexus	Fixes the clavicle during movement of shoulder joint
<b>Serratus anterior</b>	Upper eight ribs	anterior aspect of the medial border and inferior angle of scapula	Long thoracic nerve Or bell nerve  From C5,6,7 root	Draws the scapula forward in boxing, (protrusion)  Rotates # scapula outwards in raising the arm above 90 degree



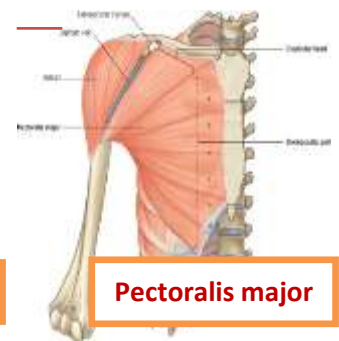
Serratus anterior



Subclavius



Pectoralis minor



Pectoralis major

## General Notes :

**Mastectomy = surgical removing of the breast**

**Axilla= arm pit**

-protrosion =protraction=forward

But retraction=backward =making winging of the scapula

**All Plexus from ventral remai**

We naming the cords ( latral,posterior,medial)according to **axillary artery**

Only trunk gives branching is: **upper trunk (superior)**

# Clavipectoral Fascia It is a thickened membrane of deep fascia between the subclavius and pectoralis minor It is pierced by (**Lateral pectoral nerve - Thoraco-acromial artery - Cephalic vein - Few lymph vessels** )

# AXILLA pyramid-shaped space between the upper part of the arm and the side of the chest through which major neurovascular Axilla has an apex, a base and four walls

### Boundaries of the Axilla

<b><u>Apex</u></b>	Is directed upwards & medially to the root of the neck It is called Cervicoaxillary canal It is bounded, by 3 <u>bones Clavicle anteriorly.Upper border of the scapula posteriorly. Outer border of the first rib medially</u>
<b><u>Base</u></b>	Formed by skin stretching between the anterior and posterior walls is bounded: <b>In front</b> by the anterior axillary fold (formed by the lower border of Pectoralis major) <b>Behind</b> by the posterior axillary fold (formed by tendons of latissimus dorsi and teres major). <b>Medially</b> by upper 4 to 5 ribs & the chest wall
<b><u>Anterior wall</u></b>	Is formed by - Pectoralis major - Pectoralis minor - Subclavius - Clavipectoral fascia
<b><u>Posterior wall</u></b>	Is formed by: Subscapularis. - Latissimus dorsi. - Teres major muscles
<b><u>The medial wall</u></b>	It is wide and formed by: Serratus anterior - Upper 4-5 ribs & Intercostal muscles
<b><u>The lateral wall</u></b>	It is narrow and formed by: Coracobrachialis - Biceps brachii - Bicipital groove of the humerus

## General Notes :

# Contents of The Axilla Cords and braches of the brachial plexus

Axillary artery and its branches.

Axillary vein and its tributaries.

Axillary lymph nodes.

Axillary fat.

Loose connective tissue

# The neurovascular bundle is enclosed in connective tissue sheath, called 'axillary sheath'

# Brachial Plexus is a network of nerves that present at the root of the neck to enter the upper limb.

# Brachial Plexus is present in the posterior triangle of the neck & axilla.

It is formed by the union of the anterior Rami of the

C 5<sup>th</sup>, 6<sup>th</sup>, 7<sup>th</sup> & 8<sup>th</sup> and the 1<sup>st</sup> thoracic spinal nerve

Roots of C5 & C6 unite to form---- Upper trunk

Root of C7 continuous as the----- Middle trunk

Roots of C8 & T1 unite to form---- Lower trunk

# The Plexus can be divided into 5 stages:

Roots: in the posterior Δ (in neck)

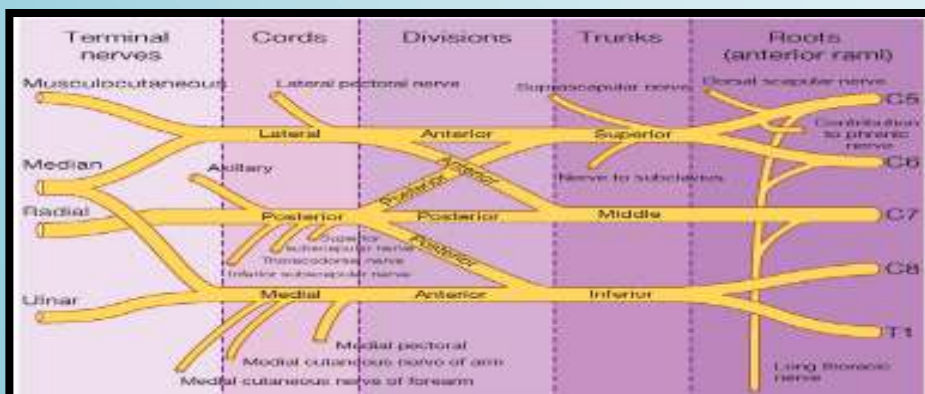
Trunks: in the posterior Δ (in neck)

Divisions: behind the clavicle (in cervico-axillary canal)

Cords: in the axilla

Branches: in the axilla

The first 2 stages lie in the posterior triangle, while the last 3 stages lie in the axilla



نوتات مهمه جداً ركز عليها الدكتور

في البيكتورال ريجون الفلكشن الطبيعي من ال humerus للكلافيكل

؛؛ لو عكسنا قربنا الاوريجن من الاتسيرشن تساعد في التسلق

النقطة هذي قال الدكتور اذا جت في الاختبار ماتزعلش ٨\_٨

ملاحظة ثانيه النيرف اللي يغذي Serratus anterior له اسم اخر وهو نيرف BELL وايضا لها وظيفه غير مذكوره وهي انها تثبت السكابولا

- ال C5 root تغذي الحجاب الحاجز

Lateral cord يطلع منه ثلاث فروع

Medial cord -Posterior cord يطلع منها خمس فروع

كل فرتبرا لها جهه اماميه من الاعصاب تسمى الموتور روت

وجهه خلفيه تسمى سينسوري

ويتحدون مع بعض مكونين مايعرف بفنترال رميس ودورسال رميس

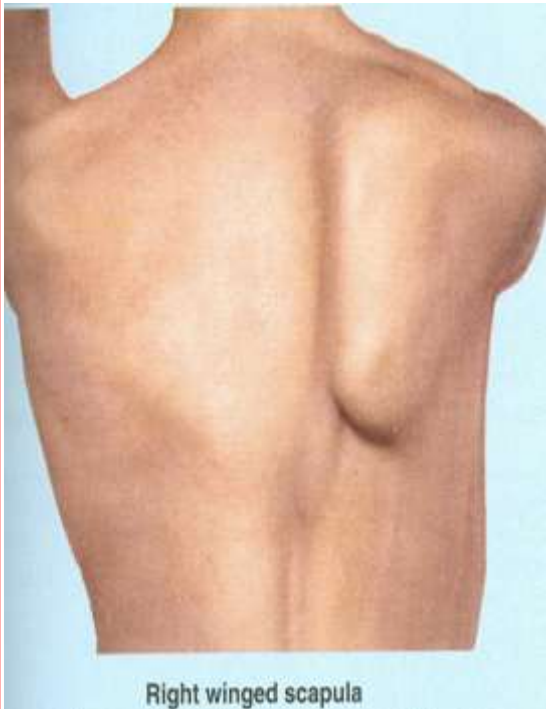
5.6.7.8.t1 كلها تعتبر فنترل لذلك قلنا انتيريور ريمي

في البيكتورال مينور لو زفير تكون فورورود وداون وورد

والشهيقي او النفس العميق اوت وورد واب وورد

في عمليات سرطان الثدي بعد مايشيلون العضله سريتس انتريور

لو ذف الجدار تطلع السكابولا تسمى winged scapula



Right winged scapula

# Quick Review:

-What does axilla has?

Axilla has an **apex**, a **base** and **four walls**.

-the last two stages of the plexues lies in?

**Axilla (it's the cord and the branches)**

-What is the muscles that forms the lateral wall of axilla ?

**Biceps brachii.**

-what does axilla contain?

**Axillary vessels.**

**Cords an branches of the brachial plexus.**

**Axillary lymph nodes.**

- What is the action of the subclavius muscle?

It fix the clavical during the shoulder joint movement.

- What Clavipectoral Fascia is percied by?

Lateral pectoral nerve.

Thoraco- acromial artery

Cephalic vein.

Few lymph vessels.

**What would happened if the long thoracic nerve is injured?**

**The scapula will be retracted rather than being protruded for doing the boxing method**

يعني معد يمديك تعطي أحد بوكس وتفقع وجهه

# Muscles of the pectoral region are connecting the upper limb with anterior and lateral thoracic wall:

Pectoralis major. - Pectoralis minor. – Subclavius- Serratus anterior.

# The axilla is a pyramidal space situated between the upper part of arm and the side of the chest, it has 4 walls:

(anterior, posterior, medial and lateral)

# The axilla is an important space as it transmits the neurovascular bundle from?

the neck and thorax to the upper limb.

# Apex: Is directed upwards & medially to the root of the neck. It is called ?

Cervicoaxillary canal

**What is the meaning of Mastectomy?**

**surgical removing of the breast**

## Quiz

1-which one of the following is correct :

A-The action of the Pectoralis Major is adduction

B-The action of the Pectoralis Major is abduction

C-The action of the Pectoralis Major is lateral rotation

D-The action of the Pectoralis Major is Depression of the shoulder.

**2-which one of the following is nerve for Pectoralis Major :**

**A-Medial & lateral pectoral nerves**

**B-Nerve to subclavius from upper trunk of brachial plexus**

**C-Long thoracic nerve**

**D-Bell nerve**

**3- The origin of Serratus anterior is :**

**A-1<sup>st</sup> rib at its costal cartilage**

**B-Upper eight ribs**

**C-From 3<sup>rd</sup> ,4<sup>th</sup> , & 5<sup>th</sup> ribs close to their costal cartilages**

**D-Sternocostal head**

**4- AXILLA is :**

**A-Circular shaped**

**B- Triangular shaped**

**C-pyramid-shaped**

**D-square shaped**

**5-one of the Boundaries of the apex's Axilla is :**

**A- Clavicle posteriorly**

**B- Outer border of the second rib**

**C- upper 4 to 5 ribs & the chest wall**

**D- Clavicle anteriorly**



**6- The neurovascular bundle is enclosed in connective tissue sheath, called:**

**A-Fat sheath**

**B- lymph nodes**

**C- axillary sheath**

**d- cervical sheath**

**7- The Plexus can be divided into 5 stages Roots in the:**

**A- Anterior**

**B-Posterior**

**C-inferior**

**D-Superior**

**8- The Plexus can be divided into 5 stages Trunks in the :**

**A- Anterior**

**B-Superior**

**C-inferior**

**D- Posterior**

**9- The Musculocutaneous nerve comes from :**

**A- Lateral cord**

**B- Medial cord**

**C- Posterior cord**

**D-Medial & latral cord**

**10-Radial nerve comes from :**

**A- Medial & latral cord**

**B- Lateral cord**

**C- Medial cord**

**D- Posterior cord**

**11- Which one of the following plays an important role in climbing:**

**A-Pectoralis Major**

**B-Pectoralis Minor**

**C-Subclavius**

**D-Serratus anterior**

**12- Clavipectoral Fascia in:**

**A-First rib**

**B-Second rib**

**C-Third rib**

**D-Fourth rib**

**13- In radical mastectomy, which ONE of the following nerve is in risk:**

**A-Long thoracic nerve. •**

**B-medial pectoral nerve. •**

**C- Thoracodorsal**

**D-Median nerve**

**14- Which one of the following muscles performs adduction of the arm ?**

**a. Pectoralis minor.**

**b. Pectoralis major.**

**c. Subclavius.**

**d. Serratus anterior.**

**15. Serratus anterior is innervated by :**

**Thoracodorsal nerve. .a**

**Long thoracic nerve. .b**

**Axillary nerve. .c**

**Radial nerve. .d**

**16. Which one of the following muscles contributes in rotation of the scapula above the head?**

- a. Pectoralis major.
- b. Pectoralis minor.
- c. Serratus anterior.
- d. Teres major.

**17. Which one of the following muscles forms the lateral wall of axilla ?**

- a. Pectoralis major.
- b. Pectoralis minor.
- c. Serratus anterior.
- d. Biceps brachii.

**18. Which stage of the brachial plexus lies in the axilla ?**

- a. Roots.
- b. Divisions.
- c. Trunks.
- d. Cords.

**19- Division of plexus in:**

**A-apex of axilla**

**B-base of axilla**

**C-Anterior wall of axilla**

**D-Neck**

<b>N.Q</b>	<b>ANSWER</b>
<b>1</b>	<b>A</b>
<b>2</b>	<b>A</b>
<b>3</b>	<b>B</b>
<b>4</b>	<b>C</b>
<b>5</b>	<b>D</b>
<b>6</b>	<b>C</b>
<b>7</b>	<b>B</b>
<b>8</b>	<b>D</b>
<b>9</b>	<b>A</b>
<b>10</b>	<b>D</b>
<b>11</b>	<b>A</b>
<b>12</b>	<b>B</b>
<b>13</b>	<b>A</b>
<b>14</b>	<b>B</b>
<b>15</b>	<b>B</b>
<b>16</b>	<b>C</b>
<b>17</b>	<b>D</b>
<b>18</b>	<b>D</b>
<b>19</b>	<b>A</b>