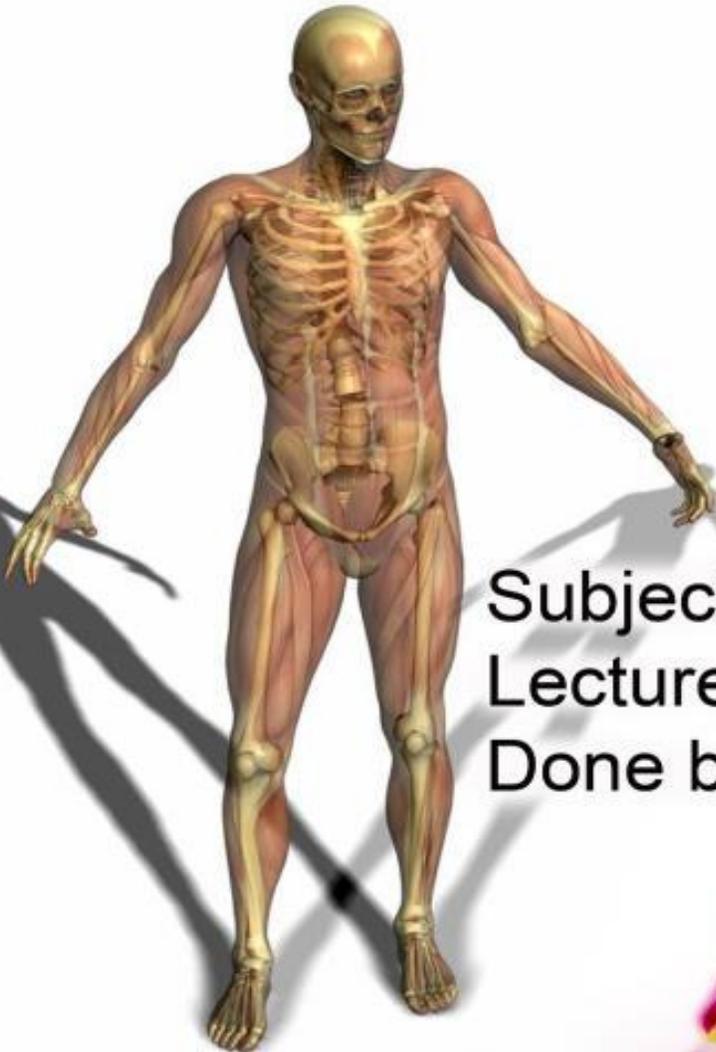




ANATOMY



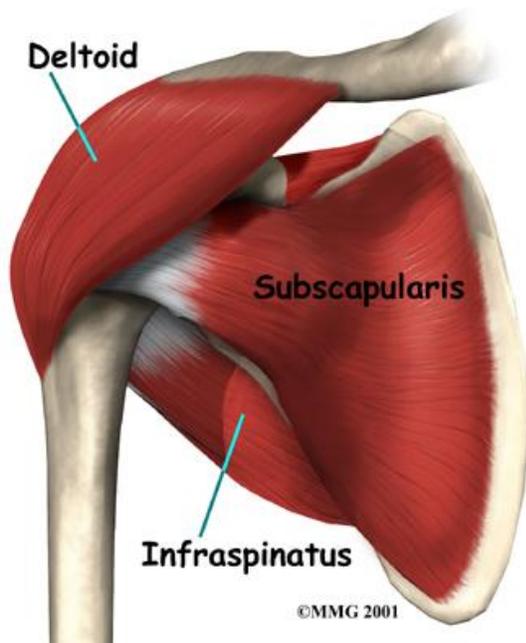
Subject : *Introduction to anatomy*

Lecturer : *Dr. Maher Hadidi*

Done by : *Fareed Halteh*

lecture # : 3

Date : 7/2/2013



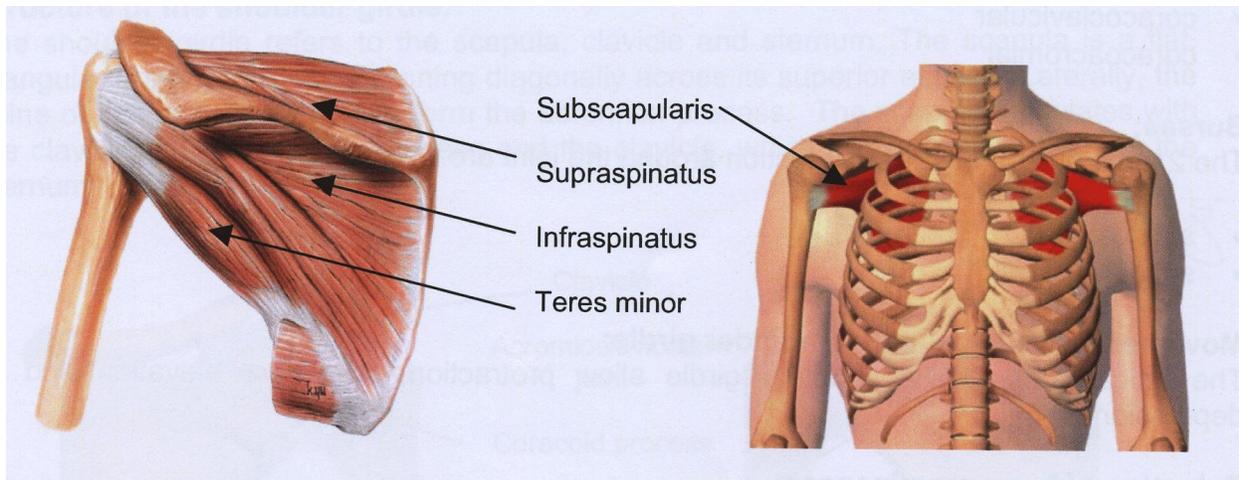
Subscapularis:

It is located on the anterior side of the scapula. It has a triangular shape. It is like Pectoralis major and Teres major (same action).

- Origin: subscapular fossa
- Insertion: lesser tubercle of humerus
- Action: medial rotation
- Nerve supply: upper and lower subscapular nerve (we have two nerves due to the size of the muscle). The lower subscapular nerve supplies teres major as well

Note: There are 2 muscles on the posterior (supra and infra spinatus), and 1 on the anterior (subscapularis)

Remember: the greater tubercle has 3 muscles attached to it (teres minor, infraspinatus, and supraspinatus). There is no more space, so the lesser tubercle is used for attachment.



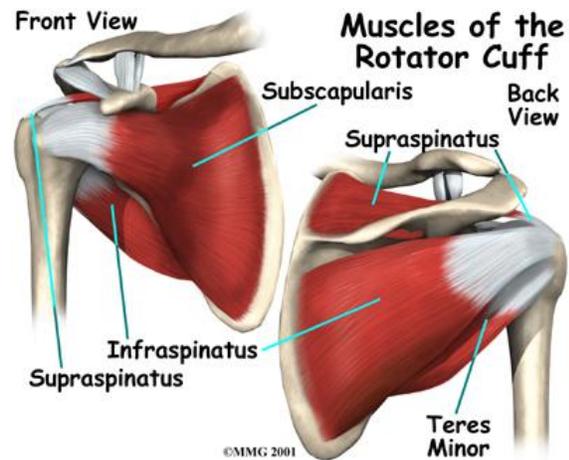
3 medial rotators: pectoralis major, teres major and subscapularis

Rotator cuff muscles:

They are 4 muscles that are inserted in the tubercles. They support the shoulder joint. **SITS. In addition, they tie the shoulder in place while it rotates. They have sheet like tendon that flatten upon reaching the tubercles (other muscles have cord like tendons). These muscles strengthen the shoulder joint from different directions. The joint is not supported by anything on its inferior, which makes it prone to injuries from below.**

SITS:

- Supraspinatus(superior) ,
- Infraspinatus(posterior)
- Teres minor(posterior),
- Subscapularis (anterior)



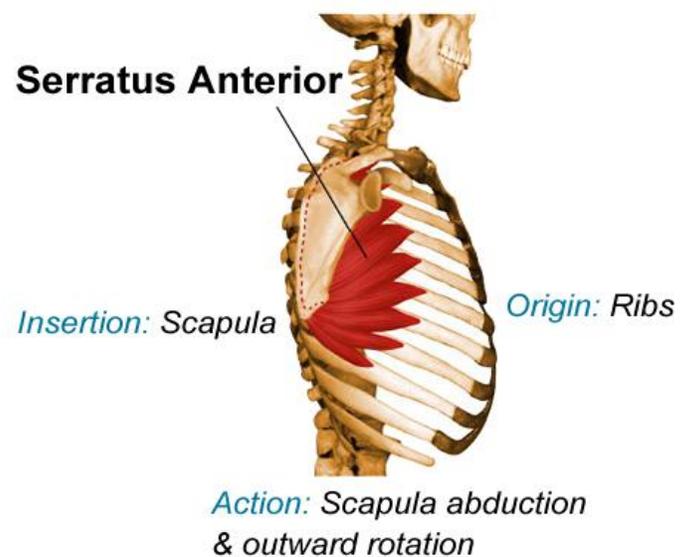
Serratus anterior:

Serratus is latin for saw-like. It was called serratus anterior because the fibers extend like saw teeth.

Origin: upper 8 ribs

Insertion: medial border of scapula

Action: Protraction. Protraction is pulling over the scapula over the thoracic wall. This movement holds the scapula in place while performing work (push, pull). The action of this muscle is posterior, anterior, and medial in its direction. It keeps scapula in place (prevents the winging of the scapula). Moreover, it assists in the elevation of the trapezius muscle 180 degrees above the shoulder.



Nerve supply: long thoracic nerve

Note: All the muscles in the body are named according to their:

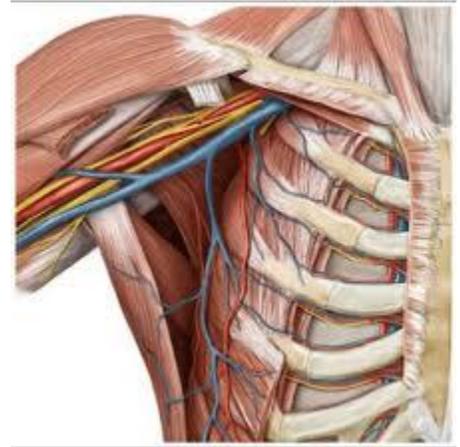
- 1) Shape
- 2) Size (if there are two muscles with the same name. E.X. Teres Major/Minor)
- 3) Location

Axilla (armpit):

It is the pyramidal space between the arm and the thorax. It has:

- 1) apex
- 2) base
- 3) 4 walls: lateral, medial, anterior, and posterior.

Note: God created it as a tunnel for structures traversing the upper limb through the head and neck (it is a passageway of nerves and blood vessels between the root of the neck and the upper limb.)



The apex:

bounded by three bones:

- a) Anterior: clavicle
- b) Posterior: scapula
- c) Medial: first rib

Base:

- a) It is formed by skin. The base is moveable (different formations appear during abduction and adduction)
- b) It is full with coarse hair
- c) It full with sweat glands, as well. (This is why we buy deodorant :P)

After hair removal alcohol swab is required to maintain the cleanness of the area. i.e. it helps preventing infections in that area.

"P.S. Stealing info from your patient is an art ;)"

Anterior wall:

Formed by: Subclavius, Pectoralis major, and Pectoralis minor

Infection of the breast may involve the underlying structures which is the anterior wall with its parts

P.S. Breast is mast in latin → breast removal = mastectomy (can be total or partial or pan (related to breast → involves the muscles. Sometimes, we have to remove one or more muscles to save the patient's life))

e.g. Gastric ulcer does not only affect the stomach; it also affects the pancreas, the spleen, and the colon.

Posterior wall:

Formed by: Teres major, Latissimus Dorsi, and Subscapularis. Puss may affect the posterior wall.

If you find a mass that is red in color, and the patient complains of fever →the diagnosis is usually an infection NOT cancer .

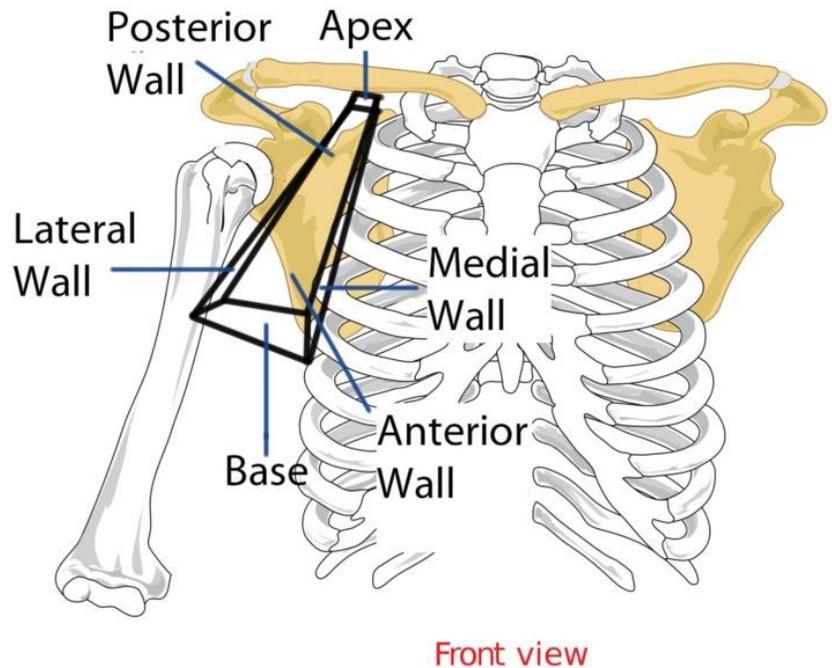
Medial wall:

Formed by: Serratus anterior, upper 4 ribs, and intercostals spaces

Lateral wall:

Formed by the Intertubercular groove and the long head of the biceps muscle. This wall is the narrowest of all walls.

P.S.: the biceps muscles passes through the intertubercular groove.

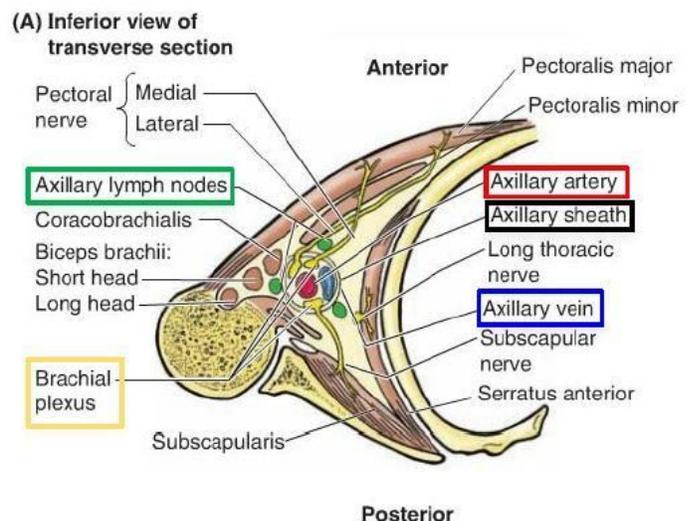


Contents of axilla:

- 1) Axillary artery: going to the upper limbs
- 2) Axillary vein: going to the upper limbs
- 3) Axillary sheath (nothing was mentioned about it)
- 4) Axillary lymph node: Although it is called Axillary lymph node, it contains a group of lymph nodes. Lymph nodes are the sites of disposal for the waste of the cells. Lymph nodes are found in the intercellular space. The waste is called lymph. Lymph is disposed in lymph vessels, which contain lymph nodes. Lymph nodes are filters for the waste. When you have an infection, lymph nodes swell. The enlargement of lymph nodes indicates sickness.

Example:

- a) People who stay seated for a long time have swollen legs. This swelling is due to the lack of lymph circulation. Movement prevents swelling.
- b) Tonsils: if your tonsils swell, it indicates the presence of an infection.
- 5) Brachial plexus of nerves (axillary nerves): Plexus is latin for network. Thus, a network of nerves is called a



plexus of nerves. There is a network in the axilla called the brachial plexus. Humerus is the name of the bone in latin; however, in Greek it is called Brachium. Therefore, we call the network of nerves that passes through the axilla to the humerus, the brachial plexus. These nerves feed your upper limb.