## **MUSCLES OF THE PECTORAL REGION**

|              | Pectoralis Major   | Pectoralis minor   | Subclavius  | Serratus Anterior<br>Muscle  |
|--------------|--|--|---|--|
| Origin       | by two heads: A)<br>Clavicular head: from<br>anterior surface of the<br>medial 1/2 of the<br>clavicle. B)<br>Sternocostal head: 1)<br>anterior surface of the<br>sternum. 2) Upper 6<br>costal cartilages. 3)<br>External abdominal<br>oblique aponeurosis   | from the 3rd, 4th and<br>5th ribs  | from the upper<br>surface of first rib and<br>first costal cartilage        | by fleshly digitations<br>from the upper eight<br>ribs The first digitation<br>takes origin from the 1st<br>and 2nd ribs   |
| Insertion    | Lateral lip of the<br>bicipital groove   | Superior surface of<br>the coracoid process  | into subclavian<br>groove on the lower<br>surface of the<br>clavicle.       | anterior surface of the<br>medial border of the<br>scapula. a) The first<br>digitation: anterior<br>surface of the superior<br>angle. b) The 2nd and<br>3rd digitations: anterior<br>surface of medial border.<br>c) The lower five<br>digitations: anterior<br>surface of inferior angle. |
| Nerve supply | (double): Lateral and<br>medial pectoral<br>nerves.  | medial pectoral nerve  | Nerve to subclavius<br>from upper trunk of<br>brachial plexus (C 5<br>& 6). | long thoracic nerve<br>(nerve of Bill C5, 6, &7)<br>passes superficial to the<br>muscle  |
| Actions      | 1- Adduction and<br>medial rotation of the<br>arm. 2- Flexion of the<br>arm by clavicular<br>head. 3- Elevates the<br>ribs during deep<br>inspiration. 4-<br>Sternocostal part acts<br>together with<br>latissimus dorsi, teres<br>major and deltoid:<br>draw the trunk up<br>during climbing and<br>gymnastic | 1) Protraction the<br>scapula (forward<br>movement). 2)<br>Depression the<br>shoulder. 3) Elevates<br>the ribs during deep<br>inspiration. | Fixation of the<br>clavicle during<br>movements of the<br>shoulder girdle   | 1- Protraction of the<br>scapula (pulls the<br>scapula forward with<br>pectoralis minor). 2-<br>Lower 5 digitations,<br>Abduction of the arm<br>above 90 degree, acting<br>with the trapezius<br>muscle. 3- Fixation of<br>the scapula during<br>movement of the upper<br>limb             |

## Muscle of the back

|              | Trapezius   | Latissimus Dorsi   |  |
|--------------|---|--|--|
| Origin       | 1- Back of the skull; external<br>occipital protuberance and medial<br>1/3 of superior nuchal line. 2-<br>Back of the neck; ligamentum<br>nuchae and spine of the 7th<br>cervical. 3- Back of the thorax; all<br>thoracic spines.                             | 1- From lower 6 thoracic spines under cover of the trapezius. 2-<br>Lumbar fascia. 3- Posterior part of the outer lip of the iliac<br>crest. 4- The lower 3 ribs. 5- The back of the inferior angle of<br>the scapula                                      |  |
| Insertion    | 1- Upper fibers into posterior<br>border of the lateral third of the<br>clavicle. 2- Middle fibers into<br>medial border of the acromion of<br>the scapula. 3- Lower fibers into<br>upper lip of the spine of the<br>scapula                                  | into the floor of the bicipital groove of the humerus  |  |
| Nerve supply | 1- Motor; spinal part of accessory<br>nerve. 2- Sensory (Proprioceptive<br>sensation) from the cervical plexus  | nerve to latissimus dorsi (thoracodorsal nerve) from<br>posterior cord of brachial plexus.   |  |
| Actions      | 1. Upper fibers elevate the<br>scapula. 2. Middle fibers retract<br>the scapula. 3. Lower fibers<br>Depress the scapula. 4. Middle<br>and lower fibers Abduction of the<br>arm more than 90 degree (with<br>lower 5 digitations of the serratus<br>anterior). | <ul> <li>Adduction, extension and medial rotation of the arm (as teres major) Used in Swimming</li> <li>It pulls the trunk towards the arm used in climbing and Gymnastics with pectoralis major.</li> <li>It assists in deep expiration (cough</li> </ul> |  |

## **Deep muscles of the back**

|              | Levator Scapulae  | Rhomboideus Minor  | Rhomboideus Major   |
|--------------|---|--|---|
| Origin       | transverse processes of C1-<br>C4   | From the lower part of the<br>ligamentum nuchae, spines<br>of C7 - T1  | thoracic spines of T 2, 3, 4,<br>5  |
| Insertion    | dorsal surface of medial<br>border of scapula from<br>superior angle to the spine.                                    | dorsal aspect of medial<br>border of scapula opposite<br>root of spine | dorsal aspect of medial<br>border of scapula from<br>spine to inferior angle. |
| Nerve supply | a- Dorsal scapular nerve<br>(nerve to rhomboideus C5).<br>b- Nerve to levator scapulae<br>from cervical plexus (C3&4) |  | Dorsal scapular nerve<br>(nerve to rhomboideus C5)                            |
| Actions      | 1- Elevates the scapula. 2-<br>Tilts the neck to the same<br>side when shoulder is fixed                              | Retraction of the scapula  | Retraction of the scapula   |



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