

Unit 3:

Bones and joints of the upper limb: shoulder and arm

GENERAL OBJECTIVES:

- recognize, name and correctly orient shoulder complex bones
- explain how the structure of shoulder girdle serves its function
- understand movements in sternoclavicular, acromioclavicular and glenohumeral joints

SPECIFIC OBJECTIVES:

Bones of shoulder complex and arm

Divide each of the following bones into its major parts, and identify the bony features on these parts.

1. CLAVICLE

Sternal end
Acromial end
Shaft (medial 1/3; lateral 2/3 of the clavicle)

Locate the following:

sternal end, acromial end, superior and inferior surfaces, and anterior and posterior borders.

Be able to 'side' a clavicle. Why is the clavicle 'S' - shaped?
What is the weak area of clavicle?

(2) SCAPULA

1 Surfaces
2 Borders
3 Angles

Locate the following:

costal (subscapular) surface, supra- and infraspinous fossae, superior, vertebral (medial) and axillary (lateral) borders, superior, lateral and inferior angles, acromion process, coracoid process, spine, glenoid fossa, with supra- and infraglenoid tubercles.

Be able to distinguish between a right and left scapula.

Appreciate that much of the body of the scapula is composed of thin translucent bone. Why?

In which direction does the glenoid fossa face? What significance does this have for the orientation of the glenohumeral joint? Which muscles attach to the supra- and infra-glenoid tubercles?

(3) HUMERUS

Locate the following landmarks on the humerus:

Proximal end: *head, anatomical and surgical necks, greater and lesser tuberosities, intertubercular groove.*
Shaft: *deltoid tuberosity, groove for radial nerve, borders & surfaces*
Distal end: *medial and lateral epicondyles and supracondylar lines, trochlea, capitulum, olecranon, coronoid and radial fossae.*

Where does the capsule of the shoulder joint attach? How tight is the capsule at rest?

Joins of shoulder complex and arm

(1) STERNOCLAVICULAR JOINT

Locate the sternoclavicular joint. What are the attachments of the fibrous capsule at this joint? What is its function? How is it supplied?

(2) ACROMIOCLAVICULAR JOINT

Locate the acromioclavicular joint. In which direction do the bony articular surfaces slope? What is its function? How is it supplied?

Locate the coracoacromial ligament. What structure does it overlie? The coracoacromial ligament lies between the deltoid muscle and the subacromial bursa (which may not be visible).

(3) GLENOHUMERAL JOINT

Locate the shoulder joint (articular elements) and identify primemovers and stabilisers at this joint. Locate the glenoid labrum. What is its function? What are specifics of joint capsule in this joint? Where are glenohumeral ligaments located? What is their function? Describe movements in relation to anatomical planes and axes.