

محاضرة التشريح الشعاعي - المرحلة الثانية

كلية المامون الجامعة

الفصل الأول

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NORMAL ANATOMY OF THE HUMERUS BONE

RADIOLOGICAL FEATURES OF THE HUMERUS

OSSIFICATION CENTER

The humerus is the **largest bone of the upper extremity** and defines the human brachium (arm). It articulates proximally

with the glenoid via the glenohumeral (GH) joint and distally with the radius and ulna at the elbow joint

The humerus has a rounded end where it meets the shoulder, a long shaft in the middle and a flatter end that forms the elbow joint. The upper end has a ball shape that fits into the shoulder socket

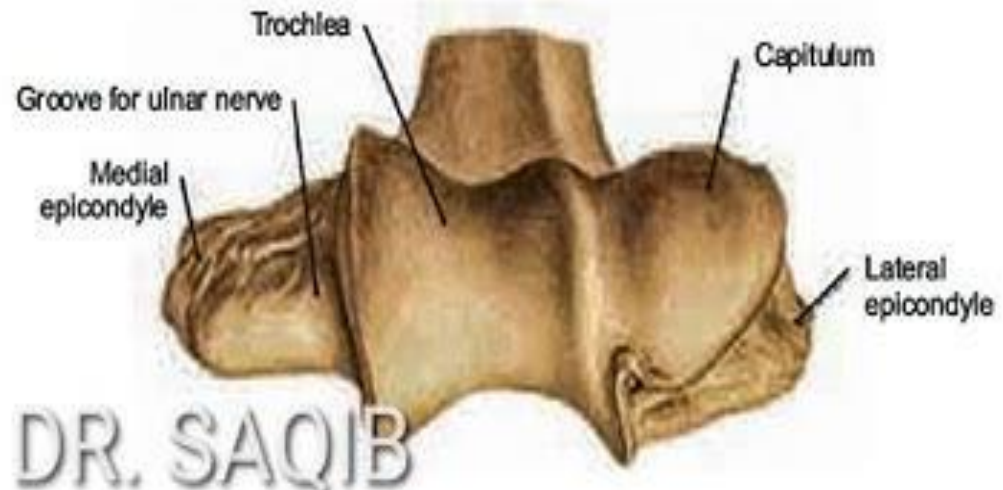
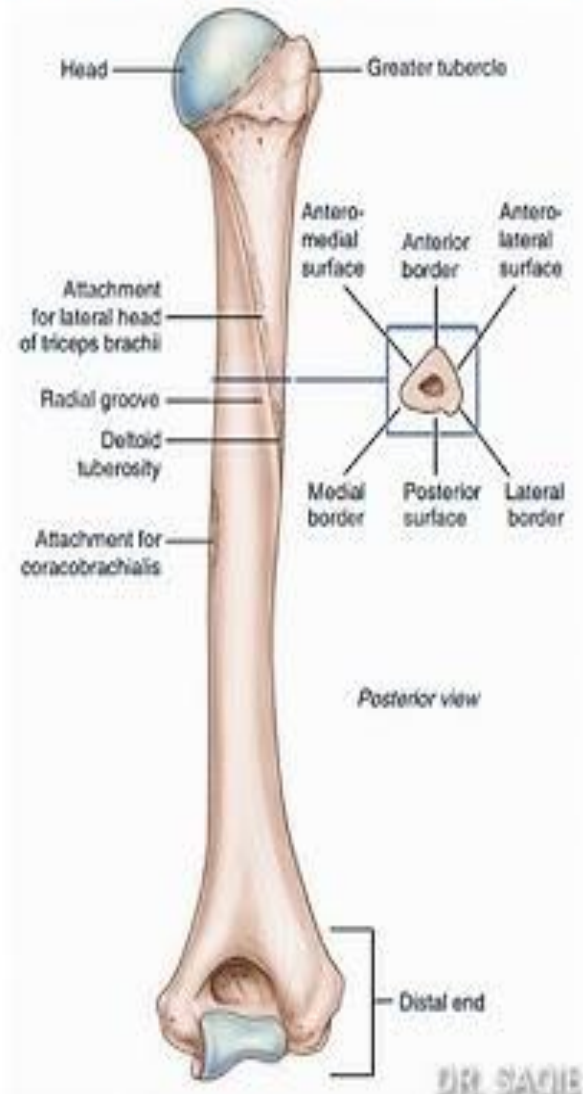
Just inferior to the head of the humerus is **the anatomical neck** of the humerus, which divides the head of the humerus from the greater and lesser tubercles

Following the tubercles is the **surgical neck** of the humerus, a site commonly susceptible to fractures.

Articulation of the capitellum and trochlea of the humerus with the head of the radius bone and trochlear notch of the ulna forms the elbow joint, a synovial hinge joint.

This joint is stabilized by the ulnar (medial) collateral ligament and radial (lateral) collateral ligament complexes.

HUMERUS ANATOMY

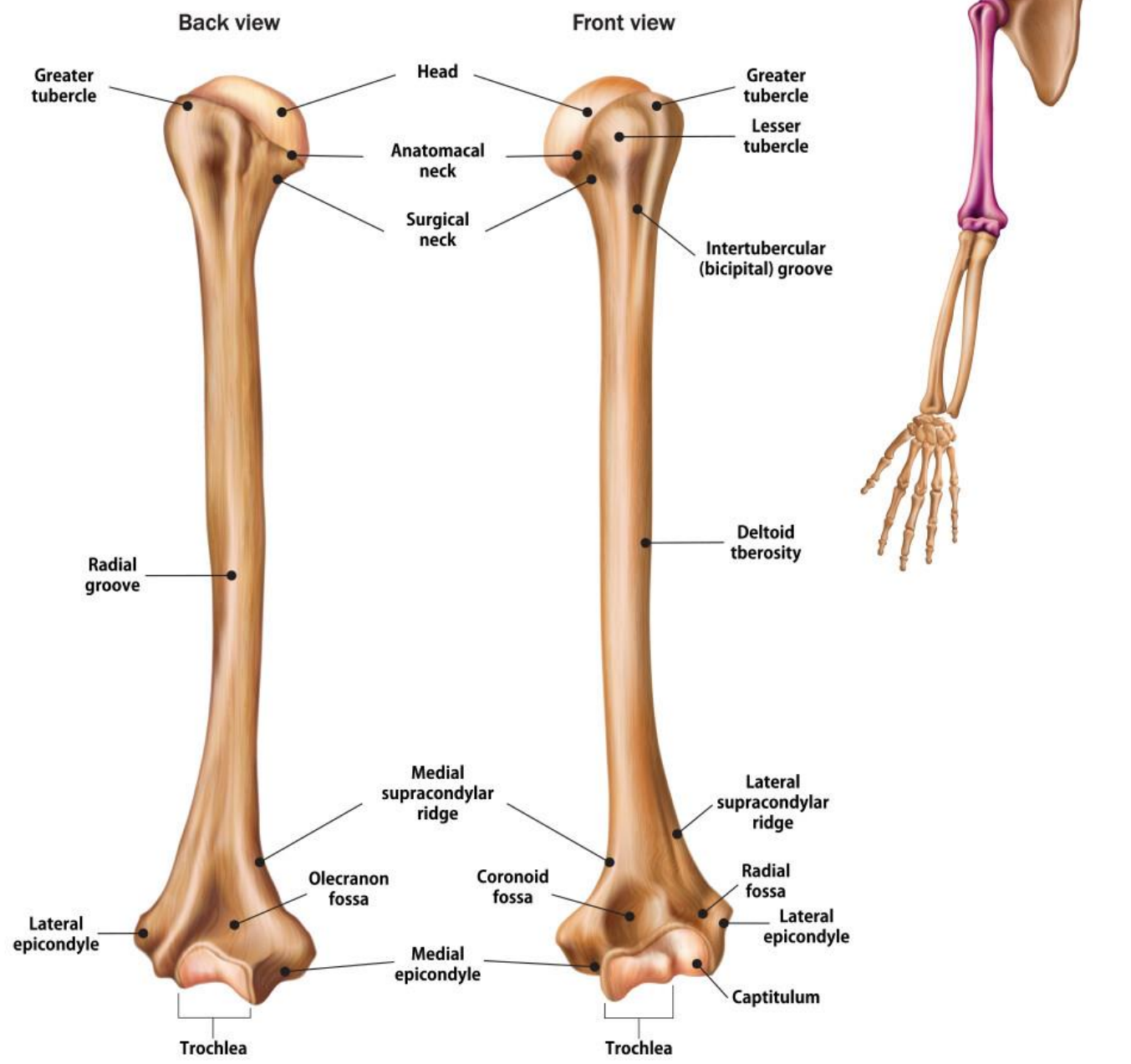


Humerus



Anterior view

Humerus bone



BLOOD SUPPLY

The primary blood supply of the proximal humerus comes from anastomoses between the anterior and posterior circumflex humeral arteries.

These are branches of the distal third of the axillary artery.

The axillary artery continues to become the brachial artery

The inner portions of the humerus are vascularized by nutrient arteries that also branch off from the brachial artery in the vicinity of the middle of the humerus

NERVE SUPPLY

The **axillary nerve**, formed from the posterior cord of the brachial plexus

Proximal part of the humerus

The upper (proximal) end of your humerus connects to your shoulder joint. The proximal end (aspect) contains the

- 1-Head (sometimes called the humeral head or humeral ball)
- 2-Greater tuberosity
- 3-Lesser tuberosity
- 4-Intertubercular sulcus (biceps groove)
- 5-anatomical neck
- 6-surgical neck

Humerus shaft

The shaft is the long middle portion of the humerus that supports the weight of the upper arm and gives it its shape. It's slightly rounded at the top near the shoulder and flatter at the bottom near your elbow. The shaft of the humerus includes the

1-deltoid tuberosity

2-Radial groove

Distal part of the humerus

The lower (distal) end of your humerus forms the top of your elbow joint. It meets the forearm bones (radius and ulna). It includes the

1-Supracondylar ridges medial and lateral

2-Epicondyles medial and lateral

3-Trochlea

4-Capitulum

5-Coronoid fossa

6-olecranon fossa

7-radial fossa

OSSIFICATION CENTERS

There are eight ossification centers that begin ossification in the following order:

- . diaphysis: 8th week in utero
- . head: 1-6 months
- . capitellum: 2-24 months
- . greater tubercle: 1 year
- . lesser tubercle: 3-5 years
- . medial epicondyle: 4-7 years
- . trochlea: 8-10 years
- . lateral epicondyle: 10-13 years













