

Radius

Radius

General Features

- **Lateral bone** of the forearm (in anatomical position).
 - Shorter than ulna.
 - Bone of **mobility** – takes part in wrist joint.
 - Lies parallel to ulna, connected by **interosseous membrane**.
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Parts of Radius

1. Upper End

- **Head** ? disc-shaped, articulates with capitulum of humerus (superior surface) and radial notch of ulna (circumference).
- **Neck** ? constricted below head.
- **Radial tuberosity** ? on medial side, insertion of biceps brachii.

2. Shaft

- Has **three borders** (anterior, posterior, interosseous) and **three surfaces** (anterior, posterior, lateral).
- **Anterior surface** ? flexor pollicis longus, pronator quadratus.
- **Posterior surface** ? abductor pollicis longus, extensor pollicis brevis, extensor pollicis longus.

- **Lateral surface** ? pronator teres insertion.

3. Lower End

- Broad and quadrilateral.
 - **Carpal articular surface** ? for scaphoid and lunate.
 - **Ulnar notch** ? articulates with head of ulna (distal radioulnar joint).
 - **Styloid process** ? lateral projection, palpable.
 - **Dorsal tubercle (Lister's tubercle)** ? pulley for tendon of extensor pollicis longus.
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Ossification of Radius

- **Primary center:** shaft, appears in **8th week intrauterine life**.
 - **Secondary centers:**
 - Lower end ? appears at **2 years**, fuses at **20 years**.
 - Upper end (head) ? appears at **5 years**, fuses at **17 years**.
 - Total centers: **1 primary + 2 secondary = 3 centers**.
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Clinical Anatomy

- **Fractures of Radius**
 - **Colles' fracture** ? fracture at lower end (about 2 cm above wrist joint), common in elderly ? “dinner fork deformity”.
 - **Smith's fracture** ? reverse of Colles', distal fragment displaced anteriorly.
 - **Fracture of neck of radius** ? common in children.
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- **Isolated radial shaft fractures** rare; usually associated with ulna fractures.
- **Dislocations**
 - **Head of radius** may dislocate in children (pulled elbow/nursemaid's elbow).
- **Clinical landmarks**
 - Radial styloid process more distal than ulnar styloid process ? important in wrist alignment.
 - Radial artery palpable at distal end (lateral to flexor carpi radialis tendon).
- **Ossification centers** useful for **age determination** in forensic practice.