

# **Skeleton of the upper extremity**

# **SKELETON OF THE UPPER EXTREMITY**

## **I. Upper extremity girdle bones (cingulum)**

**clavicle– *clavicula***

**shoulder blade – *scapula***

## **II. Bones of free upper extremity (extremitas libera)**

**arm bone– *humerus***

**radial bone– *radius***

**ulna– *ulna***

**carpal bones– *ossa carpi***

**metacarpal bones– *ossa metacarpi***

**phalanges– *ossa digitorum manus***

# clavicle– *clavicula*

- Long bone
- bone which ossified earliest
- body is S-shaped
- cranial surface- smooth
- Caudal surface- rough

## **Extremitas sternalis**

*(facies articularis sternalis)*

## **Extremitas acromialis**

*(facies articularis acromialis)*

- **extremitas sternalis** (*facies articularis sternalis*)  
***impressio ligamenti costoclavicularis***  
***sulcus subclavius***
- **extremitas acromialis** (*facies articularis acromialis*)  
***tuberositas coracoidea*** (tuberculum conoideum et  
linea trapezoidea)

**clavicle**

# Shoulder blade – scapula

- In height of 2nd to 7th rib
- **margo superior**  
(**incisura scapulae**, processus coracoideus)
- **margo medialis**
- **margo lateralis**  
(cavitas glenoidalis, tuberculum supraglenoidale,  
tuberculum infraglenoidale, collum scapulae)
- **angulus**: superior, inferior, lateralis

- **facies dorsalis**

- spina scapulae – protrudes laterally as acromion with facies articularis acromii
- fossa supraspinata
- fossa infraspinata

- **facies costalis**

- fossa subscapularis (lineae musculares)

# Arm bone– *humerus*

- **Proximal end (caput):**

caput humeri

collum anatomicum

tuberculum majus et minus

crista tuberculi majoris et minoris

sulcus intertubercularis

collum chirurgicum

- **Corpus:**

tuberositas deltoidea

sulcus nervi radialis



- **Distal end (condylus):**

epicondylus medialis (sulcus n. ulnaris)

epicondylus lateralis

trochlea humeri (fossa coronoidea)

capitulum humeri (fossa radialis)

fossa olecrani

# Radial bone – *radius*

- **Proximal end:**

caput radii

(fovea capitis radii,  
circumferentia articularis)

- **collum radii**

- **corpus:**

tuberositas radii

margo interosseus

- **Distal end:**

processus styloideus radii

facies articularis carpea radii

incisura ulnaris radii

**sulci tendinum musculorum extensorum**

# ulna – ulna

- **Proximal end:**

olecranon ulnae

incisura trochlearis

processus coronoideus

tuberositas ulnae

incisura radialis ulnae

crista musculi supinatoris

- **corpus:**

margo interosseus

margo posterior

- **Distal end:**

caput ulnae

circumferentia articularis

processus styloideus ulnae

# **Hand bones– Ossa manus**

**Carpal bones– *ossa carpi***

**Metacarpal bones– *ossa metacarpi***

**Phalanges– *ossa digitorum manus (phalanges)***

## Carpal bones– ossa carpi (8)

- Proximal row (from thumb):

Scaphoid bone– **os scaphoideum**

(tuberculum ossis scaphoidei)

Lunate bone– **os lunatum**

Triquetral bone– **os triquetrum**

Pisiform bone– **os pisiforme**

- Distal row (from thumb):

trapezium– **os trapezium**

(tuberculum ossis trapezii)

trapezoidium– **os trapezoidium**

capitate– **os capitatum**

(caput ossis capitati)

hamate– **os hamatum**

(hamulus ossis hamati)



The bones are arranged in that way, they form an arch which is convex dorsally = sulcus carpi, bounded by eminentia carpi radialis et ulnaris

# Ossification of carpal bones

# Metacarpal bones– ossa metacarpi

ossa metacarpi I. – V.  
(from thumb)

basis

corpus

caput

The 3rd metacarpal  
bone has processus  
styloideus



# phalanges– ossa digitorum manus

## Phalanges

2nd– 5th finger: phalanx proximalis, media et distalis

thumb: phalanx proximalis et distalis

basis

corpus

caput (trochlea)

•On the distal phalanx

**tuberositas phalangis**

**distalis**

# Ossa sesamoidea manus

- within metacarpophalangeal joints of the thumb: lateral and medial ones
- They develop in muscle insertions and tendons (they protect the joint)
- *os pisiforme*

**Thank you for your attention.**