

Tikrit University

College of Nursing

Basic Nursing Sciences



First Year - 2023-2024

English

(Title: The Joints)

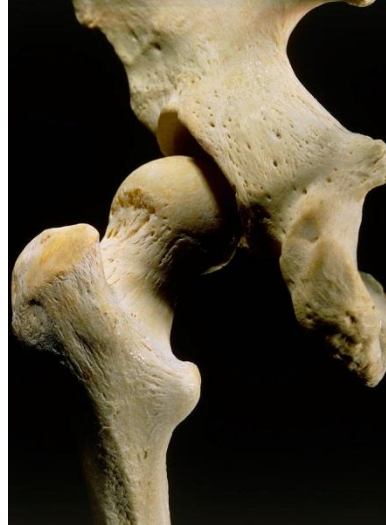
by: Prof.Dr. Abdul-Jabbar Al-Samarrae

The Joints

❖ **Definition** : Joint is a meeting between two or more bones



More than a bone



Two bones

❖ Classification:

A. Functional Classification. Includes

- 1- No movement.
- 2- Slight movement.
- 3- Free movement.

B- Anatomical structural Classification:

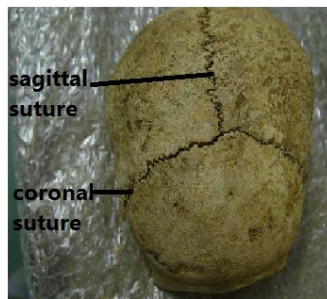
- Fibrous joints
- Cartilaginous joints
- Synovial joints

1-Fibrous joints

- The bones are connected together by fibrous tissue
- **NO** movement
- Types of joints : There are **3 types** includes:

1) Sutures:

- Present between the bones of skull.
- No movement



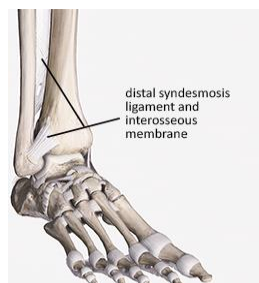
2) Gomphosis:

- present between the teeth and cavity in the (socket) jaw
- No movement



3-Syndesmosis:

- Present between the lower ends of tibia and fibula.
- Slight movement

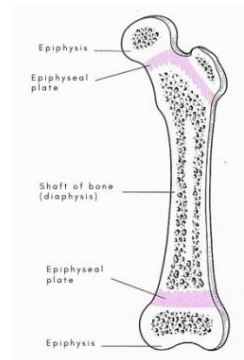


2-Cartilaginous joint

- Bones are held together by cartilage
- There are 2 types:

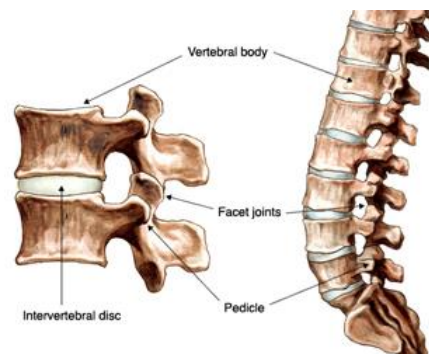
1) primary Cartilaginous

- Connecting between two bones is **hyaline cartilage**
- No movable joint
- Temporary joint(e.g Epiphyseal plate connecting epiphysis and diaphysis of a long bone



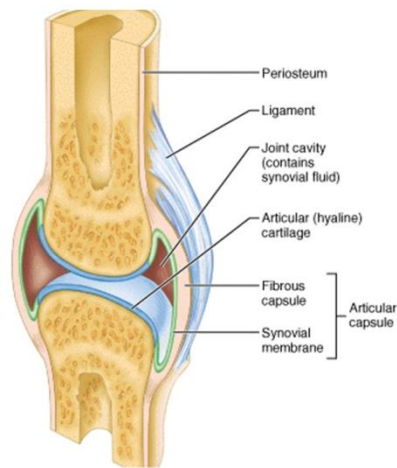
2) secondary Cartilaginous joint :

- Connecting between two bones is fibrocartilage
- Slightly movable joint
- Permanent joint(e.g intervertebral disc lie between the vertebral bodies,)



3-Synovial joint

- Permit free movement
- Ends of articulating bones are covered by articular cartilage
- Joint is surrounded by fibrous capsule
- Fibrous capsule is lined by the synovial membrane
- eg. **Most of the joints of body**



Classification of synovial joint

- 1) According to the **number of bones** forming joint
 - a) Simple(two bones articulating)
 - b) Compound(more than two bones form the joint)
 - c) Complex(present articular disc between articulating bones)

2) According to axes of movements

- a) Non- axial: it allows gliding movement e.g.: intercarpal joint



b) Uni- axial joint: it allows flexion and extension movements e.g.: elbow joint



c) Bi- axial joint: it allows flexion and extension and abduction and adduction movements eg: wrist joint



d) Poly- axial joint: A joint that allows for the several directions of movement eg: shoulder joint or hip joint



❖ joints of the upper limbs:

- Shoulder joint
- Elbow joint
- Wrist joint



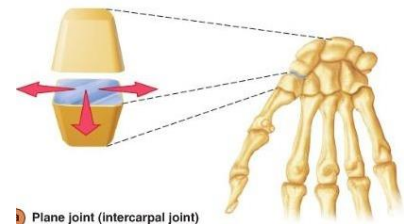
❖ Joint of the lower limbs

- Hip joint
- Knee joint
- Ankle joint



❖ types of movements

- 1) Gliding movement: flat surface of bone slide on one another e.g. intercarpal joint



- 2) Flexion : means **decrease** the angle of joint
- 3) Extension: means **increase** the angle of joint



Flexion:

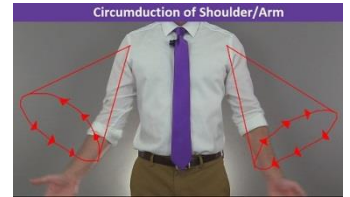
Extension

- 4) Abduction: movement away from the midline

- 5) Adduction : movement toward the midline

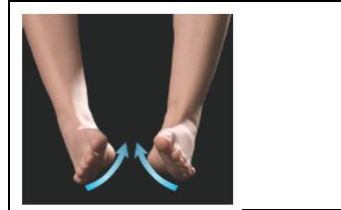


6) **Circumduction**. circular movement of the shoulder or the hip; involves flexion, extension, abduction, adduction, rotation.

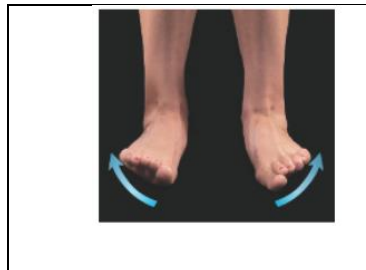


• **Special movement**

1- **Inversion**: movement the planter surface (sole) of foot inward.



2- **Eversion**: movement of planter surface (sole) of foot outward.



3- **Protraction**: moving anteriorly, as in protracting the scapula

4- **Retraction**: moving back, as in retracting the scapula.



Protraction:



retraction

5- **Supination**: rotating the forearm so the palm of the hand faces anteriorly



6- **Pronation**. rotating the forearm so the palm of the hand faces posteriorly



7- **Elevation**: to elevate the **shoulder upward..**



8-**Depression** : to depress the **shoulder downward.**



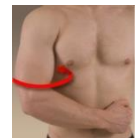
9)-**Dorsiflexion** : moving the dorsal surface of the foot **upward**



10)-**Plantar flexion**: moving the planter surface of the foot **downward .**



11- **Medial rotation**: the anterior surface turns **towards the** **midline** .



12-**lateral rotation** : the anterior surface turns **away from** **midline**



13-**opposition movement** : is the thumb movement that brings the tip of the thumb in contact with the tip of a finger

