

TYPES OF JOINTS

i) Fibrous joints:-

- lack a synovial cavity.
- Held closely by dense Irregular CT.
- They permit little (or) no movement.
- The three types of Fibrous joints are:
 - sutures
 - Syndesmoses
 - Interosseous Membranes.

ii) sutures:-

- It occurs only b/w bones of skull.
- composed of a thin layer of dense Irregular CT
- E.g:- coronal suture b/w parietal & Frontal bones.
- As sutures are immovable

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It is classified functionally as a Synarthrosis

iii) Syndesmoses:-

- It is a fibrous joint in which there is a greater distance b/w articulating surface so has more dense Irregular CT than in a suture.

- This joint permit limited (or) slight movement

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so, it is classified functionally as a Amphiarthrosis

E.g:- 1) Distal tibio fibular joint (Articulate Tibia & Fibula)
2) Tooth & socket of Alveolar process (Gomphosis.)

iii) Interosseous Membranes:-

- It is connected by sheet of dense irregular CT that binds Neighbouring long bones.

- permit slight Movement (Amphiarthrosis)

E.g:- 1) B/w radius & ulna in Forearm.
2) Tibia & Fibula in leg.

(2) Cartilaginous joints:-

- lack a synovial cavity
- held by either hyaline cartilage (or) Fibrocartilage
- '2' types of cartilaginous joints are {
 synchondroses
 sympyyses

(i) synchondroses:-

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It is a cartilaginous joint in which connecting material is hyaline cartilage.

Eg:- Epiphyseal (growth) plate that connects epiphysis & diaphysis of growing bone.

- joint b/w first rib & Manubrium of sternum.

(ii) Sympyyses:-

It is a cartilaginous joint in which the end of articulating bones are covered by hyaline cartilage but flat disc of Fibrocartilage.

Eg:- B/w anterior surface of hip bones.
B/w junction of manubrium & body of sternum.

(3) synovial joints:-

- Have certain characteristics that distinguish them from other joints.
- The presence of a space called synovial cavity b/w articulating bones.

- Bones at a synovial joint are covered by a hyaline cartilage called articular cartilage.

- synovial cavity allow a joint to be freely movable.

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so, it classified functionally as Diarthroses:-

- Articular cartilage reduces friction b/w bones during movement & helps to absorb shock.

Features of synovial joint are:-

(a) Articular capsule :-

- A sleeve like Articular capsule surrounds synovial joint.

- This Articular capsule

Holds the bones together

Allows movement

Protect from injury

(b) Synovial fluid :-

- synovial cavity is filled w a thick, viscous, clear

(or) pale yellow coloured fluid known as synovial fluid.

Secreted by synovial membrane

- It consists of hyaluronic acid secreted by fibroblast like cells in synovial membrane & interstitial fluid filtered from blood plasma.

- synovial fluid spreads as a thin film on the articular capsule.

- It reduce friction, prevent shock & provide O₂ & nourishment to bone.

(c) Accessory ligaments and Articular disc :-

- Many synovial joints contain Accessory ligaments called Extracapsular ligaments & Intracapsular ligaments

lie outside Articular capsule

lie inside Articular capsule

Fibular & tibial collateral ligaments of knee joint

Anterior & posterior cruciate ligaments of knee joint.

- Inside some synovial joints such as knee
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 - pads of Fibrocartilage lie b/w bones & Attached to Fibrous capsule.
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 - These pads are called **Articular discs (or) menisci**.
- Articular discs allow two bones of different shapes to fit together more tightly
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 - It also helps to maintain stability of the joint.

(d) Nerves and Blood supply :-

- Nerves that communicate w/ synovial joints similar to those of skeletal muscles.
- synovial joints do not have any direct blood supply
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 - It receives oxygen & nourishment via various blood vessel branches into Accessory ligaments and Articular capsule.