DIGESTION AND ABSORPTION

JOINTS

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- Joints are essential for all types of movements involving the bony parts of the body. Locomotory movements are no exception to this. Joints are points of contact between bones, or between bones and cartilages.

- Force generated by the muscles is used to carry out movement through joints, where the joint acts as a fulcrum. The movability at these joints vary depending on different factors.

- Joints have been classified into three major structural forms, namely, fibrous, cartilaginous and synovial.

(i) **Fibrous joints:** These do not allow any movement. This type of joint is shown by the flat skull bones which fuse end-to-end with the help of dense fibrous connective tissues in the form of sutures, to form the cranium.

(ii) **Cartilagenous joints:** In this, the bones involved are joined together with the help of cartilages. The joint between the adjacent vertebrae in the vertebral column is of this pattern and it permits limited movements.

(iii) **Synovial joints:** These are characterised by the presence of a fluid filled synovial cavity between the articulating surfaces of the two bones. Such an arrangement allows considerable movement. These joints help in locomotion and many other movements.

Synovial joints are classified as:

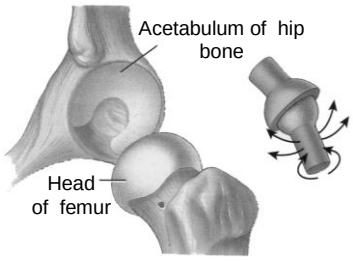
(a) **Ball and socket joint:** Ball of one bone articulate in socket of another bone. e.g., head of humerus and glenoid cavity of pectoral girdle, femur and acetabulum of pelvic girdle.

(b) **Hinge joint:** Movement is possible in one direction only. e.g., Joint of malleus and incus, knee joint, elbow joint.

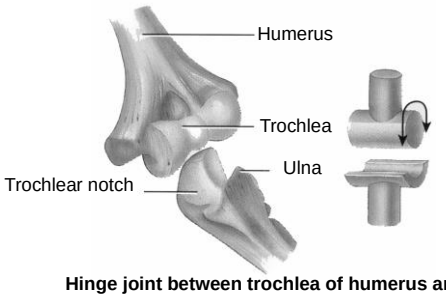
(c) **Pivot joint:** Also known as rotatoria and helps in turning movement. e.g. between Atlas & Axis, Radius & Ulna

(d) **Gliding joint:** Limited movement in all direction. e.g., Tarsals bones of ankle, between the carpals.

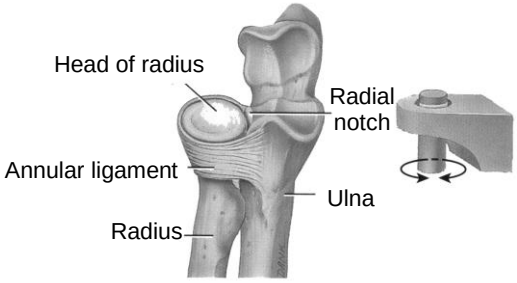
(e) Saddle joint: It is ball and socket like joint but not developed fully. E.g. between carpal & metacarpal of thumb.



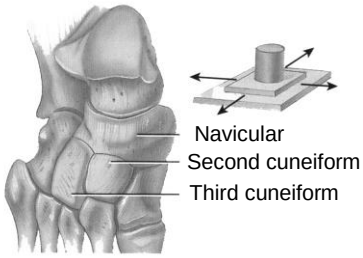
Ball-and-socket joint between head of the femur and acetabulum of the hip bone



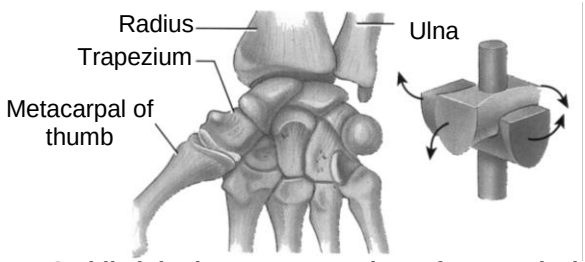
Hinge joint between trochlea of humerus and trochlear notch of ulna at the elbow



Pivot joint between head of radius and radial notch of ulna



Gliding joint between the navicular and second and third cuneiforms of the tarsus in the foot



Saddle joint between trapezium of carpus (wrist) and metacarpal of thumb