

Anatomy & Physiology: Joints—Synovial Joint Types.

STRUCTURE.

Plane joints.

- Biaxial diarthroses.
- Flattish or very slightly curved.
- Gliding types of planar movements (e.g. sideways or back and forth).
- May also rotate about.
- E.g. intercarpal (in wrist bones); intertarsal (ankle bones); sternoclavicular joint; acromionclavicular; vertebrocostal joints (ribs and transverse processes of thoracic vertebrae).

Hinge joints.

- Uniaxial diarthrosis.
- Like a hinge (door hinge); the bones "fit together" and "open-close" about a pivot point.
- Usually, one bone is "stationary" (like a door frame) while the other bone is the moving part (like the door).
- Rotational movement is about one axis.
- Flexion and extension.
- E.g. knee, elbow, ankle, interphalangeal joints of fingers and toes.

Pivot joints.

- Uniaxial diarthrosis.
- A rounded/pointy bone articulates with a "ring-like" structure formed by another bone and ligaments.
- Rotates about one axis.
- E.g. atlantoaxial joint (C1-C2); radioulnar joint (supinate-pronate).

Condyloid joints.

- Biaxial diarthrosis.
- Oval shaped end of one bone fits into the oval shaped depression of another.
- Movement about 2 axis: flexion-extension; abduction-adduction; very limited circumduction.
- E.g. wrist; metacarpophalangeal joints (II-V).

Saddle joints.

- Biaxial diarthrosis.
- One end of bone (concave) is shaped like a saddle and the other surface is convex and fits the saddle-shaped depression of the other bone.
- Movement about 3 axis: sideways; up-down; limited circumduction.

Ball and socket joints.

- Triaxial diarthrosis.
- Allows for the most movement.
- Movement about 3 axis: flexion-extension; abduction-adduction; rotations/circumduction.
- E.g. shoulder joint; hip joint.

FUNCTION.

CLINICAL SIGNIFICANCE.

References

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