

Module 7 LO6

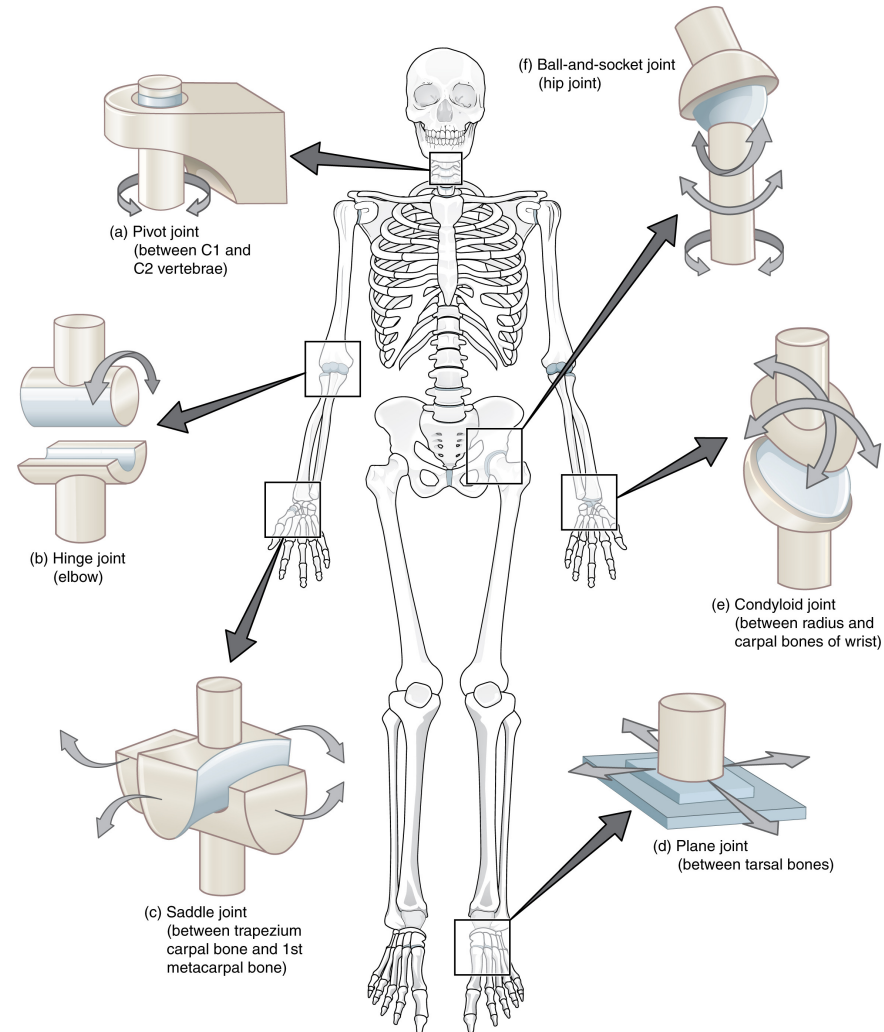
Types of Synovial Joints

Dr. Lisa Brinn

lbrinn@fiu.edu

6. Types of Synovial Joints

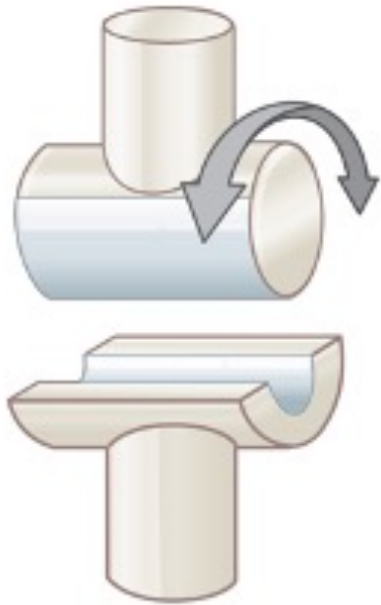
- Shapes of articulating surfaces vary
- Variation in shape governs range and type of movements possible
 - a) Planar joints
 - b) Hinge joints
 - c) Pivot joints
 - d) Condyloid joints
 - e) Saddle joints
 - f) Ball and socket joints



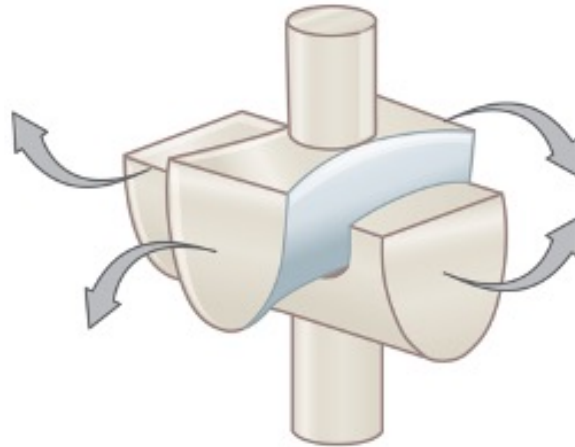
Based on Motion

- Special categories based on motion

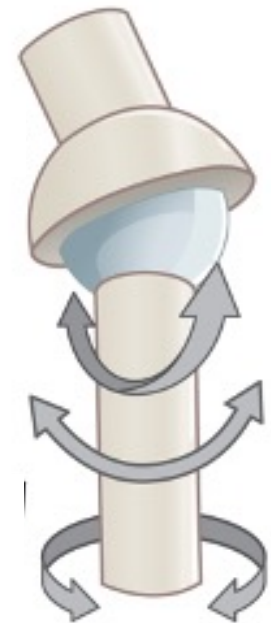
- Monoaxial



- Biaxial

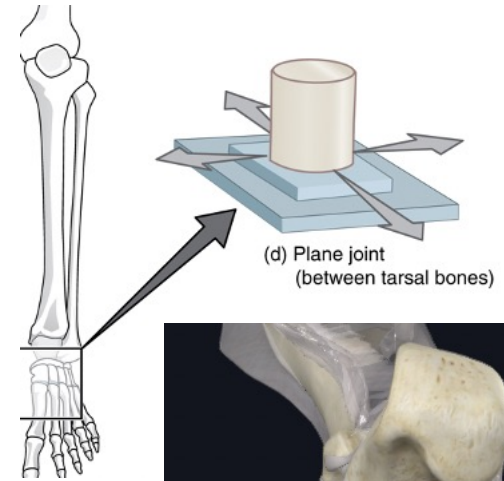


- Triaxial



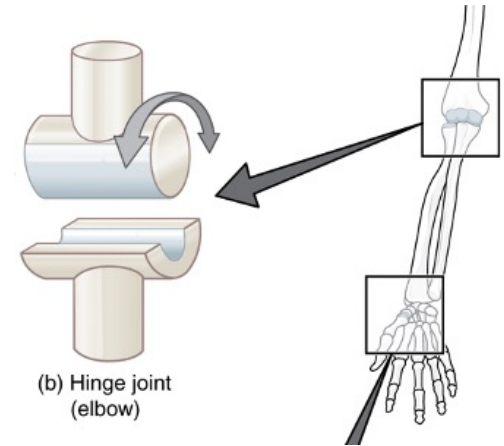
a) Planar Joints

- Flat or slightly curved
- Permit back-and-forth and side-to-side movements
- May also rotate against one another
- Many are biaxial
- If plane joints rotate in addition to sliding, then they are triaxial



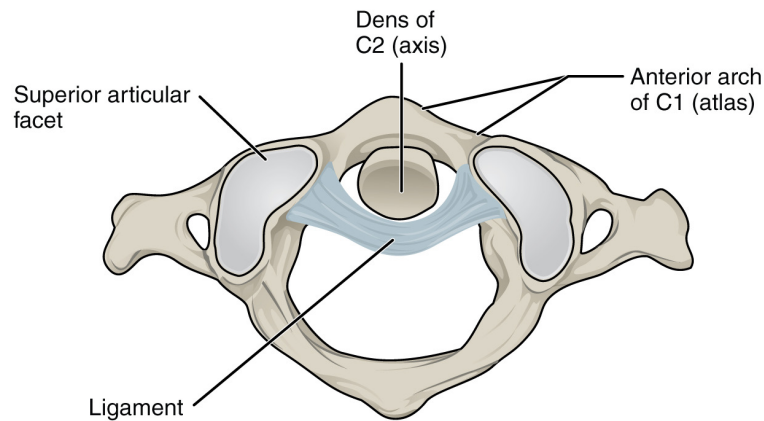
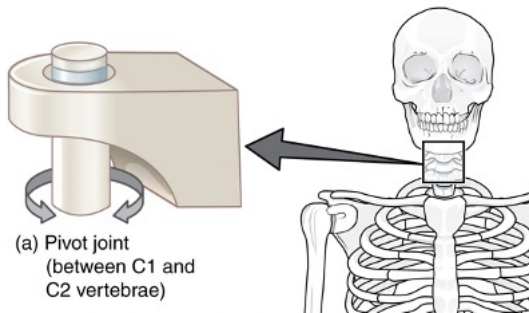
b) Hinge Joints

- Convex surface of one bone fits concave surface of another bone
- Produce angular, opening-and-closing motion
- Are uniaxial – allow motion around one axis
- Permit flexion and extension



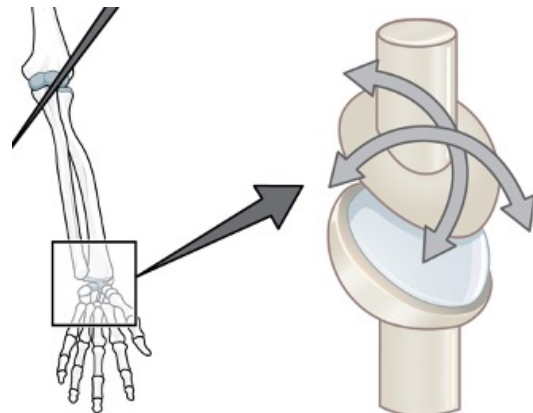
c) Pivot Joints

- Rounded or pointed surface of one bone articulates with a ring formed partly by another bone and partially by a ligament
- Are uniaxial
 - Allows rotation only around its own longitudinal axis

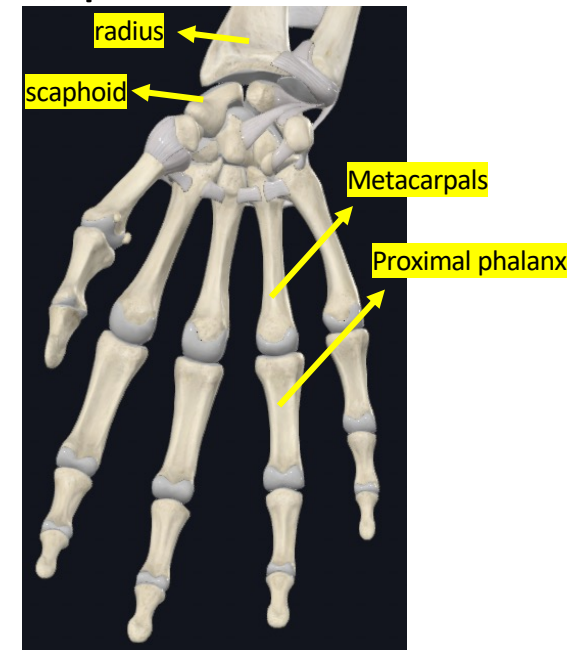


d) Condylod or Ellipsoidal Joints

- Convex oval-shaped projection of one bone fits into the oval-shaped depression of another bone
- Are biaxial
 - flexion-extension or abduction-adduction, plus
 - Limited circumduction

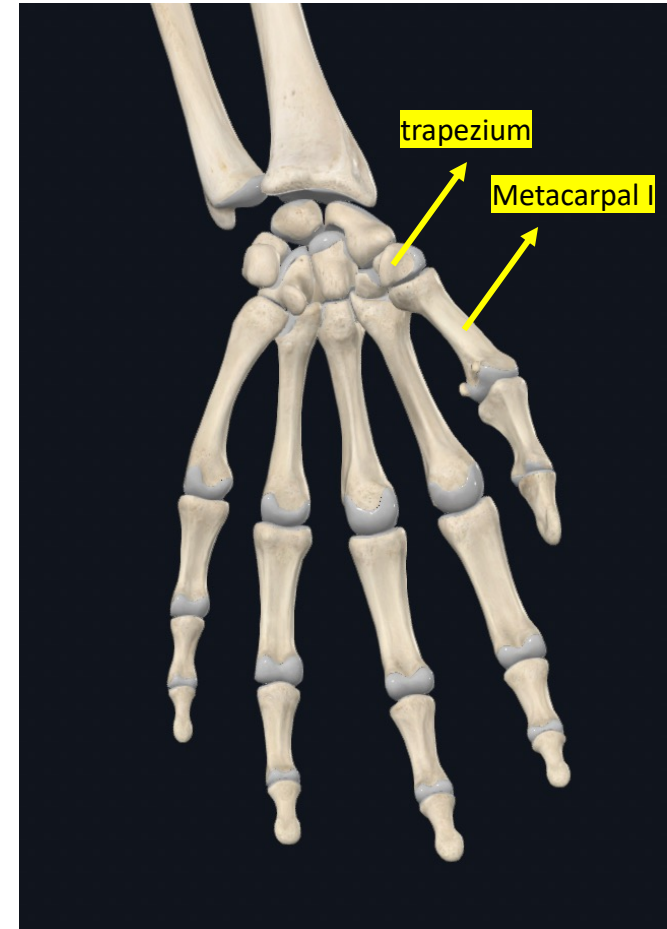
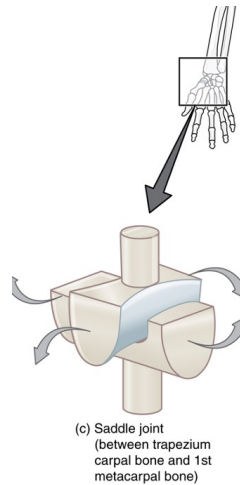


(e) Condylod joint
(between radius and
carpal bones of wrist)



e) Saddle Joints

- Articular surface is saddle-shaped
- Opposite bone fits into the saddle
- Are biaxial
 - flexion-extension or abduction-adduction, plus
 - Limited circumduction



f) Ball-and-Socket Joints

- Ball-like surface of one bone fitting into a cuplike depression of another bone.
- Are triaxial - movement around 3 axes
 - Flexion-extension
 - Abduction-adduction
 - Rotation

