

Joints

1. classifications

1. structural

1. synarthroses- immovable
2. amphiarthroses- slightly movable
3. diarthroses- freely movable

2. functional/descriptive

1. fibrous

1. synostoses
 1. bony junctions
 2. e.g., skull sutures
2. syndesmoses
 1. connection by ligament or interosseus membrane
 2. e.g., tibia & fibula, have "give"
3. gomphoses (gompho = nail)
 1. teeth in sockets connected by periodontal ligament

2. cartilaginous- bone ends connected by cartilage

1. symphyses (amphiarthrotic)
 1. pubic symphysis
 2. intervertebral joints
2. synchondroses (synarthrotic @ maturity)
 1. epiphyseal plates
 2. rib to sternum connections

3. synovial- bony joint ends separated by cavity containing fluid

1. components

1. articular cartilage
2. fibrous articular capsule
3. synovial cavities- fluid filled
4. reinforcing ligaments
5. fatty pads
6. articular discs (menisci)
7. bursae (purse) & tendon sheaths

2. figures

4. joint stability

1. articular surfaces
2. ligaments- stretch 6% before snapping
3. muscle tone- shoulder, knee, foot arches

5. types

1. plane- carpals
2. hinge- elbow (ulna & humerus)
3. pivot- elbow (ulna & radius)
4. condyloid- nuckles (metacarpal & phalange)
5. saddle- thumb (carpal & metacarpal I)
6. ball-and-socket- shoulder (humerus & glenoid)

2. movements

1. gliding- carpals & tarsals

2. angular

1. flexion
2. extension
3. dorsi- & plantar- flexion
4. abduction
5. adduction
6. circumduction (to draw a cone)

3. rotation- turning bone along its axis

4. special movements

1. supination
2. pronation
3. inversion (sole in)
4. eversion (sole out)
5. protraction (jaw)
6. retraction
7. elevation
8. depression
9. opposition