Joints of the Skeletal System

- Type of binding tissue (structural)
  - Big Three
    - Fibrous
    - Cartilaginous
    - Synovial
- Degree of movement (functional)
  - Immovable = synarthrotic
  - Slightly movable = amphiarthrotic
  - Freely movable = diarthrotic

Joints

- Functional junctions between bones
- Bind elements of the skeleton together
- Enable body movement
- Enable bone growth
- Permit the skull to change shape during childbirth

Fibrous Joints
Cartilaginous Joints

- Hyaline or fibrocartilage connects bones

Types

- Synchondrosis
  - hyaline cartilage unite bones
  - joins the epiphyses to the diaphysis at the epiphyseal disc for bone growth (synarthrotic joint)

- Symphysis
  - thin layer of hyaline cartilage with a pad of fibrocartilage in an amphiarthrotic joint
  - Ex: Intervertebral disk and pubic symphysis

Synovial Joints

- Six major groups
- Based on shape of joint and movement
  - Ball-and-socket (femur/caxae)
  - Condyloid (Metacarpal/phalynx)
  - Gliding joints (Carpals)
  - Hinge joints (Ulna/Humerus)
  - Pivot joints (Axis/Atlas)
  - Saddle joints (‘Thumb joint)
Typical Synovial Joint
- Spongy bone
- Subchondral plate
- Joint capsule
- Articular cartilage
- Synovial membrane

Ball and Socket Joints
- Hip bone
- Head of femur in acetabulum
- Femur

Condyloid Joints
- Metacarpal
- Phalanx
Types of Movements

• Produced by muscle contraction
• Pull non-fixed parts towards fixed parts
• 7 sets of opposing movements

Joint Movements