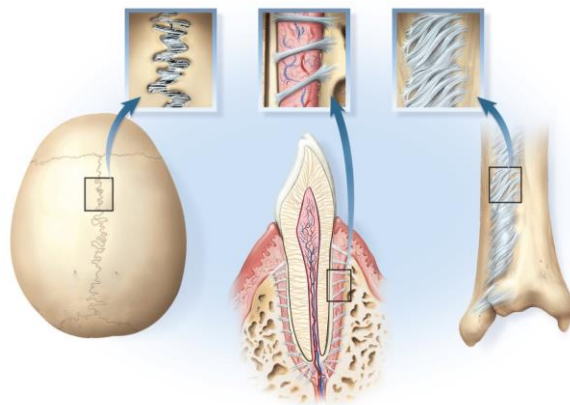# ST. CATHERINE UNIVERSITY

Joints

Joints

- Any point where two bones meet
- Also called articulations
- Can change throughout lifetime
- 4 major types: bony, fibrous, cartilaginous, and synovial

1. Bony Joints

- Two bones have fused together
- No movement can occur between bones: synostosis
- Examples: mandible and frontal bones, in adults fusion of first rib to sternum and epiphyses to diaphysis in long bones
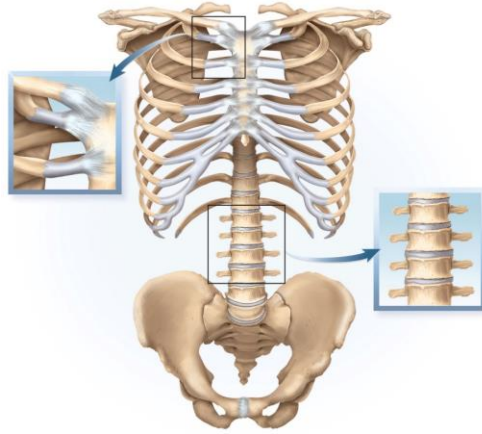
2. Fibrous Joints

- Collagen fibers hold the bones together
- Very little movement allowed: synarthrosis
- 3 kinds
  - Suture
  - Gomphosis
  - Syndesmosis

3. Cartilaginous Joints

- Cartilage holds the bones together
- Some movement allowed: amphiarthrosis
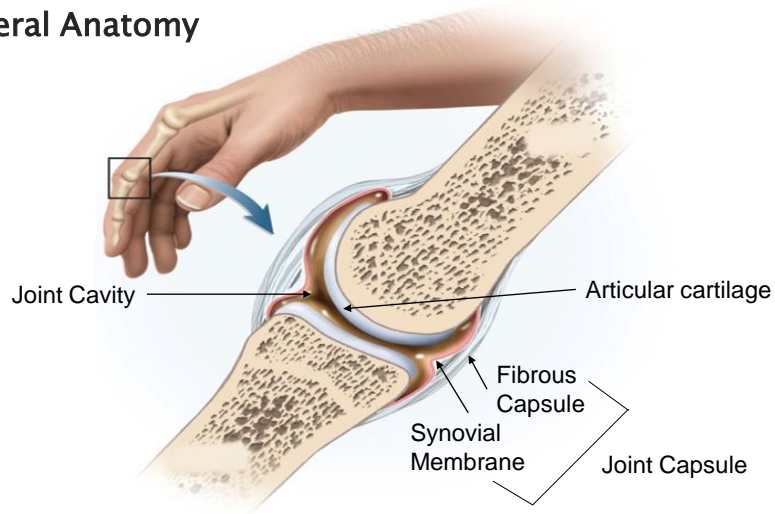- 2 types
  - Synchondrosis
  - Symphysis

4. Synovial Joints

- Bones are connected with a fluid–filled cavity
- Freely moveable: diarthrosis

4. Synovial Joints

General Anatomy

Joint Cavity
Articular cartilage
Fibrous Capsule
Synovial Membrane
Joint Capsule

4. Synovial Joints

Accessory Structures
1. **Tendons**– attach muscles to bones
2. **Ligaments**– attach bones to bones
3. **Bursa**– fluid-filled sacs that cushion and alleviate tendon/bone rubbing

4. Synovial Joints

Additional Structures
1. **Articular disc**– fibrocartilage that sections synovial fluid in the joint cavity
2. **Meniscus**– fibrocartilage that absorbs extra force in knees

4. Synovial Joints

Planes of movement
- Multiaxial
- Biaxial
- Monaxial

4. Synovial Joints