STERNUM, RELATED JOINTS & A TYPICAL INTERCOSTAL

CLASSIFICATION OF JOINTS

FIBROUS
- Skull sutures
- Interosseous membranes
- Inferior tibiofibular
- 11th, 12th costotransverse

Primary
- Costochondral
- 1st sternechondral
- Spheno-occipital

CARTILAGINOUS
- Secondary
- Midline symphyses
- Intervertebral
- Hyaline cartilage

ATYPICAL SYNOVIAL
- Articular surface covered with fibrocartilage
- Temporomandibular
- Sternoclavicular
- Acromioclavicular
- 2-7 Sternochondral

TYPICAL SYNOVIAL
- Articular surface covered with hyaline cartilage
- All other synovial joints

MOVEMENTS IN SYNOVIAL JOINTS
- PLANE: Gliding
- Tarsus & carpus

HINGE
- Interphalangeal
  - Flexion
  - Extension

MODIFIED HINGE
- Knee
  - Flexion
  - Extension
  - Rotation with flexed knee

CONDYLOID
- Metacarpophalangeal
  - Flexion
  - Extension
  - Adduction
  - Abduction
  - Circumduction

SADDLE CONDYLOID
- 1st Carpometacarpal
  - Flexion
  - Extension
  - Adduction
  - Abduction
  - Circumduction
  - "Controlled" rotation = opposition

PIVOT
- Both ends of radius
  - Atlanto-axial
  - Rotation (Uni-axial)

BALL AND SOCKET
- Hip
  - Shoulder
  - (Sternoclavicular
    - Talocalcaneonavicular - many features of one)
  - Flexion
  - Extension
  - Adduction
  - Abduction
  - Circumduction
  - "Free" rotation

nerves
**STERNUM & RELATED JOINTS**

- Suprasternal (jugular) notch, T2/3
- **Sternocleidomastoid**
- Manubriosternal junction (angle of Louis), secondary cartilaginous (usually does not fuse)
- Costochondral joints (all primary cartilaginous)
- Steroclavicular joint (atypical synovial). Features of a ball & socket joint
- 1st costochondral (primary cartilaginous)
- 1st sternochondral (primary cartilaginous)
- 3-7 sternochondral (atypical synovial, single cavity)
- Pectoralis major
- Xiphisternal (secondary cartilaginous) (Usually fuses by 40yr)

**TYPICAL INTERCostal NERVE**

- Main nerve
- Lateral cutaneous branch
- Collateral (muscular) branch. Motor to muscles & sensory to pleura & periosteum but not skin. Runs in neurovascular plane, just above the rib
- Anterior cutaneous branch
- Posterior (dorsal) Ramus
- Sympathetic chain
- Intervertebral foramen
- Deep fascia