Lecture notes for Wednesday December 4, 2002

Outline

• Skeletal System:
  Osteoporosis
  Fractures
  Divisions:
    Axial
    Appendicular

Prevention (osteoporosis)

• Calcium intake: 1000-1200 mg
• Weight-bearing exercise
• Exposure to sunlight
• Stop smoking
• Reduce alcohol intake

Bone Fractures
Healing stages (Fig 6.11):

• Alignment & immobilization
• Hematoma
• Callus formation
• Remodeling

Divisions of the skeleton (Fig. 7.1)

• AXIAL skeleton
  - 80 bones
• APPENDICULAR skeleton
  - 126 bones

Types of Bones (7.2)

• Long bone
• Short bone
• Flat bone
- Irregular bone
- Sesamoid bone

**Skull (7.4)**
- 8 cranial bones
- 14 facial bones
- 7 associated bones
- Most cranial bones joined by sutures
- Mandible only moveable bone
- Hyoid bone

**Paranasal sinuses (7.13)**
- Air filled chambers (cavities) in bone
- Make bone/skull lighter
- Mucus membrane lines chambers => clean & moisten air
- Give resonance to voice

**Fontanels (7.14)**
- At birth cranial bones connected fibrous connective tissue.
- Spaces between bones = fontanels
- Closed by age 2
- Replaced by SUTURES

**Vertebral column (7.16)**
- Regions
- Curvatures (7.16c)
- General structure of a vertebra (7.17)
- Invertebral discs (7.16d)
- Herniated disk (7.24)

- Atlas & axis (17.b & c)
Thoracic cage

- Ribs:
  - 12 pairs: true & false (floating)
  - Costal cartilage (hyaline)
  - Intercostal muscles
- Sternum: manibrium, body, xiphoid