Appendicular Skeleton

Appendicular Bones
- 126 bones out of 206 total
- Pectoral girdle - clavicle & scapula
- Arms, wrists and hands
- Pelvic girdle - ilium, ischium, pubis
- Legs, ankles and feet

Pectoral Girdle
- Clavicle
- Scapula
  - Coracoid process - anterior
  - Acromion - posterior
  - Dorsal spine - separating supraspinous & infraspinous fossae
  - Glenoid fossa

Upper Limb
- Humerus - greater (lateral) & lesser (medial) tubercle with intertubercular sulcus between, surgical neck, epicondyles, trochlea, coronoid and olecranon fossae, capitulum, radial fossa
- Ulna & radius - olecranon, radial notch, styloid processes
- Carpals
- Metacarpals
- Phalanges

Carpal Bones
- Mneumonic
  - Some lovers try positions that two can’t handle.
  - Sally left the party to take Cathy home.
  - Scaphoid, lunate, triquetrum, pisiform, trapezium, trapezoid, capitate, hamate

Pelvic Girdle
- At birth, three separate bones on each side
- Together, they form the acetabulum
- Two sides bound at symphysis
- Together with sacrum & coccyx, forms the pelvis

Sexual Differences in the Pelvis
- Related to the need for a larger pelvic outlet in females for childbirth
- Breadth between the ischial spines greater in females
- Angle at the pubic symphysis
  - Females 90 degrees or more, less in males
• Pelvimetry
  – Pelvic inlet between the pelvic brims and sacral promontory & ant. symphysis
  – Pelvic outlet between the ischial spines and coccyx & post. symphysis

Other Skeletal Differences
• Male bones generally larger and heavier, joint surfaces also tend to be larger
• Muscle attachment points more well-defined in the bones of a male - larger size of the muscles

Lower Limb
• Femur - head, neck, trochanters
  – knock-knee vs. bowleg
• Patella - adds leverage to quadriceps femoris muscle, maintains position of tendon
• Tibia & fibula - anterior crest, medial & lateral malleolus
• Tarsals (7) - calcaneus fused of two, talus
• Metatarsals (5)
• Phalanges (14)

Pectoral vs. Pelvic Girdles
• The pectoral girdle does not directly articulate with the vertebral column
• The pectoral girdle sockets are shallow and maximize movement; those of the pelvic girdle are deeper and allow less movement
• The structure of the pectoral girdle offers more movement than strength, the pelvic girdle, more strength than movement.

Arches of the Foot
• Longitudinal - from calcaneus to metatarsals
• Transverse - from navicular to metatarsals
• Functions
  – Shock absorbers
  – Distribute body weight
  – Increase leverage during walking