

Appendicular Skeletal System

The appendicular skeletal system is made up of 126 bones. The bones in the appendicular system make up the upper and lower extremity. They attach to the axial skeleton at the pectoral girdle and the pelvic girdle. The appendicular skeleton has much more flexibility and movement than the axial skeleton but in turn is more likely to receive fracture and dislocation injuries.

Interesting Fracture Facts

- Scapula fractures are less than 1% of all fractures but are often seen in race car drivers because of the force of impact and position of the seat.
- Bar room vs. Boxer fractures- Bar room fractures typically occur at the 4th or 5th metacarpals when inexperienced or inebriated fighters land a glancing rotational punch. Boxer fractures are usually at the 2nd or 3rd after a straight jab seen by most professional fighters.
- Hip fractures can be caused by falls, but in many cases osteoporosis, or weakening of the bones, may cause the hip to break first and the person to fall as a result.
- Stress fractures may not show up on x-rays for several weeks after they begin. Often the bone has to begin to heal before the fracture site can be seen on a radiograph.

Pectoral Girdle and Upper Extremity

The pectoral, or shoulder, girdle is what connects the bones of the arm to the rib cage. It is made up of the clavicle and scapula. The arm is divided into the upper arm and lower arm. The upper arm is made up of the humerus and the lower arm contains the ulna and radius, the lower arm connects into the wrist and hand. Eight carpal bones make up each wrist. They are the scaphoid, lunate, triquetrum, pisiform, trapezium, trapezoid, capitate, and hamate. The hand has 5 metacarpals and 14 phalanges.

STUDY TIPS

To remember many parts of anatomy, come up with a mnemonic to help remember information. For instance each word of the following phrase begins with the first letter of each of the hand bones:

Sally **L**eft **T**he **P**arty **T**o **T**ake **C**athy **H**ome

Pelvic Girdle and Lower Extremity

The pelvic girdle is made up of the two sides of the pelvis. Each pelvic, or innominate bone is made up of three bones fused together: the ilium, or upper region, the ischium where we sit, and the pubis in the front. The leg bones attach into the pelvic girdle at the hip. The femur, the longest and strongest bone in the body, makes the upper leg. The tibia and fibula make up the lower leg and the patella sits at the knee where the upper and lower leg meets. The ankle is made up of 7 tarsal bones. They are the talus, calcaneus (heel), navicular, cuboid, lateral cuneiform, medial cuneiform, and intermediate cuneiform. The arch of the foot consists of 5 metatarsals, and the toes are made up of 14 phalanges on each foot.