

The **axial skeleton**, the principal supportive structure of the body, is oriented along its median longitudinal axis. It includes the skull, vertebrae, sternum, ribs, and hyoid bone. Much of the mobility of the torso is due to the multiple articulations throughout the vertebral column.

The **appendicular skeleton** includes the pectoral and pelvic girdles and the bones of the arms, forearms, wrists, hands, thighs, legs, and feet. The joints of the appendicular skeleton make possible a considerable degree of freedom of movement for the upper and lower limbs. Fractures and dislocations are more common in this part of the skeleton, but often more serious in the axial skeleton.

CLASSIFICATION OF BONES

Bones have a variety of shapes and defy classification by shape; yet such a classification historically exists. **Long bones** are clearly longer in one axis than in another; they are characterized by a medullary cavity, a hollow diaphysis of compact bone, and at least two epiphyses (e.g., femur, phalanx). **Short bones** are roughly cube-shaped; they are predominantly cancellous bone with a thin cortex of compact bone and have no cavity (e.g., carpal and tarsal bones). **Flat bones** (cranial bones, scapulae, ribs) are generally more flat than round. **Irregular bones** (vertebrae) have two or more different shapes. Bones not specifically long or short go into this latter category.

Sesamoid bones are developed in tendons (e.g., patellar tendon); they are mostly bone, often mixed with fibrous tissue and cartilage. They have a cartilaginous articular surface facing an articular surface of an adjacent bone; they may be part of a synovial joint ensheathed within the fibrous joint capsule. The structures are generally pea-sized and are most commonly found in certain tendons/joint capsules in hands and feet, and occasionally in other articular sites of the upper and lower limbs. The largest sesamoid bone is the patella, integrated in the tendon of the quadriceps femoris. Sesamoid bones resist friction and compression, enhance joint movement, and may assist local circulation.