### Skeleton Components

The skeleton is composed of fibrous and mineralized connective tissues that give it firmness and flexibility. It consists of bone, cartilage, tendons, joints, and ligaments.

* **Bone** - a type of mineralized connective tissue that contains collagen and calcium phosphate, a mineral crystal. Calcium phosphate gives bone its firmness. Bone tissue may be compact or spongy. [Bones](http://biology.about.com/od/anatomy/ss/bones.htm)provide support and protection for body[organs](http://biology.about.com/od/organsystems/a/aa031706a.htm).
* **Cartilage** - a form of fibrous connective tissue that is composed of closely packed collagenous fibers in a rubbery gelatinous substance called chondrin. Cartilage provides flexible support for certain structures in adult humans including the nose, trachea, and ears.
* **Tendon** - a fibrous band of connective tissue that is bonded to bone and connects bone to bone.
* **Ligament** - a fibrous band of connective tissue that joins bones and other connective tissues together at joints.
* **Joint** - a site where two or more bones or other skeletal components are joined together.

### Skeleton Divisions

Bones are a major component of the skeletal system. Bones that comprise the human skeleton are divided into two groups. They are the axial skeletal bones and appendicular skeletal bones. An adult human skeleton contains 206 bones, 80 of which are from the axial skeleton and 126 from the appendicular skeleton.   
  
The axial skeleton includes bones that run along the medial sagittal plane of the body. Imagine a vertical plane that runs through your body from front to back and divides the body into equal right and left regions. This is the medial sagittal plane. The axial skeleton forms a central axis that includes bones of the skull, hyoid, vertebral column, and thoracic cage. The axial skeleton protects numerous vital organs and soft tissues of the body. The skull provides protection for the [brain](http://biology.about.com/od/humananatomybiology/a/anatomybrain.htm) , the vertebral column protects the [spinal cord](http://biology.about.com/od/Nervous-System/ss/spinal-cord.htm) , and the thoracic cage protects the [heart](http://biology.about.com/od/humananatomybiology/ss/heart_anatomy.htm)and [lungs](http://biology.about.com/od/anatomy/ss/the-lungs.htm) .   
  
**Axial Skeleton**

* Skull - includes bones of the cranium, face, and ears (auditory ossicles).
* Hyoid - U-shaped bone or complex of bones located in the neck between the chin and larynx.
* Vertebral Column - includes spinal vertebrae.
* Thoracic Cage - includes ribs and sternum (breast bone).

The appendicular skeleton is comprised of body limbs and structures that attach limbs to the axial skeleton. Bones of the upper and lower limbs, pectoral girdles, and pelvic girdle are components of this skeleton. Although the primary function of the appendicular skeleton is for bodily movement, it also provides protection for organs of the [digestive system](http://biology.about.com/od/organsystems/ss/overview-digestive-system.htm) , excretory system, and reproductive system.   
  
**Appendicular Skeleton**

* Pectoral Girdle - includes shoulder bones (clavicle and scapula).
* Upper Limbs - includes bones of the arms and hands.
* Pelvic Girdle - includes hip bones.
* Lower Limbs - includes bones of the legs and feet.

### Bone Classification

Bones of the [skeletal system](http://www.mananatomy.com/body-systems/skeletal-system) can be classified into four major types. They are categorized by shape and size. The four main bone classifications are long, short, flat and irregular bones. Long bones are bones that have greater length than width. Examples include arm, leg, finger, and thigh bones. Short bones are almost the same in length and width and are close to being cube shaped. Examples of short bones are wrist and ankle bones. Flat bones are thin, flat, and typically curved. Examples include cranial bones, ribs, and the sternum. Irregular bones are atypical in shape and can not be classified as long, short, or flat. Examples include hip bones, cranial bones, and vertebrae.