

## The Structural System



The structural system provides a framework for the body. Consisting of bones, muscles and connective tissues, it gives the body not only form, but also the ability to move.

### Skeleton

The skeletal system consists of bones of many different shapes. They may be flat as in rib bones, cube shaped as in wrist or ankle bones or irregular shaped as in the bones of our spine. The majority of the skeletal bones are called long bones, because these are the type of bones that make up the arms and legs.

The skeletal system serves many different functions including:

- Providing a framework for the body in which to support the tissues and protect the vital organs.
- Acting as levers and working with the muscles to produce movement.
- Producing red blood cells within the marrow and serving as a reservoir for calcium and phosphorus.

### Joints

Joints are an area of junction between two or more bones. Joints are classified into three main types:

- Fibrous joints include the joints between the bones of the skull. They are held together by fibrous connective tissue.
- Cartilaginous joints include the joint between the pubic bones in the pelvis. They are connected to one another by cartilage.
- Synovial joints have a small space in between the bones, in which a thick fluid acts to buffer and lubricate the action of the joint. Most of the joints in the body are synovial joints. Ligaments and other connective tissues hold these freely moving joints together.

### Muscles

Muscles perform their work by contracting. The body is made up of three different kinds of muscle tissues; skeletal, smooth, and cardiac muscle. Muscles require energy, oxygen, glucose and other nutrients, in order to work correctly. These substances are brought to the cell during circulation.

### Skin

The skin is the outer boundary of the body. It is made up of specialized structures, which include the

hair, sebaceous, and sweat glands and the nails. The skin has several important functions, which include:

- Disease prevention.
- Protection of the deeper tissues of the body from mechanical or thermal injury.
- Regulation of body temperature.
- Prevention of dehydration.
- Synthesis of Vitamin D.
- Providing sensory information from the world around us.

[www.diatrofologos.com](http://www.diatrofologos.com)