

Bones

Bones are living organs that are characterized by being lightweight and hard. There are 206 bones in the adult body and around 300 bones in a baby's body. During infancy, some of the bones fuse together to form bigger or longer bones. By the age of 25, the growth process of bones is complete, which means that after that age there will be no more growth.

Bones have numerous functions in the body, amongst which are:

1. They provide structure to the body
2. They allow movement and support
3. They protect the various internal organs
4. They produce blood cells
5. They are able to store minerals important for the body. When there is a deficiency of a certain mineral in the body, the bones release these minerals into the bloodstream.
6. They can store heavy metals and other harmful elements. They detoxify the body by getting rid of these harmful substances through excretion.

The 206 bones consist of the following:

The human skull has 22 bones. The bones in the skull protect the brain and provide structure to the face. There are 6 bones in the middle ears. The smallest bone in the body is located in the middle ear. It is called the stirrup bone and it is behind the eardrum. It is only 0.1 to 0.13 inches. The throat has one bone. There are 4 bones in the shoulder. The thorax, which is the chest area from the throat until above the abdomen, has 25 bones. It is known as the rib cage and it protects the heart, the liver, and the lungs. The vertebral column, which is the spine, has 24 bones. The arms have 2 bones. The forearms have 4 bones. The hands have 54 bones. The pelvis, which is a bowl-shaped structure that supports the spine, has 4 bones. The thighs have 2 bones. The legs have 6 bones. The feet have 52 bones.

The longest bone in the human body is the femur, which is located in the thigh. The average femur is 19 inches in length and can support up to 30 times the weight of an adult.

Bones are mainly made up of calcium, phosphorus, sodium, other minerals, and collagen.

The structure of the bone consists of different layers. The *Periosteum* is the outer layer of the bone. It is a dense thin membrane that has nerves and blood vessels to nourish the bone. The next layer is the *Compact* bone, and it is smooth, white, and very hard. This is what we see when looking at a skeleton. There are many inner layers. These layers represent the *Cancellous* bone, and it resembles a sponge. *Cancellous* bone is not as hard as the *Compact* bone, but it is still very strong. Generally, the *Cancellous* bone protects the innermost part of the bone, which is the bone marrow. Bone marrow is responsible for the production of blood cells.

Name _____

Date _____

Bones (Cont'd)

Bones have different shapes. Some are long, such as the ones found in the thigh. Others are short like the ones found in the wrist and ankle. Some bones are flat, such as the ones in the skull. Others are irregular in shape like the hip bones. Others are sesamoid in shape. They get their name from the fact that they resemble sesame seeds. The bone in the knee is an example of a sesamoid bone.

Osteology is the study of bones. The study of bones can reveal a lot about the person. It can help identify the age of the person, the kind of nutrition he/she gets, and the gender of the person. It also helps tell us certain things about the culture and habits of the person. The study of osteology also helps in archaeology and solving crimes.

Protecting and strengthening the bones relies on the amounts of certain vitamins and minerals a person consumes. Consuming calcium, which is found in dairy products like milk and yogurt, helps the growth process of bones and ensures that a person builds up a reserve amount to be stored in the bones. In addition, exercising, playing sports, dancing, and even gardening are some of the best ways to help your bones grow and be strong.

Bones Questions

Multiple Choice:

1. The growth development process of bones is completed by the age of:
 - a. 18
 - b. 16
 - c. 25
 - d. 21
2. The longest bone in the body is called:
 - a. Stirrup
 - b. Femur
 - c. Patella
 - d. Tibia
3. The part of the human body that has the most bones is:
 - a. The hands
 - b. The arms
 - c. The skull
 - d. The shoulder
4. Osteology, the study of bones, can reveal:
 - a. Age
 - b. Gender
 - c. Nutritional facts
 - d. All of the above

True or False:

- ____ 5. Bones come only in 3 shapes: long, short, and flat.
- ____ 6. Gardening and dancing help the bones get strong.
- ____ 7. Bones consist of many layers.
- ____ 8. The Perisoteum protects the bone marrow.
- ____ 9. Babies have 206 bones.

Bones Answers

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