



Have you ever looked closely at a **bone**? If you eat meat, you may have seen bones in your food. Maybe you've found old bones from an animal on the beach or in a pasture. Fresh bones look and feel different from bones that are old and dried out.

Bones are **organs** that contain living cells. Fresh bones can be strong but flexible, too. When bones dry out, only the hard, nonliving part remains. This part is made mostly of minerals, such as **calcium**. Holes that once held living cells become empty spaces.

Many Different Bones

When people are born, they have about 350 bones. But many of these bones grow together during childhood. An adult **skeleton** normally has 206 bones. The smallest bones in your body are inside your ears. The largest bones are inside your upper legs.



This animal skull is dried and brittle because it no longer contains living cells.

Some bones are long and narrow, like those in your arms and legs. Other bones are flatter, like your shoulder blades or bones in your skull. Bones in your back fit together kind of like beads on a string. Bones come in many shapes and sizes, but they all have certain things in common.

Characteristics of Bones

Bones must be rigid enough to hold you up and protect your organs. But they must be flexible enough so they do not snap easily. If you press the sides of your ribs, you'll notice that you can push them in a little and they spring back out. This helps them stand up to bumps and falls. Your ribs provide a strong cage to protect your heart and lungs.

Bones also have to be light enough for muscles to lift them. If they were too heavy, you couldn't move around easily. Bones are amazingly strong for their weight. Pound for pound, bones are stronger than steel!



This **backbone** of a sea animal resembles a human backbone. Can you feel separate bones running down your back?

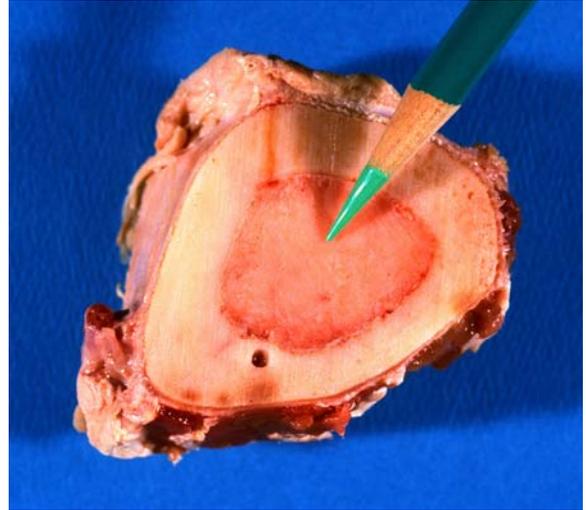
Bones also carry out other important jobs. They store minerals and make blood cells. Because bones hold the mineral calcium, they can release calcium when your body needs it. Bones also contain **bone marrow**. Bone marrow is a jelly-like substance that produces trillions of blood cells each day.

Inside Your Bones

Bones are surrounded by a thin covering of blood vessels and cells. Beneath this layer, there are two main types of bone: compact bone and spongy bone. Compact bone is hard and strong. It contains tunnels for blood vessels to pass through. Spongy bone is light. It has spaces that contain bone marrow.

In long bones, like those of your legs, spongy bone is found mostly at the ends. The long center is made primarily of compact bone that surrounds bone marrow.

Bones give your body shape. They protect your organs and help you move. Bones also produce blood cells and store important minerals that your body needs. So, remember to eat well and exercise to keep your bones healthy and strong!



This image shows bone marrow inside a bone that has been cut.