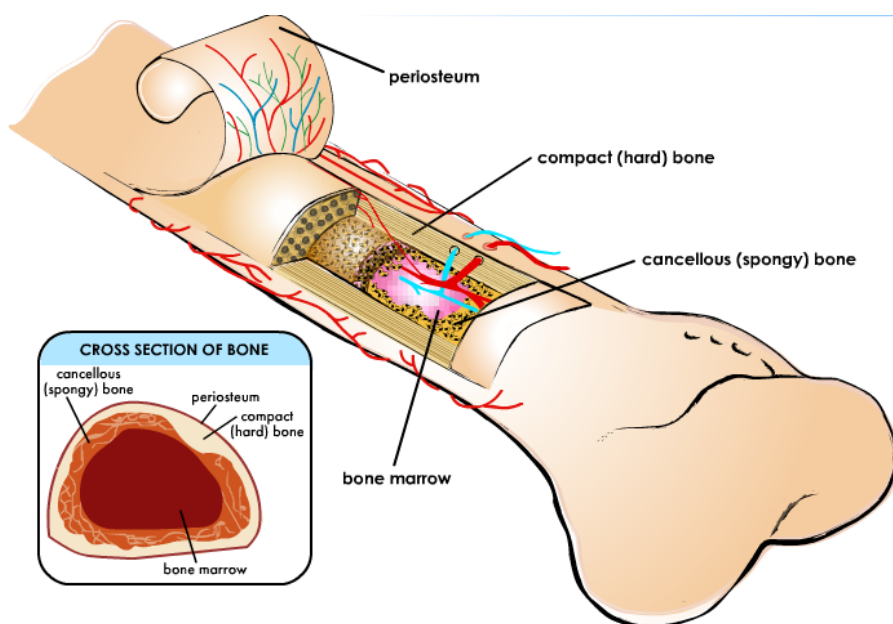


What Are Bones Made Of?

If you've ever seen a real skeleton or fossil in a museum, you might think that all bones are dead. Although bones in museums are dry, hard, or crumbly, the bones in your body are different. The bones that make up your skeleton are all very much alive, growing and changing all the time like other parts of your body.

Almost every bone in your body is made of the same materials:

- The outer surface of bone is called the **periosteum** (say: pare-ee-OS-tee-um). It's a thin, dense membrane that contains nerves and blood vessels that nourish the bone.
- The next layer is made up of **compact** bone. This part is smooth and very hard. It's the part you see when you look at a skeleton.
- Within the compact bone are many layers of **cancellous** (say: KAN-sell-us) bone, which looks a bit like a sponge. Cancellous bone is not quite as hard as compact bone, but it is still very strong.
- In many bones, the cancellous bone protects the innermost part of the bone, the **bone marrow** (say: MAIR-oh). Bone marrow is sort of like a thick jelly, and its job is to make blood cells.



How Bones Grow

When you were a baby, you had tiny hands, tiny feet, and tiny everything! Slowly, as you grew older, everything became a bit bigger, including your bones.

A baby's body has about 300 bones at birth. These eventually fuse (grow together) to form the 206 bones that adults have. Some of a baby's bones are made entirely of a special material called **cartilage** (say: KAR-tel-ij). Other bones in a baby are partly made of cartilage. This cartilage is soft and flexible. During childhood, as you are growing, the cartilage grows and is slowly replaced by bone, with help from calcium.

By the time you are about 25, this process will be complete. After this happens, there can be no more growth — the bones are as big as they will ever be. All of these bones make up a skeleton that is both very strong and very light.