

# THREE Skeletal system

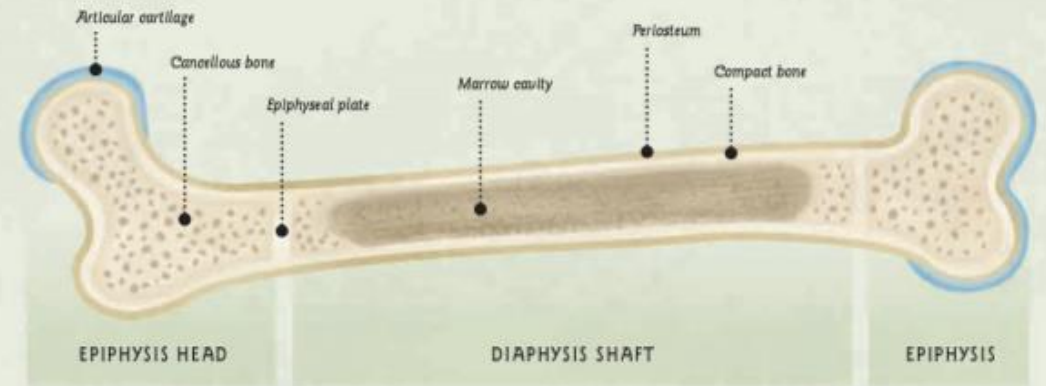
The body's skeletal system is a framework of bones that gives you your shape, helps you to move and protects your internal organs.

*How many bones are there in our bodies?*

When babies are born, they have about 300 bones, but some of these fuse together to form the 206 bones that adults have.

*How do our bones grow?*

Some of a baby's bones are made from a flexible tissue called cartilage. This tissue grows throughout childhood and is slowly replaced by bone, with the help of a mineral called calcium (which we eat and drink in things like dairy products, kale and broccoli). Around the age of 25, this growth stops and your skeleton is fully formed.

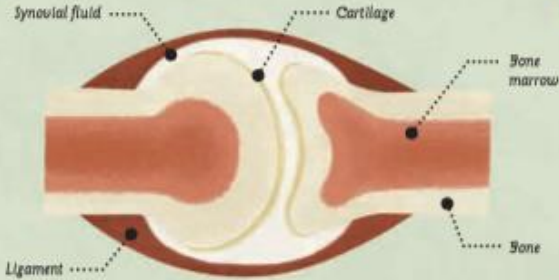


## Joints

The place where two bones meet is called a joint. Most of our joints are synovial joints, like those in our shoulders, hips, knees, ankles, toes, elbows and fingers. These help us move around.

*Did you know?*

The only bone you can deliberately move is your lower jawbone.



## SYNOVIAL JOINTS

Cartilaginous joints like these in your spine don't move as much as your synovial joints:



## CARTILAGINOUS JOINTS

Your stiffest joints are your fibrous joints, like these in your skull, which move just enough to let you grow over time.



## FIBROUS JOINTS

## How does a broken bone heal?

1.

After a bone breaks, a blood clot, followed by tissue called a callus, form around it.



2.

Then new strings of bone cells start to grow on both sides of the break line towards each other...



3.

...until the break closes up and the callus is absorbed by the new cells.



4.

Bones are so good at healing themselves that sometimes you can't even tell on an X-ray a few months after a break that it ever happened. Pretty amazing!

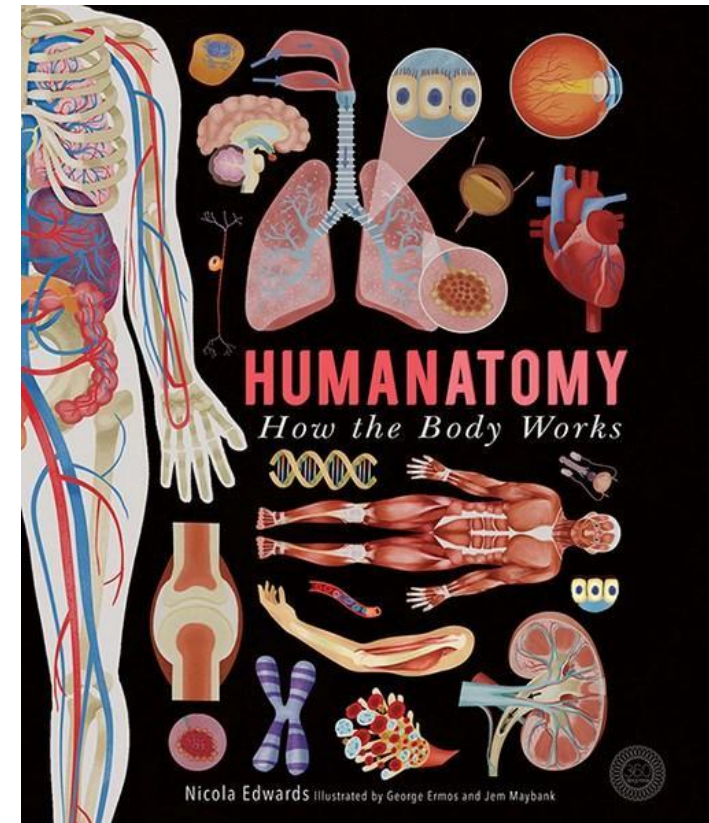


## Are teeth made of bone?

Teeth and bones have a lot of similarities. They're both hard, white and contain lots of calcium, and they're also both part of your skeletal system. But there are some important differences. Unlike bones (which are mostly made of a protein called collagen) teeth are made of pulp tissue which contains nerves and another tissue called dentine. The dentine is covered with enamel, which is the hard, shiny layer you can see on your teeth. Unlike bones, teeth cannot repair themselves when they get damaged, so it's important to take good care of them.



1. Draw a table with two columns. Label one side 'similarities' and the other side 'differences'. Complete the table by finding the similarities and differences between teeth and bones.
2. How many bones do babies have when they are born?
3. How many bones do adults have?
4. Why is there a difference of 94 bones?
5. How old are you when you stop growing?
6. Which joint has more movement: a synovial joint or a cartilaginous joint? Explain why.



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