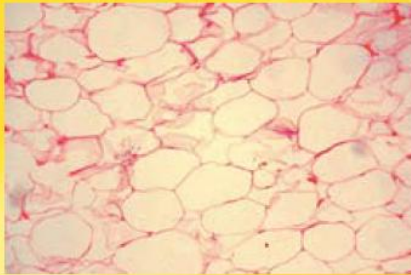
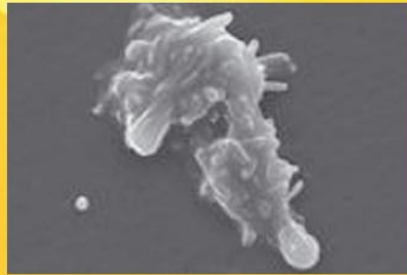




Cells are the basic unit of life for all living things. They come in all sorts of sizes, shapes and have all sorts of functions.

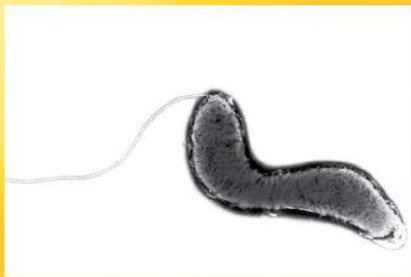


FAT CELLS

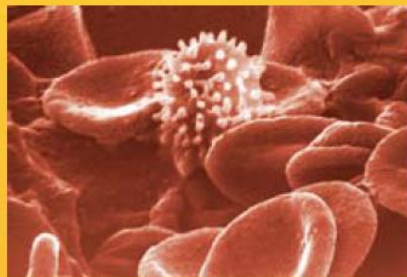


AMOEBIA

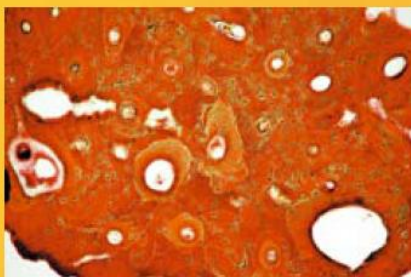
Different cells have different shapes. This is often because of their function, or the job they have to do. Take muscle cells – they have to stretch and contract. So they are long and thin. Fat cells store fat; they are round and chubby in shape.



CAMPYLOBACTER ORGANISM



WHITE AND RED BLOOD CELLS



BONE CELLS



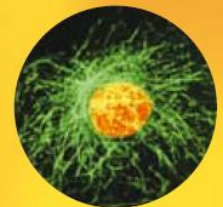
MUSCLE CELLS



STOMATA CELL



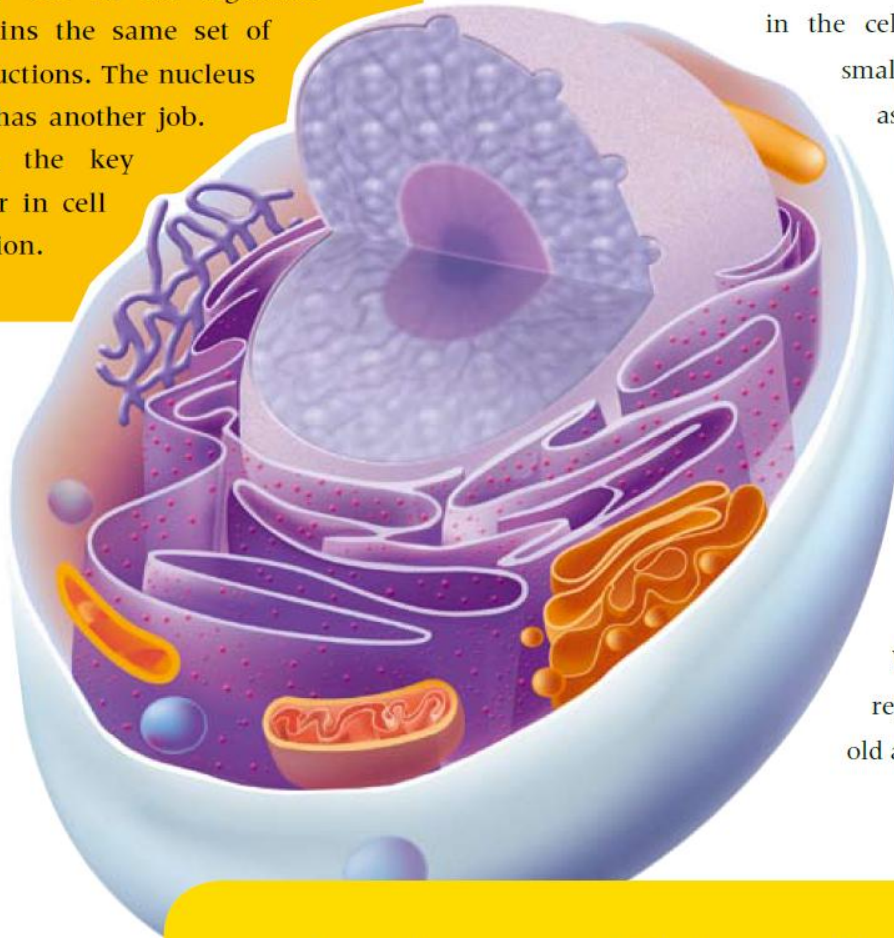
NERVE CELLS





## Background:

Everything going on in the cell is controlled by the nucleus. The instructions are coded in the chromosomes which are mostly made of DNA. Each chromosome is made of smaller parts called genes which carry the instructions. Every cell in an organism contains the same set of instructions. The nucleus also has another job. It is the key player in cell division.



**In your body, you have about 100 billion or more cells and they all came from one single cell.**

All organisms grow and reproduce in a similar way.

*Can you think why we are not just made of one giant cell?*

Cells communicate by using chemicals. These chemicals have to move through the cytoplasm. The nucleus tells the cell what to do. It has to get the message from the outside and then send out a message to the organelles

in the cell, to respond. Cells are small compared to the body

as a whole so the messages

reach the control centre

very quickly. All the cells

in your body came from

one cell. That cell had

to undergo division

into two cells.

Then those two divided

into two each and so

on, until there were

enough cells to make up

what has become you.

You are in fact constantly

replacing cells as they grow

old and die.

As you know, cells vary enormously. They have many different functions and their structure is related to their various jobs. But they all start out from the same cell.

*So what can it be that makes them change their structure and function and be able to do all the different jobs cells have to do?*

Many people work on the research into this question.

