

Body Systems: Start with Cells

It has been said that '*cells are the building blocks for all living things*'. The body is a living thing and all living things start from cells. Cells are the smallest living organisms that make up all of the body systems. Human cells cannot be seen without the help of a microscope because they are so small. Cells are surrounded by a membrane which is surrounded by a cell wall. The human body has hundreds of different cell types. Cells that combine together perform the same functions and get grouped together in categories like bone cells, muscle cells, skin cells, lung cells, nerve cells etc. Many same type cells then form tissues, millions of skin cells form skin tissue, many nerve cells form nerve tissues, many muscle cells form muscle tissues etc. The tissues then group together to form many of the body's organs like the lungs, the brain and the stomach. The cells in the body come in a variety of different shapes and sizes. All cells are made from other cells. Cells are always regenerating, the body makes over a million new cells every minute! To do this, cells separate and divide to make new cells, a process called mitosis. Injuries like cuts, scrapes and broken bones all get repaired by the cell's ability to separate and make new cells. Humans grow due to new cells being made. In the circulatory system, the blood cells take blood which contains the food and oxygen needed by the body to all parts of the body. The brain is actually made up of billions of nerve cells. The nerve cells send signals to and from our brain which is part of the nervous system. A primary function of the cell is to take in nutrition and get rid of waste. Cells also contain the hereditary information for things like eye color, height, hair texture and color to name a few. This hereditary information gets passed from cell to cell. Scientists are still researching about cells as there is much more that can be learned about cells.

- ① Explain why cells are considered the building blocks for all living things.
- ② Name 5 types of cells.
- ③ Why are cells important?
- ④ Write 3 facts about cells.
- ⑤ List 2 questions you have about cells.