How Cells Divide and Make New Cells

KS3 Ages 11-14 ⏰ 3 min read

What Are Cells?

Cells are the tiny building blocks that make up every living thing — from you to trees to bacteria. Your body contains roughly **37 trillion cells**, and they're so small you can't see them without a microscope. Every cell needs to grow and eventually make copies of itself so that living things can grow bigger and repair damage.

How Do Cells Divide?

Cells divide through a process called **mitosis**. This is how your body makes new cells to help you grow taller, stronger, and to replace old or damaged cells. When a cell divides, it splits into **two identical daughter cells**, each with an exact copy of the **DNA** (the instruction manual inside every cell).

Think of it like photocopying a document. The original cell is the document, and mitosis is the photocopier that makes an exact copy. You end up with two identical copies instead of one.

The Steps of Cell Division

Cell division happens in several stages. First, the cell copies all its **DNA** so there's enough for both new cells. Next, the cell's nucleus (where the DNA lives) breaks down, and the copied DNA lines up in the middle of the cell. Then, the cell pulls the DNA apart into two equal bundles. Finally, the cell membrane pinches in the middle, splitting the cell completely into two brand-new cells.

Think of it like splitting a sandwich in half — you start with one sandwich, and after cutting, you have two equal pieces instead of one.

Why Is This Important?

Without cell division, you couldn't grow or repair cuts and scrapes. When you get a wound, cells nearby divide to create new cells that fill the gap and heal your skin. The same process helps your bones get stronger, your hair grow longer, and your body

replace old cells with fresh ones. In fact, your body replaces millions of cells every single day!

Cell division is so important that your body does it constantly, day and night, to keep you healthy and growing.