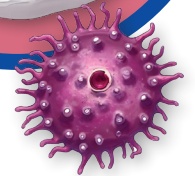
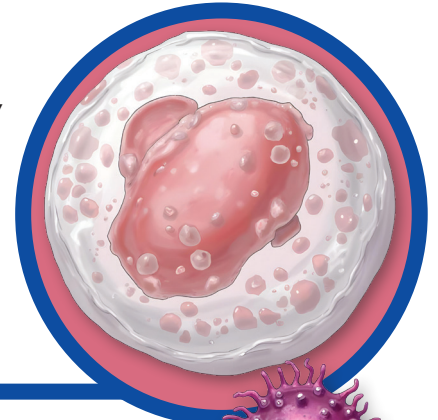


# WHAT ARE STEM CELLS?

STEM CELLS ARE SPECIAL CELLS IN YOUR BODY THAT HAVE THE UNIQUE ABILITY TO BECOME MANY DIFFERENT TYPES OF CELLS.

Think of them as 'blank slates' that can turn into skin cells, muscle cells, nerve cells, or even blood cells. They help your body grow, repair damage, and replace old or dead cells.



## WHY ARE STEM CELLS IMPORTANT?

Your body constantly needs new cells. A cut, a break, a burn – all require repairing. Stem cells are the 'healers'.

## THERE ARE TWO MAIN TYPES OF STEM CELLS:

**1 EMBRYONIC STEM CELLS** – Found in early-stage embryos, these can become any type of cell in the body.



**2 ADULT STEM CELLS** – Found in different tissues (like bone marrow or the brain), these can turn into some, but not all, cell types.



## HOW ARE STEM CELLS USED IN MEDICINE TODAY?

Stem cells treat diseases and injuries.

**+ BONE MARROW TRANSPLANTS** (Stem cell transplants). Doctors have been using stem cells for decades to treat blood disorders like leukaemia (blood cancer) and sickle cell disease. Bone marrow contains hematopoietic stem cells (HSCs), which can create new blood cells. In a bone marrow transplant, doctors replace damaged blood cells with healthy ones from a donor.



### + GROWING NEW SKIN FOR BURN VICTIMS

For people with severe burns, doctors can use stem cells to grow new sheets of skin in a lab. These can then be transplanted onto the patient's body, helping them heal faster.

### + REPAIRING SPINAL CORD INJURIES

Stem cell therapy is being tested to help people with spinal cord injuries regain movement.

### + TREATING BLINDNESS

Some types of blindness happen when the cells in the eye stop working. Scientists have been able to use stem cells to replace damaged eye cells and restore sight.

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