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Special stem cells

Stem cells are special cells because:

- they can divide and produce many copies of themselves and;
- they have the ability to become other types of cell.

Because of this, scientists are exploring ways in which stem cells can be grown and used to replace diseased tissues and organs in the body.

Stem cell therapy provides hope for treatment for diseases such as Parkinson's disease, Alzheimer's disease, diabetes and cancer.



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Different types of stem cells

There are different types of stem cells:

- **Embryonic stem cells** - these are grown in the laboratory from cells found in the early embryo and can make nearly all the cell types in our body.
- **Tissue or adult stem cells** - these are found in our bodies all our lives and can make the cell types for that particular tissue.
- **Induced pluripotent stem cells (iPSCs)** - these are adult cells that have been reprogrammed to have some of the properties of embryonic stem cells. They offer great hope for the future and do not have the ethical concerns associated with embryonic stem cells.

