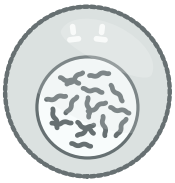
The Cell Cycle: Mitosis

Mitosis is a form of cell reproduction in which a cell makes an identical copy of itself. Mitosis is used for growth and repair all over an organism's body.

Learn more about the phases of mitosis below!

BEFORE MITOSIS



Interphase

- The cell grows and makes an identical copy of its DNA.

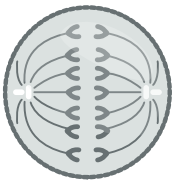
MITOSIS

Prophase

- **Chromatin** (unwound DNA) winds up tightly into **chromosomes**. Each chromosome has two identical copies of DNA, called **sister chromatids.**
- The **nuclear envelope** (membrane around the nucleus) breaks down.
- **Spindles** form to help the chromosomes move.

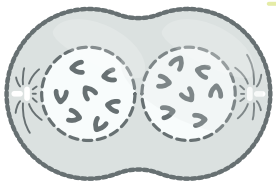
Metaphase

- The chromosomes line up in the center of the cell.



Anaphase

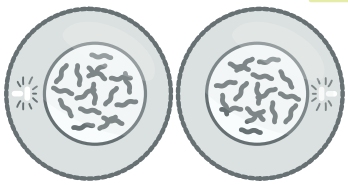
- The spindles pull the two sister chromatids of each chromosome apart, resulting in two sets of identical chromosomes.



Telophase

- The spindle dissolves and nuclear envelopes form around the chromosomes of each cell.

AFTER MITOSIS



Cytokinesis

- The cytoplasm divides and the two cells are completely separated.