




Cell Cycle & Cell Division

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Content of the Lectures

-  Cell Cycle
-  Cell Division

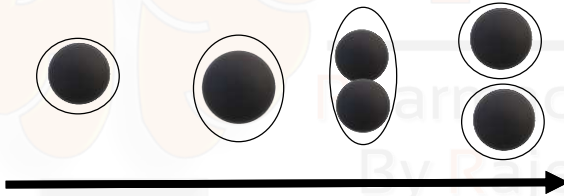
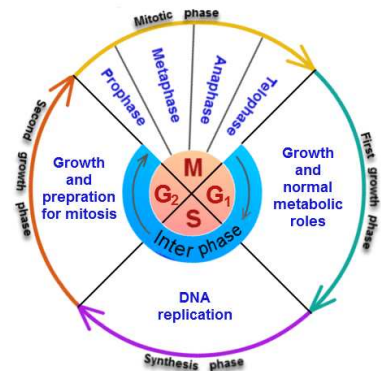
Cell Cycle & Division

- Cell is the fundamental unit of life.
- The major life process is cell division for the reproduction, developments, repair and regenerations.



Cell Cycle & Division

- Cell Cycle** is the order sequence of events that occur in a cell in preparation for cell division
- Cell Division** is the process of cell multiplication or formation of daughter cells.



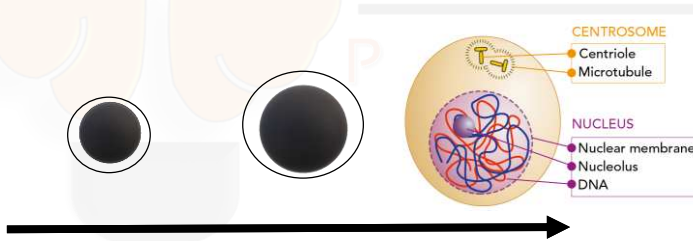
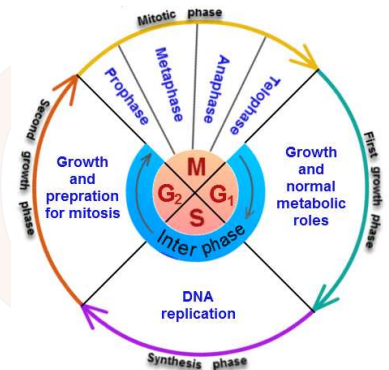
Cell Cycle & Division

🔦 **Cell Cycle** is a four-stage process

Interphase

- 🔦 **1. Gap 1 or G1 Stage**- increases in size
- 🔦 **2. S Stage**- DNA replication
- 🔦 **3. Gap 2 or G2 Stage**-prepare for Cell division

***Chromatin** replicates and become tightly coiled forming double chromosome, called **chromatids**



Cell Cycle & Division

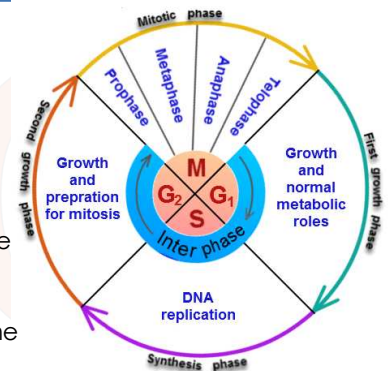
🔦 **Cell Cycle** is a four-stage process

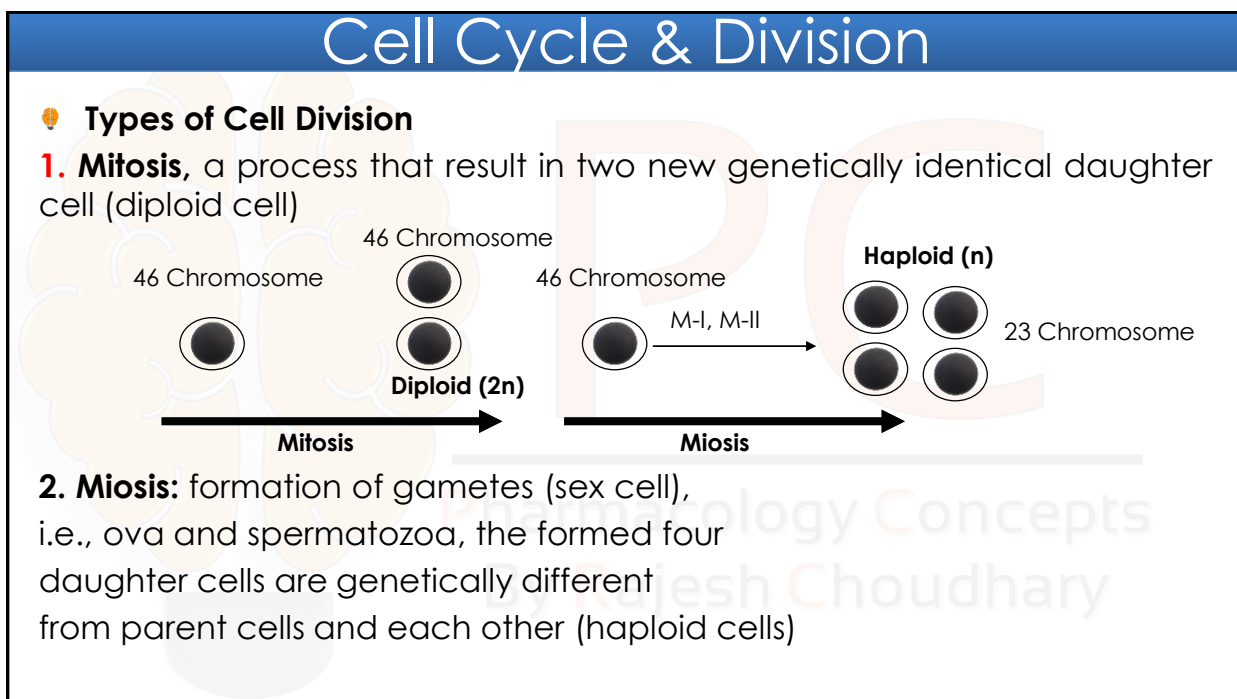
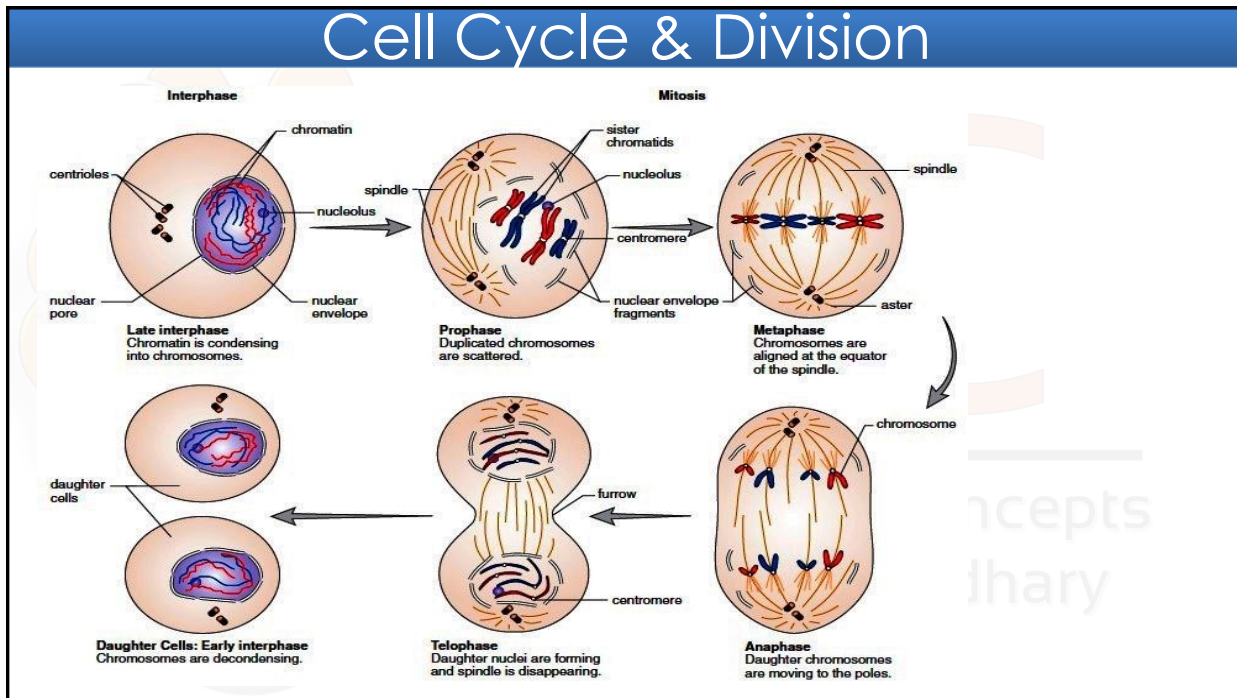
4. Mitosis (M) stage: Cell division stage

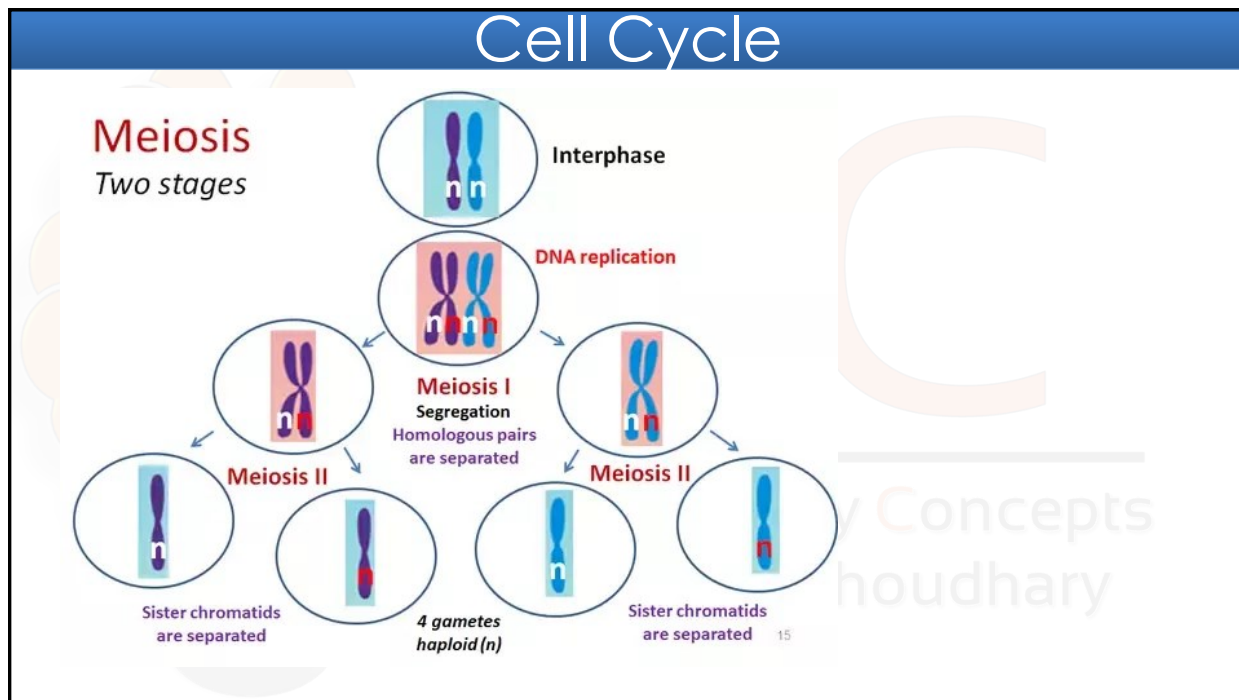
🔦 **Mitosis**, a process that result in two new genetically identical daughter cell (diploid cell)




- 🔦 M stage has major two stages: **1. Karyokinesis** in which nucleus divides and **2. Cytokinesis** in which cytoplasm divides.
- 🔦 4 phase: Prophase, Metaphase, Anaphase & Telophase.










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