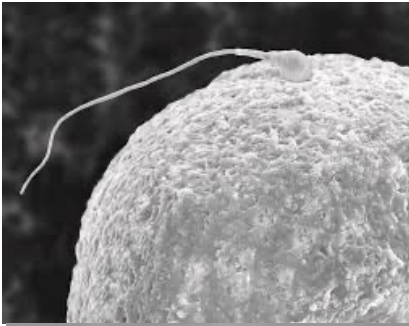


Cell division and organism growth

Mitosis

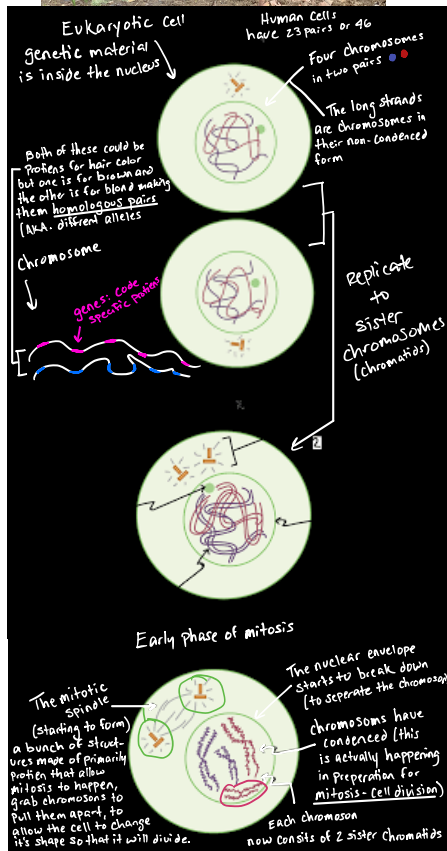


haploid - half made genetic (Aka: egg/sperm) material  
 diploid - when the fuse (egg & sperm)

Once fertilized the egg will begin to divide and replicate



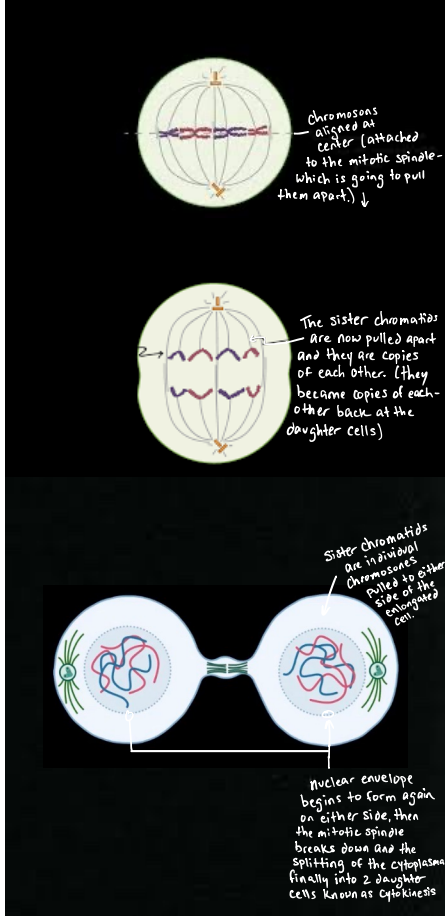
You with trillions of cells (30-40 trillion)



two daughter cells (from a previous round of mitosis)

sister cells (two copies of daughter cells replicated and connected at the center)

Early phase of mitosis



← Middle phase of mitosis

← Continuation of middle phase of mitosis

← Late phase of mitosis

Mitosis isn't only about growing an organism it's also about repair for an organism.

### Mitosis:

**(My definition):** mitosis is the process where cells are grown and maintained, through cell division.

**(Dictionary definition):** mi-to-sis | mī'tōsəs | noun (plural mitoses | -sēz |) Biology

a type of cell division that results in two daughter cells each having the same number and kind of chromosomes as the parent nucleus, typical of ordinary tissue growth: the single large egg cell subdivides by repeated mitosis | [count noun] : each mitosis seems to be associated with an increase in calcium. Compare with meiosis.

### Mitotic Spindle:

**(My definition):** the strings that grab and tear chromosomes apart

**(Dictionary definition):** The mitotic spindle is the macromolecular machine that segregates chromosomes to two daughter cells during mitosis. The major structural elements of the spindle are microtubule polymers, whose intrinsic polarity and dynamic properties are critical

***for bipolar spindle organization and function.***