

Organisms that reproduce sexually contain two types of cells

- 1) Somatic Cells  $\rightarrow$  uses mitosis  
 $\rightarrow$  any cells that are not sperm or egg
- 2) Reproductive Cells  $\rightarrow$  sperm or egg  
 $\rightarrow$  uses meiosis

- 1) Cells that divide by mitosis are known as somatic cells.  
 muscle, brain cells

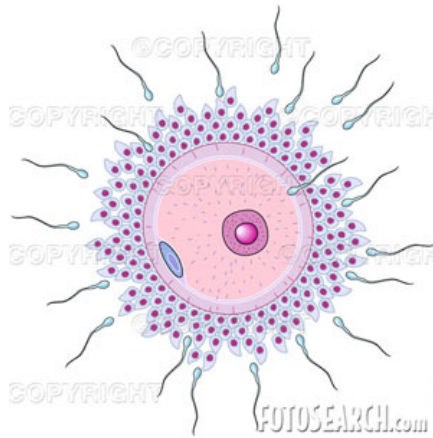


They are diploid, which means that they have the full amount of chromosomes. symbol for diploid is  $2n$ .

Humans

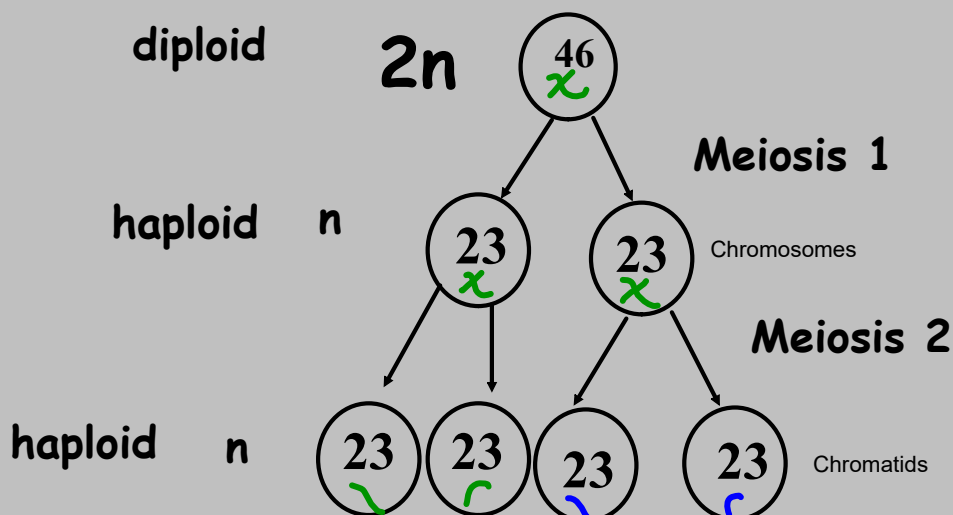
$\rightarrow$  46 chromosomes

- 2) Reproductive cells produce sex cells that contain only half the number of chromosomes through a process called meiosis.

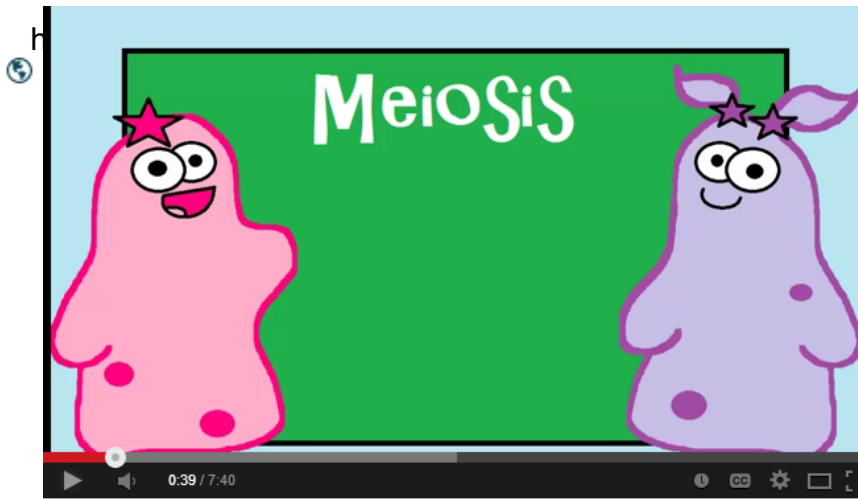


They are haploid, which means they only have half the chromosome number. Also called  $n$

Meiosis has two stages. In the first stage, you go from 46 chromosomes to 23 chromosomes (the homologous chromosomes go to opposite poles). In the second part, the chromosomes divide (just like mitosis). The end result is 4 daughter cells that are all haploid.







Meiosis: The Great Divide  
<https://www.youtube.com/watch?v=VzDMG7ke69g>

## Attachments

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Genes\_\_Genetics\_\_and\_DNA.mp4