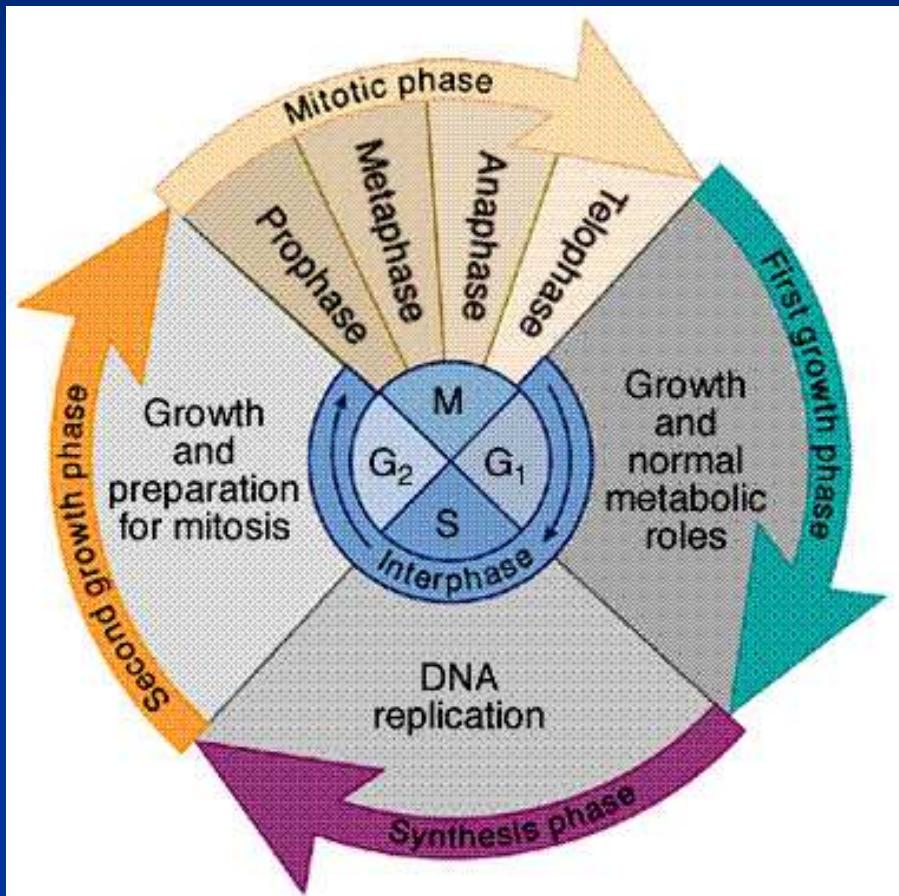


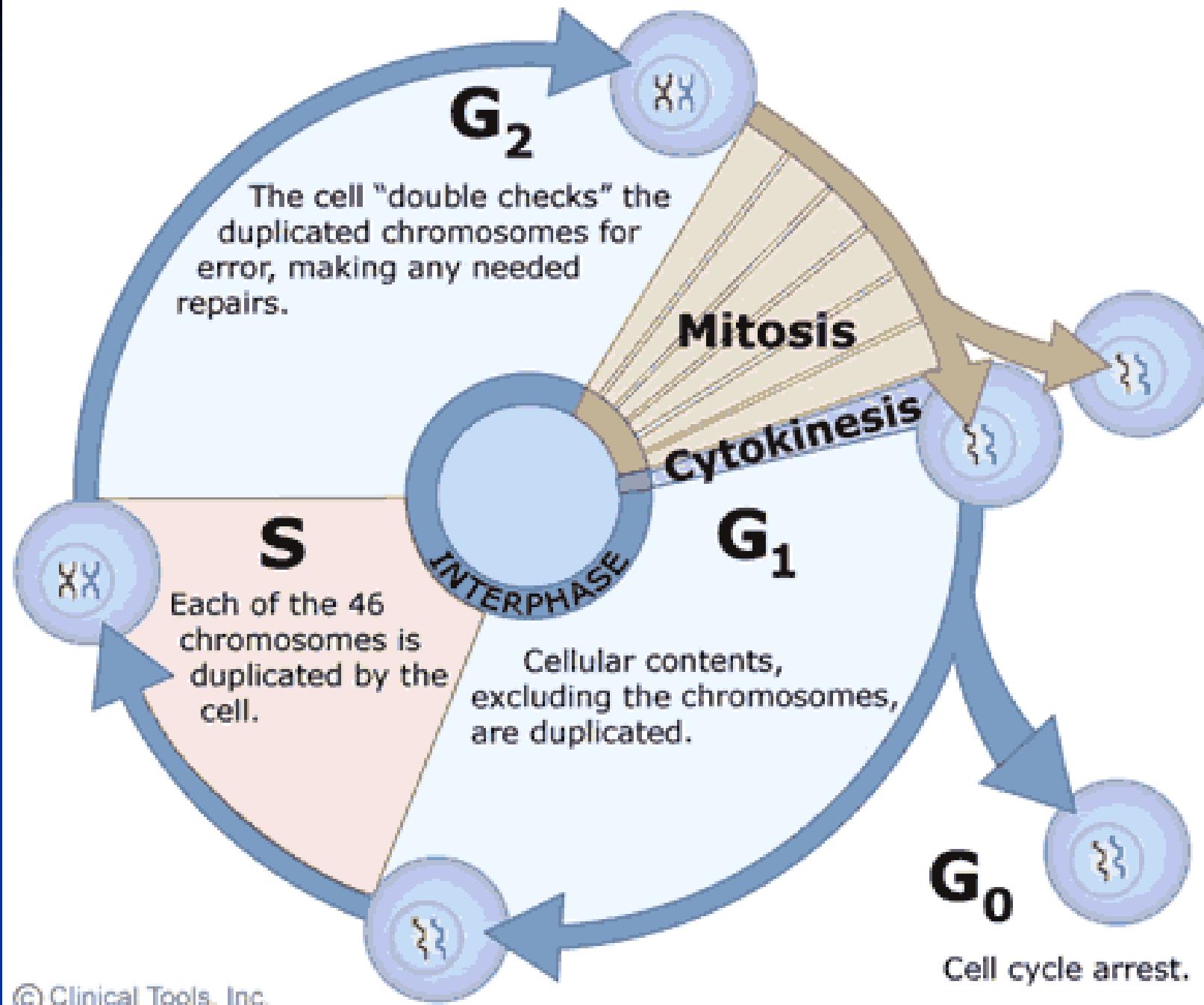
Cell cycle

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The cell cycle:



- The lifespan of different cell types varies
 - some cells such as nerve cells never divide once they are formed.
- This figure represents the lifespan of a typical cell.
 - From the point of view of mitosis, the cell is in Interphase and is "resting", but this is actually the time when the cell is performing its normal bodily function, whatever that may be.

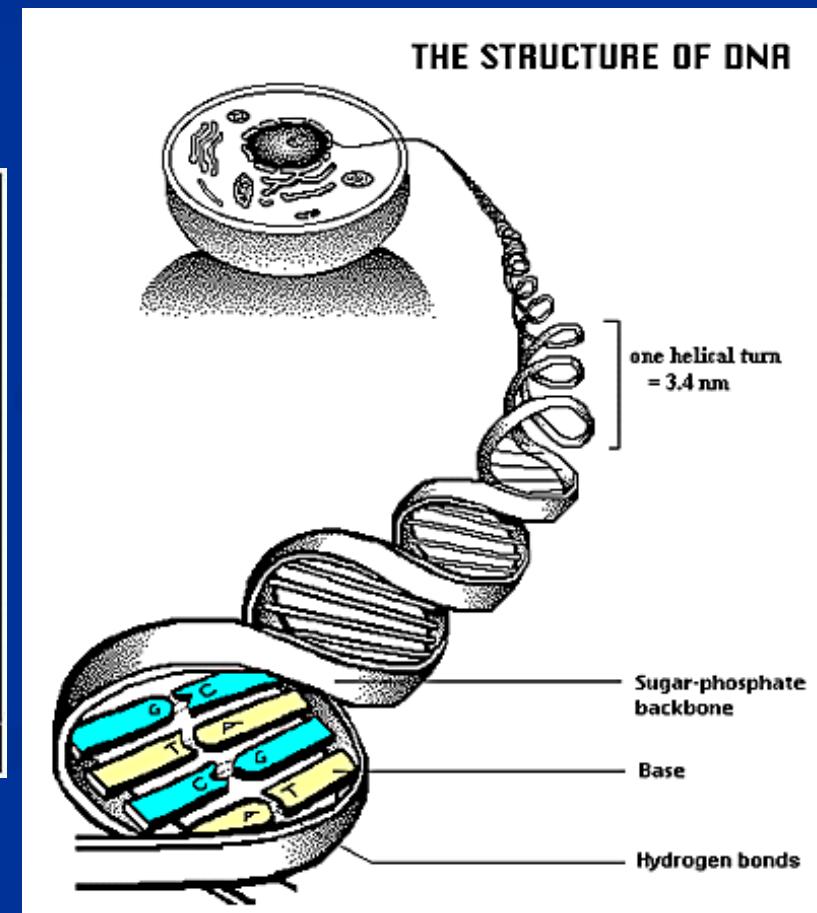
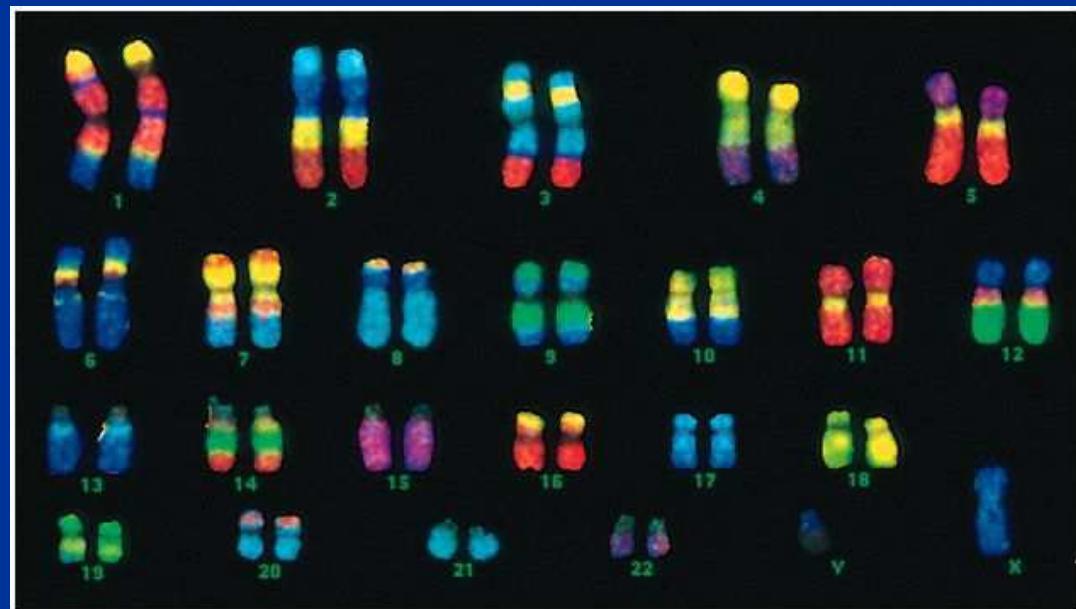


G1

- The cell is doing its everyday job
 - Metabolizing
 - Making proteins!
- At this time the chromosomes each have just one molecule of DNA.
 - Chromosomes with one strand of DNA are called unduplicated or unreplicated chromosomes.

What do the chromosomes look like?

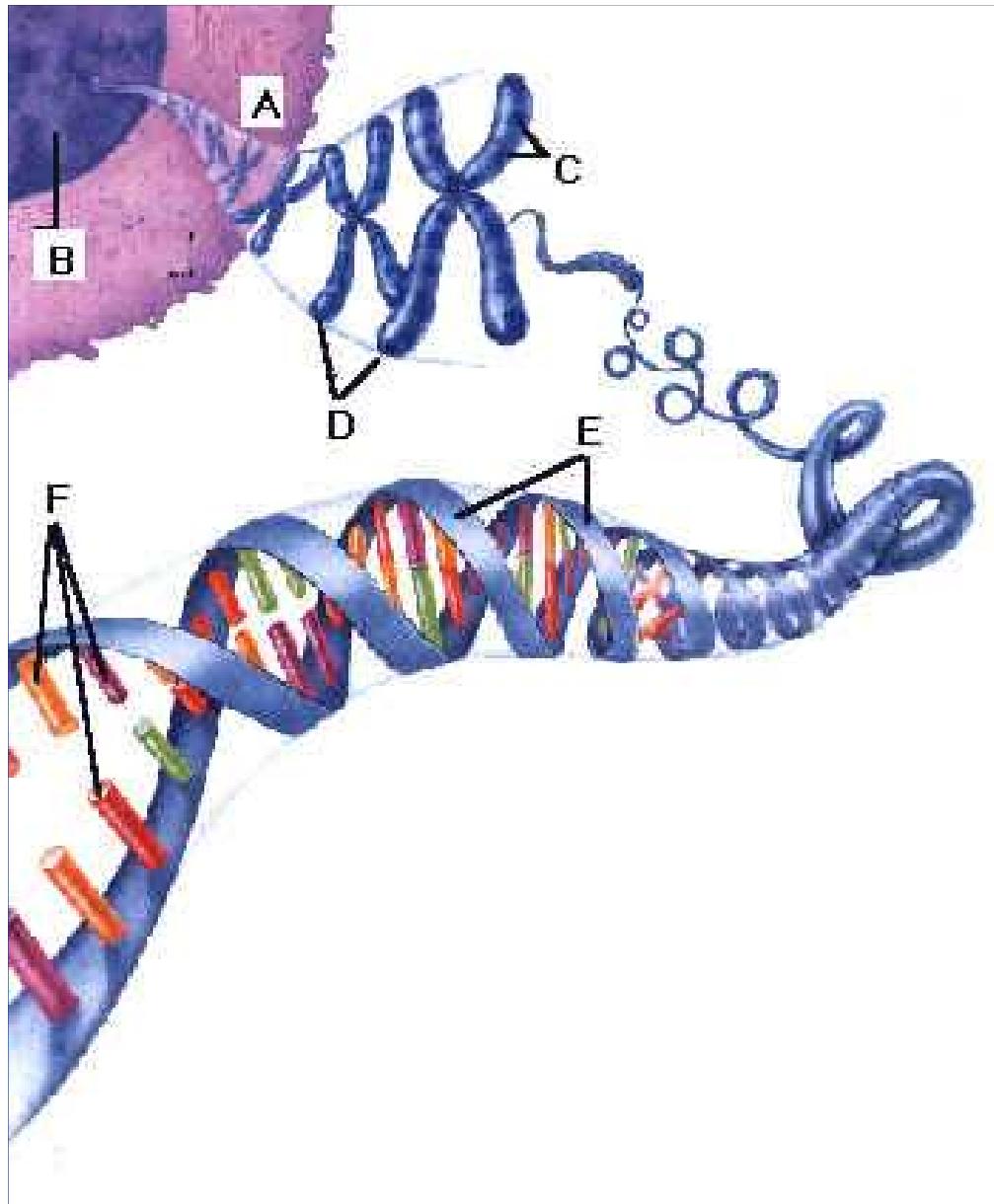
What do they contain?



DNA

- Stands for Deoxyribose Nucleic Acid
- Every living thing has DNA
- It is too small to see, but under a high magnification it can be seen and appears like a twisted up ladder





- All living things are made up of cells
- Most plant and animal cells have a nucleus
- Inside the nucleus are chromosomes
- Chromosomes are made of long strands of tightly coiled DNA
 - *If you stretched out the DNA from a human cell, it would be about six feet long!*

What is the connection?

So....What is DNA?

- DNA is hereditary material
- Genetic material codes for proteins, which lead to the expression of traits
 - Ex. DNA codes for a protein that makes your eye color (a genetic trait)
- Genetic material reproduces and is passed down from one generation to the next
- DNA mutates infrequently

What is DNA used for?

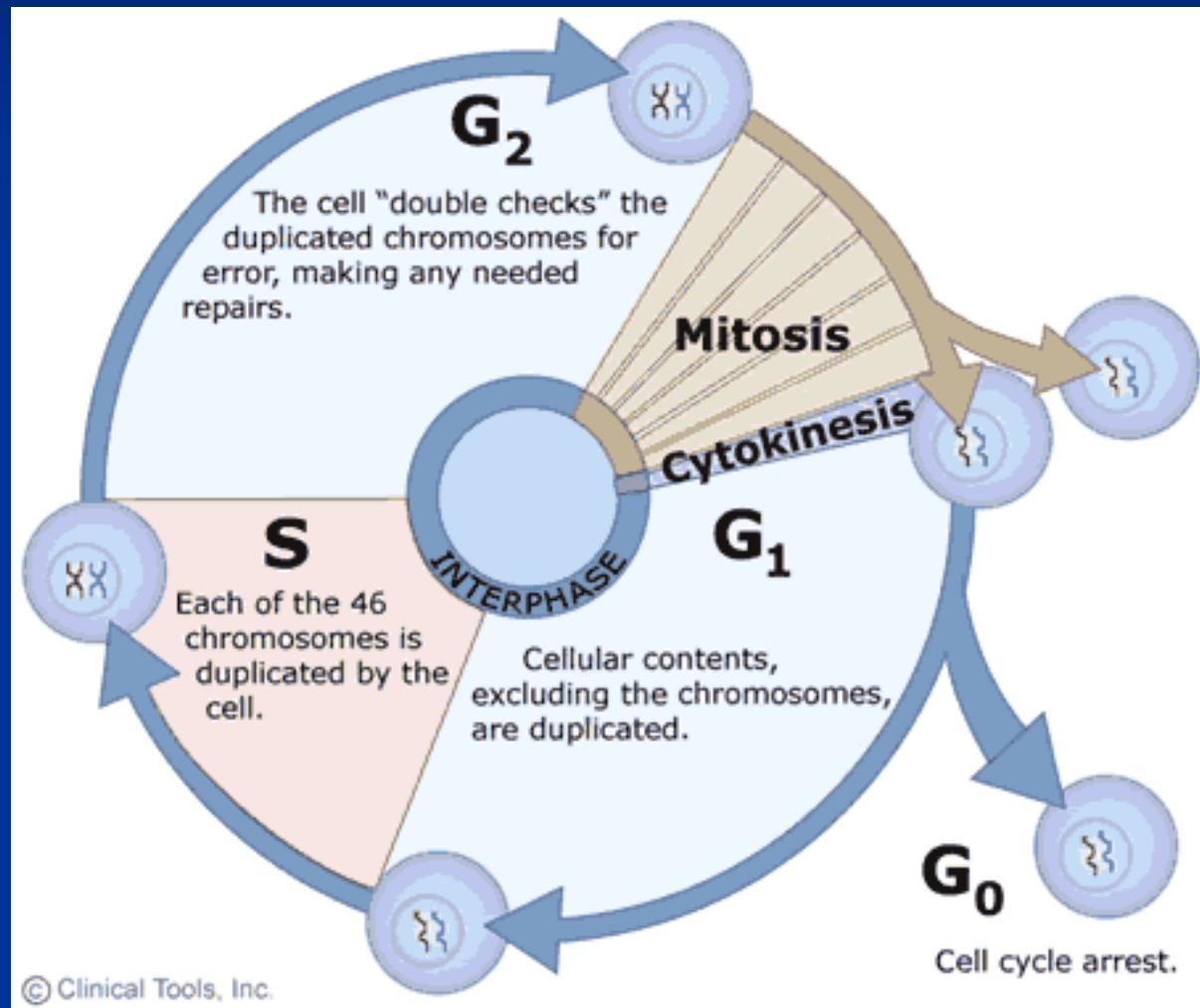
- To make proteins!

What is the difference between DNA and RNA?

DNA

RNA

So what is the most important thing that happens in G1 phase?



How are proteins made?

