

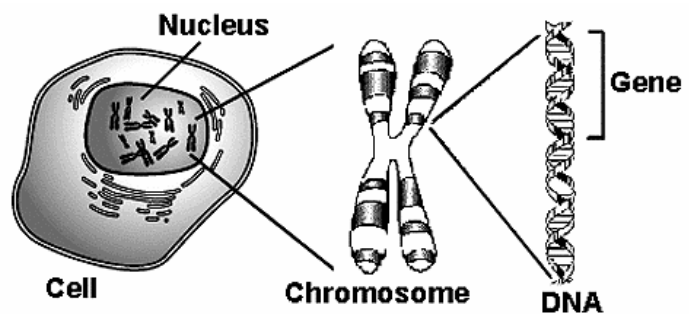
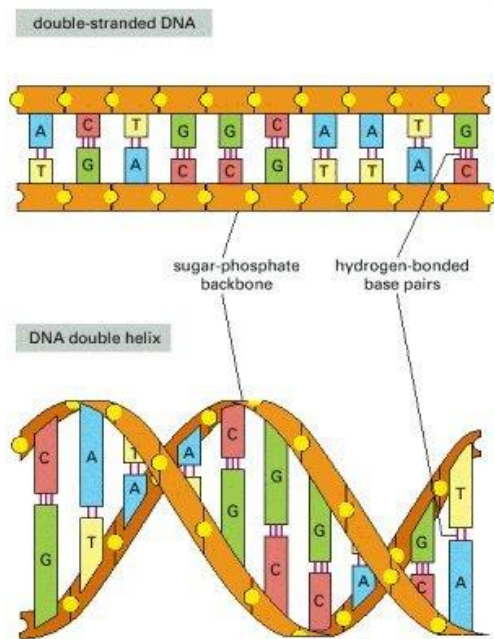
The DNA Story of My Body

By Jim Myers

Bill Bryson wrote the book, *A Short History of Nearly Everything*, in it is the following very long sentence:

“Not one of your pertinent ancestors was squashed, devoured, starved, stranded, stuck fast, untimely wounded, or otherwise deflected from its life’s quest of delivering a tiny charge of genetic material to the right partner at the right moment in order to perpetuate the only possible sequence of hereditary combinations that could result eventually, astoundingly, and all too briefly — in you.”

Bryson’s sentence is the beginning of “*The DNA Story of My Body*.” The “*tiny charge of genetic material*” is **DNA** - deoxyribonucleic acid. **DNA** is a code that is written in **a four letter chemical alphabet** – **A** is adenine, **T** is thymine, **G** is guanine and **C** is cytosine. **A** is always linked to **T**, and **G** is always linked to **C**.



A **gene** is a specific section of DNA.

Genes are part of **chromosomes**, which are found in the **nucleus** of **cells**.

Humans have around 19,000 genes. That is more genes than a chicken, about the same number of genes as a cat, and fewer genes than an earthworm or a tomato.

Humans have about 19,000 genes.



More than a chicken.



About the same as a cat.

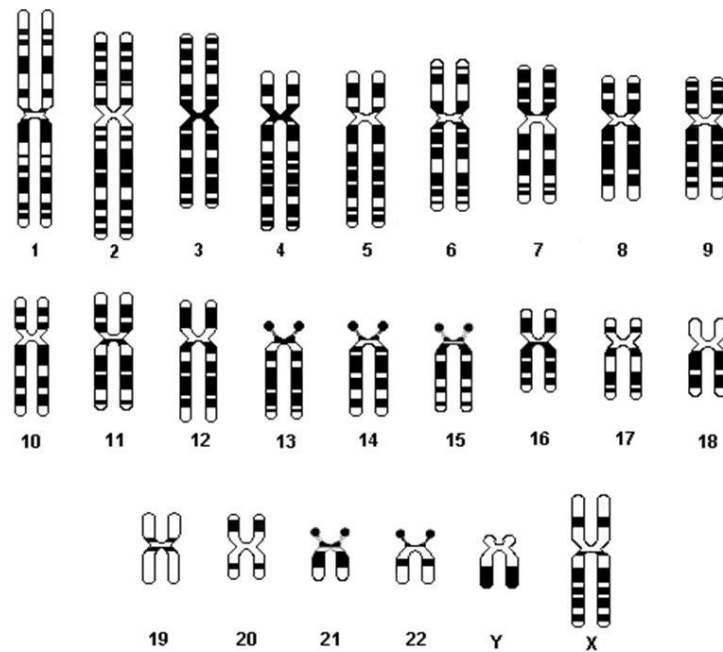


Fewer than an earthworm.



Fewer than a tomato.

Each cell normally contains **23 pairs of chromosomes** (46 chromosomes in total).



22 pairs of chromosomes **are the same in all people**. The 23rd pair, the sex chromosomes, and it differs between males and females.

- *Females have two X chromosomes.*
- *Males have one X and one Y chromosome.*

The DNA code contains **instructions for making physical bodies** -- *eyes, ears, skin, fingernails, hearts, brains, livers, feet, bones, stomachs, elbows, skin, etc.* A complete DNA code of a human body is called a genome. The human genome is written in **3 billion DNA letters** and it is one very long sentence. It has been estimated that if we were to print it out, *it would fill a space about the size of 800 bibles.* **But the DNA code in all humans is over 99% the same.** And, a complete copy of the genome is stored in every cell of the human body, which contains approximately **37.2 trillion cells**.

It is very important for people to understand this recently discovered fact about the human body.

Genetic evidence has undermined the idea of racial divisions of the human species and rendered race obsolete as a biological system of classification. Race therefore should no longer be considered as an objective category. While the scientific foundation for race is now disputed, racial factors in sociological and historical contexts continue to be relevant. Often in these cases, the adjective “racial” is more appropriate than the noun “race.”

The DNA code also contains **epigenetic memories**, **genetic instructions for human functions** and probably a lot of other things that scientists have not figured out yet. But this lesson from science also teaches us some very important wisdom.

*I am a genetic creature that has a unique DNA code,
but I am also over 99% genetically the same as every other person.*

I have shared this information with you to raise your awareness of this very complex scientific field. Now you are ready to begin **Exploring The DNA Story of Your Body**.

Choose Life. Do Tov!
Shalom