

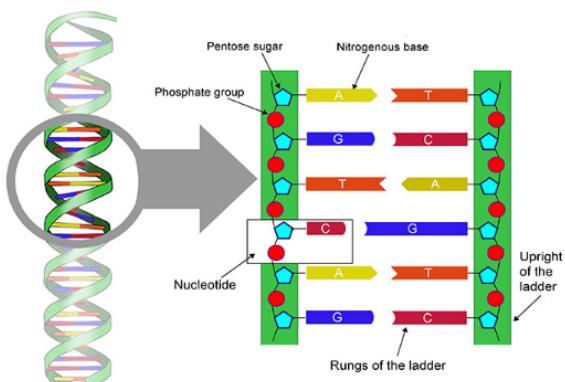
## Conception!

By Jim Myers

**What is life?** Dr. Francis S. Collins, the director of the international director of the Human Genome Project from 1993 until 2021, quoted H. L. Menchen:

“For every complex problem there is an answer  
that is clear, simple, and wrong.”

Then he said, “We must embrace the complexity of the problem and seek sophisticated and multicomponent solutions.” The Human Genome Project’s signature accomplishment – generating the first sequence of the human genome – provided fundamental information about the human blueprint, which has since accelerated the study of human biology and improved the practice of medicine. **DNA** stands for **d**eoxyribonucleic **a**cid. It is crucial for storing genetic information and guiding the development and functioning of living organisms. **Its structure allows it to replicate and pass genetic instructions from one generation to the next**, forming the basis of modern genetics and biotechnology.



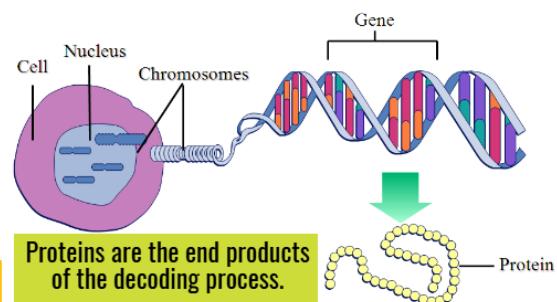
**Our DNA Code consists of three billion letters & a copy is in every cell in the body!.**

**Humans have about 20,000 genes.**

Our DNA code is written in a four letter chemical alphabet – A (adenine), T (thymine), G (guanine) & C (cytosine).

Notice that A is always linked to T and G is always linked to C.

A gene is a specific section of DNA and genes are part of chromosomes, which are found in the nucleus of cells.



More than a chicken.

About the same as a cat.

Less than an earthworm.

Fewer than a tomato.

We are members of one of three million species with a DNA code.

Our goal is to create an awareness of this very complex subject. Take a few moments to let your brain absorb the information in the graphic above.

Most of us have a DNA story like the one below Bill Brice wrote below:

“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.”<sup>1</sup>

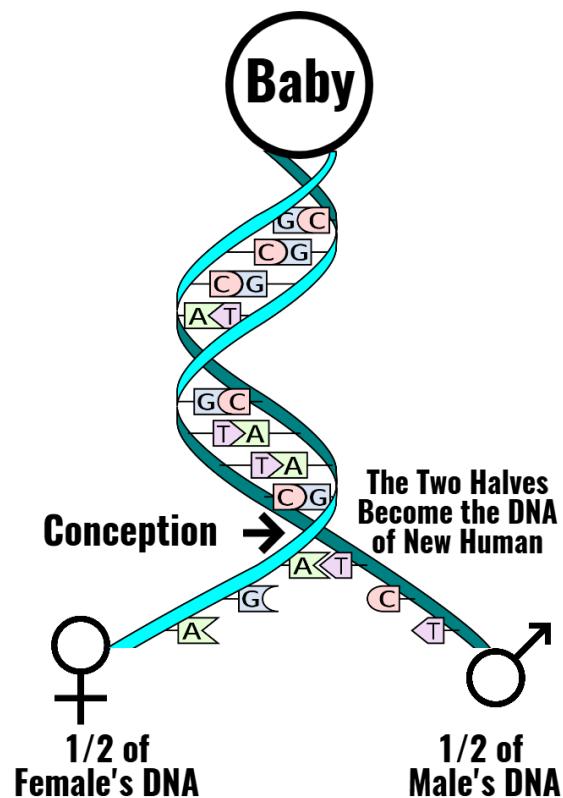
Interpretation: “For some unknown reason a male and female had sex that resulted in a **conception**.”

Conception is the joining of a sperm and egg, also known as fertilization. In most cases, conception occurs in a woman’s fallopian tube in the hours or days following sexual intercourse. However, in cases of assisted reproduction, particularly in vitro fertilization, conception can occur in a lab.<sup>2</sup>

Each parent contributes half of the genetic information (DNA) needed to make a person. When the sperm and egg combine, they create one complete set of instructions. A zygote is the very first cell that forms when two special cells come together:

**Sperm (from dad) + Egg (from mom)**  
**= Zygote (first cell of new baby)**

- It’s just ONE cell at first
- It contains ALL the genetic information needed to build a complete human
- It starts dividing immediately (one cell becomes two, then four, then eight...)
- Every person on Earth started as a zygote.<sup>3</sup>



<sup>1</sup> Bill Bryson, *A Short History of Nearly Everything*

<sup>2</sup> <https://www.verywellhealth.com/conception-5115035>

<sup>3</sup> <https://www.omegapediatriics.com/zygote-in-your-childs-development/>