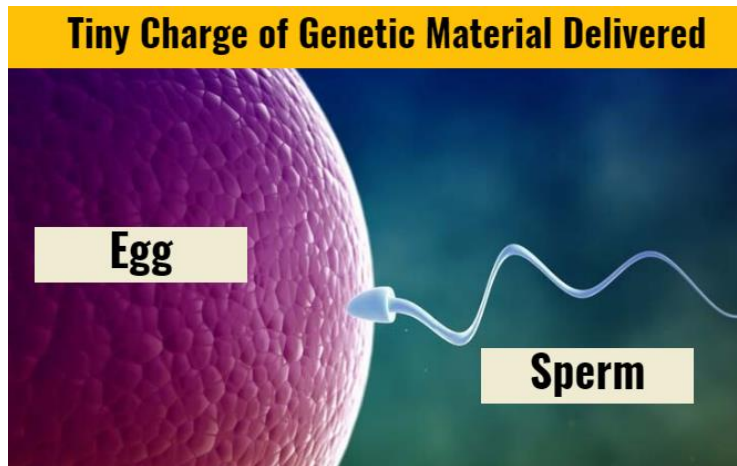


# I am a Genetic Creature

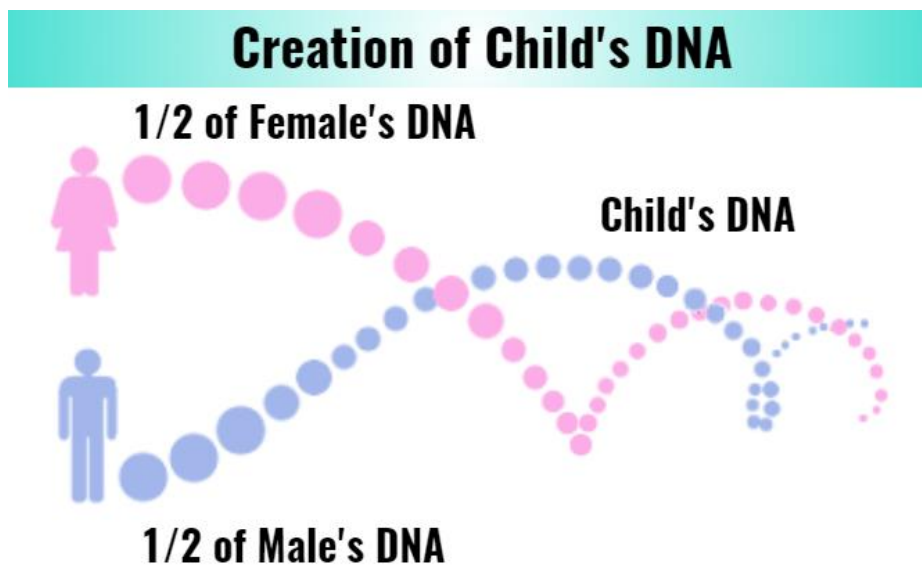
By Jim Myers

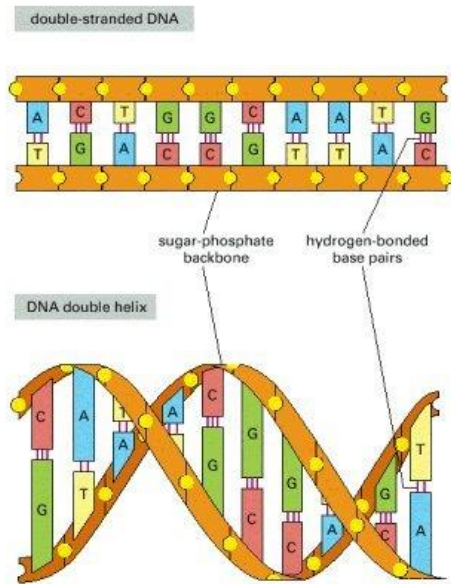
Bill Bryson wrote *A Short History of Nearly Everything*. One of his most profound observations is summed up in his words below.

*“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.”*



***“The right moment”*** results in **conception**, which can take place as soon as *three minutes or up to five days later*. **Implantation** (when the fertilized egg attaches to the uterine wall) occurs five to 10 days after fertilization. *Each person contributes one-half of the DNA that will create a new human.*





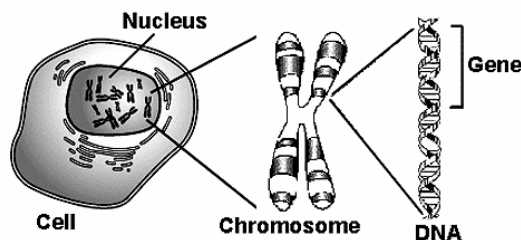
The “*genetic material*” is **DNA** (*deoxyribonucleic acid*). A male contributes one half of a baby’s DNA and the other half comes from a female.

- The **DNA code** is written in **a four letter chemical alphabet** – **A** (*adenine*), **T** (*thymine*), **G** (*guanine*) & **C** (*cytosine*).
- **A** is always linked to **T** and **G** is always linked to **C**.
- **3 million species** have a DNA code. Our DNA code has **3 billion letters**.

The DNA code contains **instructions for making physical bodies** -- *eyes, ears, skin, fingernails, hearts, brains, livers, feet, bones, stomachs, elbows, skin, etc.* It also contains **epigenetic memories, genetic instructions for specific functions** and a lot other things science has not figured out yet.

A complete copy of your DNA code is stored in each cell of your body. The average human body contains approximately **37.2 trillion cells**. The body replaces itself with **a largely new set of cells every seven years to 10 years**, and some of our most important parts are revamped even more rapidly.

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



## Comparing Our 25,000 Genes To These



We have more than a chicken.



We have about the same as a cat.



We have fewer than an earthworm.



We have fewer than a tomato.

## Stories for Families Choosing Life (001.070223)

Each cell normally contains 23 pairs of chromosomes (46 chromosomes in total). Twenty-two of the pairs of chromosomes **are the same in all people**. The 23rd pair, the sex chromosomes, differs between males and females. **Females have two X chromosomes.** **Males have one X and one Y chromosome.**

### **The DNA Code & Early Functions**

| Conception | Development   |
|------------|---|
| 5 weeks    | Heart begins to beat.   |
| 6 weeks    | Facial features began to form.  |
| 8 weeks    | Arms, legs, fingers, nose and upper lip.  |
| 9 weeks    | Eyes developed & loses tail.  |
| 10 weeks   | Kidneys, intestines, brain, and liver starting to function; fingernails and toenails forming.                                     |
| 11 weeks   | Bones beginning to harden and genitalia developing externally.  |
| 14 weeks   | Kidneys are producing urine and can make facial expressions.  |
| 16 weeks   | Sex detectable  |
| 19 weeks   | Skin is wrinkly and is covered by protective, waxy coating; length about 6 inches and weighs about 8 1/2 ounces.                  |
| 23 weeks   | Sense of movement has developed.  |
| 24 weeks   | Taste buds developing, brain growing very quickly, hair may be growing.   |
| 27 weeks   | Lungs developing, sleeping and waking up at regular intervals, opening and closing his eyes, sucking his fingers.                 |
| 28 weeks   | May be dreaming, has eyelashes, eyesight is improving, billions of neurons developing in brain.                                   |
| 32 weeks   | Fingernails and toenails developed, starting to plump up.   |
| 34 weeks   | Lungs and central nervous system is continuing to develop, skin has become soft and smooth, filling out and getting even rounder. |
| 39 weeks   | Full-term and ready for life outside the womb.  |

Every person's Genetic Story is just like mine. **The DNA codes of all humans are 99% the same!** We are all Genetic Creatures. We had no choice in whose DNA combined to make our bodies, but their DNA could cause us to have important health consequences later. DNA only determines part of what a person is. The same two people may also play a major role in creating the other part – **We are social creatures.**

#### **SOURCES:**

<http://en.wikipedia.org/wiki/DNA>

<https://www.23andme.com/gen101/genes/>

<http://ghr.nlm.nih.gov/handbook/basics/howmanychromosomes>

[How Long Does It Take to Get Pregnant After Sex? \(verywellfamily.com\)](http://www.verywellfamily.com/How-Long-Does-It-Take-to-Get-Pregnant-After-Sex/)