

Basic Terms in DNA Testing

Looking into DNA testing can be confusing at times. Here are some DNA terms that will help you out.

DNA

DNA stands for Deoxyribonucleic acid. DNA is the substance inside each and every cell in your body that tells that cell how to divide. When you were first formed from your mom's egg and your dad's sperm, you got one half of your DNA from each one. The two combined to make your own unique DNA, in a single cell. That one DNA split, and you had two cells. They kept splitting, and soon you were born. Since you got one half of your DNA from your mom and one half from your dad, DNA testing can see how you compare to those people ... and you can work your way back through the family tree.

Chromosome

Chromosomes are what make up DNA. Human beings have 23 chromosomes in their DNA. These are long, paired threads. In each chromosome pair, you have one thread from your mom and one from your dad. The 23rd chromosome is what makes you male or female. If you have two X chromosomes in that pair, you're female. If you have one and one Y, you are male. Since your mom has two Xs, she had to give you an X. Your dad had an X and Y in his DNA, so he is who randomly determined (depending which sperm got to you first) whether you were a boy or a girl.

Y-Chromosome Testing

Because only males have the Y chromosome, and only a father can give one to his son, this is perfect for DNA testing purposes. If you have two lines that are father-son related, and supposedly have a common male ancestor, you can use Y-DNA testing to see if this is true or not.

Markers

A human gene is MASSIVE and cannot be compared letter to letter. It would take years to do that. Instead, researchers have come up with certain key spots, or "markers". They choose the markers that are easiest to work with, and compare just those marker locations. If all of the markers match, they know the genes have a very high probability of matching.

Mitochondria

Mitochondria are the powerhouses of the cell. In fact, George Lucas was so intrigued with them that they inspired his "miticlorians" in his Star Wars movies. Mitochondria are passed only from a mother to her children. So while a son can get the mitochondria, he cannot pass them down to HIS children. Therefore, mtDNA testing is perfect for tracing up female family lines.

Buccal

Most genealogy tests nowadays do not involve any blood! It is COMPLETELY painless. You are given a plastic "spoon". You scrape that gently along the inside of your cheek. This is called a buccal test. The gentle scraping takes off a few skin cells, just like rubbing your hands together releases a tiny cloud of dead skin cells. You send the spoon back into the testing company, and VOILA you are done.

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