

Genealogy: To DNA or not to DNA?

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DNA has become so familiar to genetic genealogists. We hear them talking, using strange terms that some of us have never heard before. We are left shaking our heads, afraid to admit that we don't understand what the letters DNA stand for. Let me explain.

DNA or Deoxyribonucleic acid, is considered the blueprint from which our body is built from. DNA is a genetic record of our family tree. All of the genome, which is one complete haploid set of chromosomes of an organism, was passed down in the family before it ended up in us.

There are three distinct kinds of DNA used in genetic genealogy.

1. Y-DNA is passed down only in the male line of the family, same as the last name. This test looks at the direct paternal line down through the generations of a family. This DNA test is exclusive to men only.

2. Mitochondrial DNA (mtDNA) is passed down intact through the female line of a family. Both men and women inherit their mtDNA from their mothers, but only women can pass it on to the next generation. When two people share the same mtDNA they will have a common ancestor along the female line of their families. Both men and women are eligible for this test.

3. Autosomal DNA testing is the kind that works across all lines of a family, both male and female. People that share the same autosomal DNA will have common ancestors. However, further analysis would be required to determine to which family line they are connected.

The autosomal DNA test is the latest tool developed for genealogy and very quickly helps to identify relatives and cousins across many family lines. Each of our parents contributed half of our autosomal DNA, grandparents a quarter, great grandparents one eighth and so on. As we move further back in our ancestral line, we get less and less genome from past generations.

What we must keep in mind is that our ancestors passed their DNA down to many other descendants within our family. This is the reason that we consider testing our DNA, to identify these other descendants. This test should give us what kind and how much DNA these descendants have in common with us. This is the "genetic" part of genetic genealogy. The "genealogy" part of genetic genealogy comes from our family pedigrees as we discover the matches from our descendants.

There are three major companies doing genealogy DNA testing. They are, Family Tree DNA, Ancestry DNA and 23 and Me. A fourth company affiliated with National Geographic called Geno2.0, tests mainly for scientific emphasis.

There are advantages to using more than one company, however this will increase your cost but at the same time increase your chances of finding matches to your family.

If you should decide to use DNA to further search for family members, a word of caution if privacy is a concern to you. Some of the genetic genealogy companies have agreements with the pharmaceutical industry to "share" your DNA data for research purposes. If your DNA data is sold to pharmaceutical industry, who else could access it for a price? Also, something for you to think about: What if insurance companies decide to use your DNA results for insurance purposes, etc. These are just a few of the issues to consider before you jump onto the DNA bandwagon. You can check this out on Google at "The Legal Genealogist." At this time to my knowledge, the only genetic genealogy company that is "not sharing" DNA data with other industry is Family Tree DNA.

Sources: <http://www.yourgenealogytoday.com> and <http://www.legalgenealogist.com>

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