

July 2017 Genealogy Tip-DNA Testing

As interest in DNA testing for purposes of genealogical research continues to increase, many people are curious about which tests are used for genealogy, and what the differences are between them. There are three main tests used for genealogical research. The three major direct-to-consumer companies offering these tests—Family Tree DNA, 23andMe, and Ancestry DNA—have been joined in 2016 by new additions MyHeritage DNA and Living DNA. Each of these products, and the types of tests they offer, have strengths and weaknesses. Find a brief summary of the popular genetic DNA tests following:

Autosomal DNA SNP (atDNA) Testing: This type of test examines samples of the 22 chromosomes inherited from each biological parent. Since an individual inherits 50% of these chromosomes from each parent, this test will draw results from both the male and female genetic inheritance, so both men and women can directly use this form of testing. It is the most popular form of genetic DNA testing and is available through AncestryDNA, 23andMe, MyHeritage DNA, Family Tree DNA's Family Finder, and Living DNA.

Y Chromosome (Y-DNA) Testing: This test reveals variations in the Y chromosome, which is passed exclusively from father to son. It is used to research a direct male line in doing genetic ancestral research. Since females do not possess a Y chromosome, when a female wants this type of research for looking at the male family line, she will need to recruit a male relative for testing purposes. This type of testing is offered by Family Tree DNA, 23andMe, and Living DNA.

Mitochondrial (mtDNA) Testing: Mitochondrial DNA is inherited exclusively from the mother and is relevant to the direct female line only. It will not be passed on by the male to his offspring, but males can still test for it in cases where there is specific interest in the maternal line. This test can help find out if a person has descended from the same female ancestor. This type of test is available through, Family Tree DNA, 23andMe, and Living DNA.

The size of the database of the testing company is important to consider in DNA testing because when a testing company analyzes a DNA sample they use comparison of samples they have obtained from everyone they have tested in order to obtain results for an individual.

None of the companies mentioned in this tip are being specifically endorsed or recommended. They are included as information if you are considering getting someone's DNA tested to use the results in genealogical research.

Here are a couple of resources if you want to enquire further regarding genealogical DNA testing. The subject can become quite complex.

From the National Health Institute U.S. National Library of Medicine
<https://ghr.nlm.nih.gov/primer/testing/ancestrytesting>

GENIE1-Website of Louise Coakley, member of the Genealogical Society of Victoria, the Society of Australian Genealogists (from where she has obtained her Certificate of Genealogical Research).
<http://www.genie1.com.au/>

This tip can be found on the OC Public Libraries Intranet Site under Genealogy Resources, then click on Genealogy Monthly Tips.

