

[DNA: Six Limitations & Building Your Confidence with DNA Testing](#)

While each day may bring new stories of DNA success, it is not always easy to get the best results from your DNA testing because your expectations may be unrealistic. Adoptees find their birth families, donor – concealed children call up their biological fathers and genealogist breakdown brick walls to uncover their ancestral origins which may prove to be impossible to ascertain. Or others caution you not to take the test because claiming your privacy is at risk or casting doubt on the test accuracy. This posting sets the record straight that there are six areas about DNA tests that need to be discussed about what they can and can't do, allowing you to set realistic expectations.

- **You only need one kind of DNA tests.** While your research problem may only require you to purchase and administer one DNA test but depending on your research goals you may need to examine all three kinds of DNA tests available. Each test serves a different purpose and you'll have to do some research to determine which is best for you.
 - a. Autosomal DNA: It covers your ethnicities. You get half from your mother and half from your father.
 - b. Y-DNA: passed on from father to son
 - c. MTDNA or Mitochondrial is used to trace a direct maternal line
- **You can get DNA from stamps or hair samples.** The answer is yes but we can't quite use this technology yet. Science continues to evolve but not available at this time.
- **DNA tests** can pinpoint locations where your ancestors lived. Locating your ancestor's tribe or location is the holy grail of genetic genealogy. But it is quite elusive just as the word at the necessity is enough to get some genealogist excited but there are conflicting opinions about what the word really means. This is because over time, there can be vast geographical migrations of ethnicity.
- **Your results are 99.9% accurate.** Unfortunately, biogeographical DNA results are only estimates so they are not meant to be precise.
- **DNA can tell me how I'm related to someone else.** DNA tests can be great tools in helping you find your living relatives but you'll need to supplement your results with good old-fashioned genealogical research.
- **The government or insurance companies can use your DNA against you.** Are you nervous that your DNA test results end up in an online database? You can take some comfort in knowing that testing companies take your privacy seriously. They won't integrate your results into online matching databases without your consent furthermore, health insurance companies are forbidden by law to use genetic information to deny coverage or charge higher premiums.

Tools of the DNA Trade

Because DNA research is changing rapidly through modern science, it is a fast-moving field that is getting better with time and should not be avoided much like computers 30+ years ago when they were new and basically not a proven commodity for education, research and improving others areas of life today. To aid you in the technical jargon, here are a glossary of genetic genealogy terms that are key to using and understanding your test results so you don't get tripped up by advertising schemes or ignorance when exploring the world of DNA tests.

Autosomal DNA(atDNA): DNA is the nucleus of a cell that is passed down from parents to their children: studying this material can provide information about both maternal and paternal lines

Cousin–matching: feature of most testing companies that compares test makers DNA samples and provides estimates about the age genealogical relationships between them.

Ethnicity estimate: a testing companies best guess about the geographic origin of the test takers DNA, usually presented as percentages from various regions.

Genetic information nondiscrimination Act (GINA): act of Congress passed in 2008 forbidding employers and health insurance companies from using genetic information to make employment or coverage decisions.

Haplogroup: classification of individuals who have similar Y– DNA and mtDNA, used to make inferences about groups ancient origins.

Marker: location along DNA that is examined when analyzing DNA and comparing it with other test takers samples.

Mitochondrial DNA (mtDNA): DNA that is passed down from mothers to their children; studying this material can provide information about maternal lines.

Reference population: group of individuals used by a testing company to represent the genetic makeup of a particular geographic region; essential ingredient of ethnicity estimates

Special sample: extract of DNA from a source other than a traditional saliva sample or a cheek swab, such as an archive stamp or envelope.

Y-chromosomal DNA (DNA (Y-DNA)): DNA that is passed down from fathers to their sons; studying this material can provide information about the paternal line.

Now that you have been presented six common DNA myths with appropriate answers towards DNA testing implications, I encourage you to visit Diahan Southard's website for informative DNA resources and answers about DNA testing at: <http://www.yourdnaguide.com>. There, you will find many topics covered suitable and realistically for the layperson to get oriented to better understand the world of DNA testing. In addition, she offers a free DNA user-guide and a newsletter that are highly recommended.

Here's a sample of DNA-related articles and videos of what is offered presently on her web site that might be helpful to you to take you to the next level of DNA insight. Diahan writes regularly for many family history magazines focusing in DNA for laypeople and presents nationally at family history conferences.

- How Am I Related to My DNA Matches?
- Check Out this Shareable Video of Your mtDNA Results
- Best DNA Ethnicity Report? And the Answer Is....
- Sisters Reunite after a Lifetime Apart: A Must-Watch Documentary
- Help! AncestryDNA Match with Unlinked Tree
- DNA Testing To Identify a Birth Parent
- How to Build the Best Family Tree for DNA Matches
- MyHeritage AutoClusters: How They Work
- Best DNA Tests for Family History

Closing Comments with Homework: Get Familiar with the Major DNA Testing Companies

Hope you have enjoyed these first two postings on DNA testing. Although there is much to learn, do not hesitate to inquire and learn more about the benefits of DNA testing. In closing, there's also invaluable

resources on Diahan's website at: <https://www.yourdnaguide.com/resources>. In particular, I like how she covers the more popular DNA testing companies to become familiar with in a short but rather informative article entitled: "Get the Most Out of Your DNA Testing Company" and "Best DNA Tests for Family History" both found on the above URL link cited above. Note: Diahan will be presenting four clinics at the RootsTech 2020 Conference in Salt Lake City, February 26-29, 2020.

Using AncestryDNA

Using 23andMe

Using Family Tree DNA

Using Living DNA

Using MyHeritage DNA

Best DNA Tests

for family history

