guY-chromosome DNA is only passed from fathers to sons. Therefore, it can only give information about your father’s paternal line. Only men can be tested. It is relatively stable from one generation to another so it is useful for surname studies. It is less stable than mitochondrial DNA so it is less likely to survive for a long time after death to aid in identification of old remains.

Mitochondrial DNA (“umbilical DNA”) is only passed along the umbilical cord from mothers to their daughters AND sons. Therefore, it can only give information about your mother’s maternal line. Both women and men can be tested. Mitochondrial DNA is the most stable of the DNA used for genetic genealogy. Therefore, it is the most reliable for tracing deep ancestry.

Autosomal DNA is passed from both fathers and mothers to both daughters and sons; BUT it is recombined (mixed) up before it is passed on. Each person gets about half of their DNA from each parent but it will be a different mix than that received by a sibling. Both men and women can be tested. Since it gets remixed with each generational transfer it is only useful to trace back a few generations.

Background reading:

Check out my blog, “Dr D Diggs Up Ancestors” http://blog.ddowell.com. Read the particular posts on:

5. Autosomal DNA, April 24, 2010.
10. Should we DNA Test the "Older Generation"? August 4, 2011.
12. Dr D finally meets Your Genetic Genealogist, June 16, 2011.
15. We Also Collect & Preserve, April 22, 2014  
16. Autosomal Dominant Inheritance: Brugada Syndrome; and  
17. Our DNA Day Miracle, April 25, 2014

David Dowell, *Crash Course in Genealogy*, 2011, Chapter 10. @ [www.Amazon.com](http://www.Amazon.com)


International Society of Genetic Genealogists is a free society for those who try to keep each other up to date with the rapidly evolving field of genetic genealogy. The society’s website can be found at [http://www.isogg.org/](http://www.isogg.org/)

Check out the rich array of resources that can be found by clicking the icon.

Also see: [http://www.isogg.org/wiki/Before_You_Buy](http://www.isogg.org/wiki/Before_You_Buy)  

DNA Testing Companies for Genealogy:

- 23andMe: [www.23andMe.com](http://www.23andMe.com) autosomal DNA (also health information when cleared by FDA)
- Family Tree DNA: [www.ftdna.com](http://www.ftdna.com) autosomal DNA, mitochondrial DNA & y chromosome DNA