

# DNA & Genealogy

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- Where do you get your DNA?
  - There are 23 pairs of chromosomes in a normal human cell.
  - You get autosomal (atDNA) from both parents, so everyone has atDNA. (Goes back 5-6 generations only)
  - Only a man gets Y-DNA from his father. (Goes back hundreds of years.)
  - Both a man and a woman get mtDNA from their mother. (mtDNA goes back hundreds of years. This is your mother's line: your mother's mother's mother's etc. and mutates very little.
  - Everyone has an X-chromosome. That determines your sex.  
<https://www.23andme.com/gen101/origins/>
- DNA testing should **supplement** your traditional genealogical research.
- What company should I order my DNA kit from?

**Autosomal — atDNA** — This is the test most people talk about:

- **Ancestry.com** — The largest database of testers @ five million people. Plus you can attach DNA results to your tree on Ancestry.com. This is the best test to order if you have or plan to have to tree on Ancestry.
  - **23andMe** — atDNA — Second largest database. You can also get health information if you order that test.
  - **FamilyTree DNA** — Third largest database. They offer atDNA, Y-DNA, and mtDNA tests.
  - **MyHeritage** — Fourth largest database. atDNA test only. You can upload your results from other companies to their site for free.
  - **Living DNA** — They are able to attribute your ancestry to up to 21 regions of the British Isles, meeting the need of those who want more detail about their British heritage specifically. <https://www.livingdna.com/>
  - **National Geographic Helix DNA** uses mitochondrial DNA to trace migration patterns and is of limited usefulness for genealogists at this time.
- **Y-DNA & mtDNA Tests** – Currently FamilyTree DNA is the only company testing.

## DNA INFORMATIVE WEBSITES:

**The Relationship Chart from The Shared cm Project:** [https://thegeneticgenealogist.com/wp-content/uploads/2017/08/Relationship\\_Chart\\_FINAL\\_August\\_2017.jpg](https://thegeneticgenealogist.com/wp-content/uploads/2017/08/Relationship_Chart_FINAL_August_2017.jpg)

**Gedmatch.com** A third party website with numerous free analytical tools for your DNA test results. Some additional tools are available for \$10 per month.

### **Genetic Genealogy using GEDmatch**

<http://smithplanet.com/stuff/gedmatch.htm>

### **Explaining X-DNA**

<http://www.genie1.com.au/blog/63-x-dna>

<https://dna-explained.com/2012/09/27/x-marks-the-spot/>

### **Ethnicity Areas for Ancestry.com DNA test:** Africa; Africa

North; Senegal; Mali, Cameroon/Congo; Nigeria; Africa Southeastern Bantu; Ivory Coast/Ghana, Benin/Togo; Asia — South, East, West, and Central; Europe: east, west, and south; Great Britain; Ireland/Scotland/Wales; Scandinavia; European Jewish; Iberian Peninsula; Finland/Northwest Russia; United States of America; Native American; Pacific Islander; Polynesia; Melanesia; Caucasus; Middle East.

### **Concepts – Percentage of Ancestors' DNA:**

<https://dna-explained.com/2017/04/21/concepts-percentage-of-ancestors-dna/>

### **Why you should upload your atDNA test results to GEDMATCH**

<https://segmentology.org/2015/06/11/why-upload-to-gedmatch-or-ftdna/>

### **X-DNA's helpful inheritance patterns**

<http://www.genie1.com.au/blog/63-x-dna>

**National Society of Genetic Genealogy** will have the most up-to-date information on genetic testing. The International Society of Genetic Genealogy (ISOGG) was founded in 2005 by DNA project administrators who shared a common vision: the promotion and education of genetic genealogy. Their mission is to advocate for and educate about the use of genetics as a tool for genealogical research, and to promote a supportive network for genetic genealogists.

### **Asians, & Native Americans descended from the same group, DNA analysis shows:**

<http://www.scmp.com/news/world/article/1134701/asians-native-americans-descended-same-group-dna-analysis-shows>

**MyHeritage** — MyHeritage and Legacy Family Tree Webinars recently broadcast an incredibly successful educational webinar about DNA and genetic genealogy. MyHeritage DNA Product Manager, Ran Snir, walked Geoff Rasmussen through his personal DNA results, while explaining the importance of DNA testing for genealogy. They also got into the powerful tools available for working with DNA results, and how to use those tools to get the most out of your Ethnicity Estimate and list of DNA Matches.

[https://familytreewebinars.com/download.php?webinar\\_id=792](https://familytreewebinars.com/download.php?webinar_id=792)

**DAR and Y-DNA Requirements** - <https://www.dar.org/national-society/genealogy/dna-and-dar-applications>

### **Asians, native Americans descended from the Same Group —**

<http://www.scmp.com/news/world/article/1134701/asians-native-americans-descended-same-group-dna-analysis-shows>

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