

How to Get More from Your DNA with GEDMatch.com

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Through The Trees Blog

<http://throughthetreesblog.tumblr.com>

GEDMatch utilities can help one achieve several autosomal DNA genealogy objectives:

- Understanding how various DNA matches are related to you
- Determining how your DNA matches are related to each other
- Demolishing brick walls to identify new ancestors
- Specifying the common ancestor from whom you and your matches inherited the shared DNA

Relevant Types of DNA

- **Autosomal DNA:** DNA on chromosomes 1-22 inherited from all ancestors. This type of DNA is the workhorse of genetic genealogy, answering a multitude of questions.
- **X-Chromosome DNA:** DNA on the X chromosome with a specific inheritance pattern; males receive X-chromosome DNA only from their mothers, while females inherit X-chromosomes from each of their parents. The distinct inheritance pattern can assist with determining relationships to unknown DNA relatives with whom you share X-chromosome DNA.

GEDMatch's top free utilities for genetic genealogy include:

- **One-to-Many DNA comparison** lists one's closest 2000 matches, displaying kit numbers email addresses, the amount of shared DNA, and the estimated degree of relationship
- **One-to-One DNA comparison** enables one to compare two kit numbers and see the amount and location on the chromosomes of the shared DNA

- X One-to-One DNA comparison tool compares two kit numbers and displays only the amount of DNA shared on the X-chromosome
- The Phasing engine on GEDMatch facilitates separating one's maternal matches from one's paternal matches, if you have tested at least one parent and have their DNA uploaded into the GEDMatch database
- People who match one or both kits allow one to compare two GEDMatch kits and identify shared relatives
- Multiple kit analysis enables one to compare groups of GEDMatch members and facilitates family and community autosomal DNA projects

GEDMatch's top premium genetic genealogy tools requiring a donation of \$10 per month include:

- Matching Segment Search which allows one to generate a list of all matches and the shared DNA segments
- Triangulation and Triangulation groups visualize groups of matches who match you and each other on the same DNA segment. These groups of matches (known as triangulated groups) likely inherited the shared DNA segment from the same common ancestor. Collecting and comparing family trees from each member of the triangulated group may reveal the source of the shared DNA segment

GEDMatch works best for those who follow these steps:

- Upload a raw DNA data file
- Include a valid email address in their profile
- Upload a GEDCOM/family tree file
- Use a GEDMatch username consistent with AncestryDNA, 23andMe, and/or Family Tree DNA Family Finder profile names
- Contact the closest matches first, collecting and comparing both family trees and DNA to link specific DNA segments to specific ancestors

Making the Most of Autosomal DNA

Employ DNA segment triangulation

- Download or create spreadsheets containing the DNA segments you share with each match.
- Sort the spreadsheet by chromosome and segment start point.
- Identify clusters of matches who all share the same DNA segment (a triangulated group).

Compare pedigrees

- Compare family trees with each match within a triangulated group to identify a common ancestor.
- The common ancestor identified is the ancestor who passed down the shared DNA segment to each member of the triangulated group.

Build a robust online family tree

- Use Ancestry.com, Rootsweb.com, and FamilySearch.org to research your lineage and make your research available to your DNA matches.

Strategically test relatives

- Testing as many relatives as possible, especially the oldest living generations, delivers many more valuable genealogical data points. The most important relatives to test:

Relative to Test	Alternative	Second Alternative
Your parents	Your uncle or aunt	Your siblings
Your grandparents	Your granduncle or grandaunt	Your 1st cousins
Your great-grandparents	Your great-granduncle or great-grandaunt	Your 2nd cousins
Your great-great-grandparents	Your great-great-granduncle or great-great-grandaunt	Your 3rd cousins

Genetic genealogy is a dynamic field that requires constant study. Consult the following resources:

Books

- Emily Aulicino's *Genetic Genealogy: The Basics and Beyond*
- Blaine T. Bettinger's *The Family Tree Guide to DNA Testing and Genetic Genealogy*

- Blaine T. Bettinger and Debbie Parker Wayne's *Genetic Genealogy in Practice*
- Dave Dowell's *NextGen Genealogy: The DNA Connection*

Genetic Genealogy Blogs

- DNA Explained <http://dna-explained.com/>
- The Genetic Genealogist <http://thegeneticgenealogist.com/>
- Through The Trees Blog <http://throughthetreesblog.tumblr.com>
- Your Genetic Genealogist <http://www.yourgeneticgenealogist.com/>