



DNA and Genetic Genealogy

DNA testing for genealogy has become an important tool for the family researcher. As the technology advances and the prices are more affordable than ever, DNA is more widely used as a way of connecting with biological relatives and confirming the paper trail. The more people who test around the world, the better the results.

Why test?

DNA can be an enhancement to your research by helping find branches not yet discovered, or confirm or disprove what you already know. Through your matches you can discover cousins to share information and potentially solve dead-ends and brick walls.

Many people are simply curious to discover their ancient origins. For those who are uncertain of their biological history perhaps due to adoption, DNA can help link to living relatives.



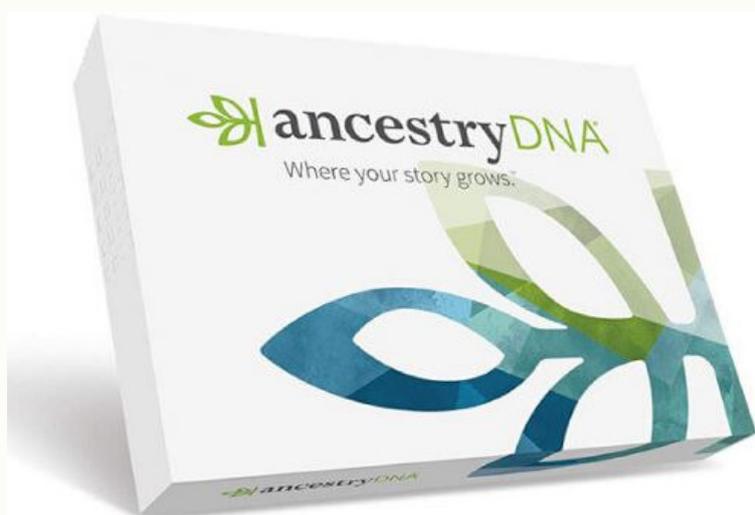
All you need is a basic understanding of how it works. It is easy to be put off by the science but to utilise DNA for genealogy you only need a minimal amount of technical knowledge. You will need an email address to set up an account with the company you choose, in order to contact and be contactable by DNA matches.

You can then collaborate with your newly found genetic relatives using your traditional genealogical skills to determine your ancestors-in-common.

The DNA test kit

A DNA kit is ordered online from one of the DNA testing companies, which are usually based in the US. Your test kit arrives within a few days to a few weeks, depending on the company. The DNA kits are very simple to use, with either a cotton-toothed cheek swab or saliva sample.

After testing, place your sample in the packaging provided and mail to the address given. All notifications you receive will be via email and results are provided via your online account.



Which company do I choose?

There are more choices than ever and this can be overwhelming. The main three companies traditionally were Family Tree DNA, Ancestry, and 23andMe.

Newer companies which have increasingly growing databases are My Heritage and Living DNA.

Family Tree DNA is a popular choice for genealogists and has the option of y-DNA (paternal) and mt-DNA (mother line) testing. They also run DNA project groups. There is no subscription required to log in and manage results.

Ancestry DNA has the fastest growing database due to its popularity and advertising. Their vast collection of online family trees make it easier to link your DNA results with relatives. You can also upload your raw DNA file to other testing companies who accept them.

23andMe has a large database, and although having great analysis tools, it is more expensive and is predominantly US-focused, with a lesser number of people opting in to be contacted.



My Heritage is the new kid on the block. It is a fast growing platform which you can link to online records and trees if you have a subscription. They also accept uploads of DNA data from other companies but without a subscription you can view only limited details of your matches.

Living DNA is the only company based in the United Kingdom and offers a unique product, breaking down ethnic origins to more refined regions than the other companies. Recommended particularly for people with UK and Irish origins. A partnership with Find My Past is expected to bring further enhancements.

To save money, it is a good idea to wait for the specials offered by many companies, usually coinciding with holidays and special occasions.

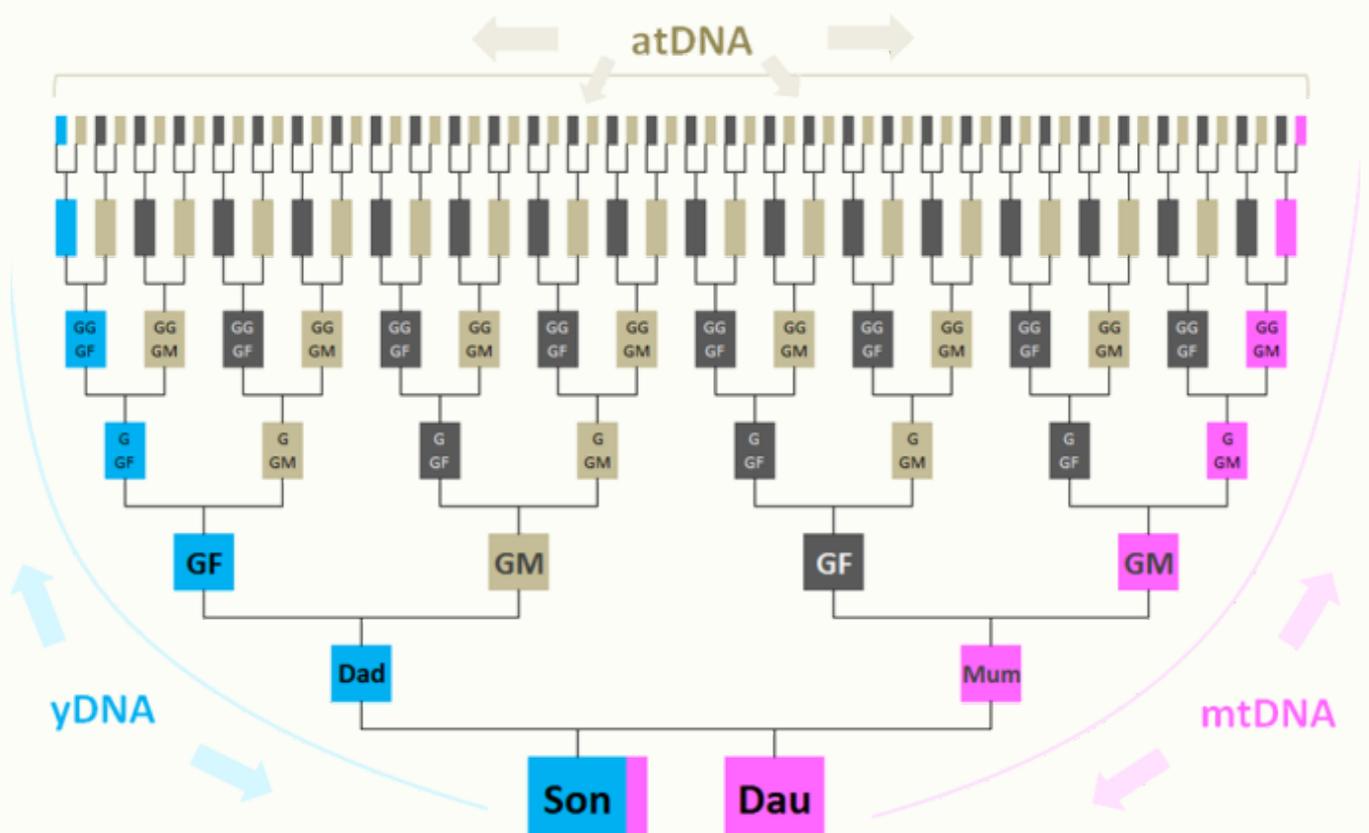
Matches

Your DNA results are added to a database and compared with others, which then appear in a list of matches sent to your personal account. If you have an account with Ancestry you can link your results to your tree and choose to have it available for others to see.

You may not have many close matches initially, but the more people who test will see your matches grow. It can be useful to get older relatives, parents, aunts and uncles and siblings to test as they may match with cousins that you do not.

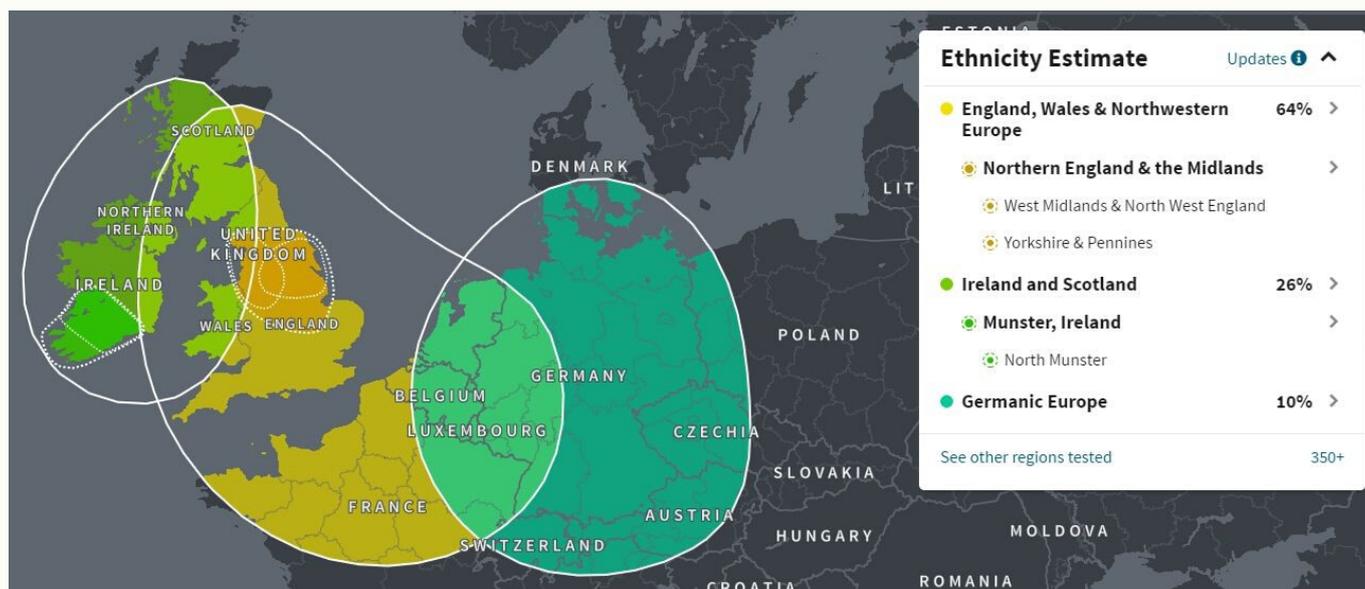
In addition to the tools provided by the company who you test with, you can upload your DNA files to Gedmatch, a free platform which accepts DNA from all companies and has useful tools to help you compare to others.

There are several different types of DNA that can be tested for genealogical purposes. The most common test type, and most beneficial to family historians, is Autosomal (at) DNA. Autosomal DNA is inherited from all ancestral lines, so anyone can be tested and matches may descend from anyone on the pedigree chart back to about six generations.



Ethnicity

Autosomal DNA tests include an estimate of your ancient ethnic ancestry, and maps showing where your ancestors came from many thousands of years ago. These results often change as the algorithms used are more refined and the population reference base grows. Results may differ between companies.



Treat ethnicity results as an estimate only. This is not an exact science. Very low percentages in particular regions may not be a true reflection of your heritage at all. The real value is in the matches you receive.