
How can DNA Testing help me?

DNA testing for family history research has been commercially available since the start of the 21st century, but in the last few years has become more widely available and affordable. The company with the largest number of customer tests in their database is Ancestry (4 million as at April 2017), which launched its autosomal testing service in the USA in 2012 and in the UK in 2015.

DNA testing can help you achieve many different goals. It offers you the opportunity to confirm the research you have already carried out using traditional research methods, or it may offer the chance to solve long-standing family mysteries. As with all aspects of family history research, there is always the chance that it will bring more questions than it answers, or reveal previously hidden family secrets.

DNA testing on its own is unlikely to provide you with instant answers to family mysteries. A vast amount of time, effort and research is likely to be required to piece all the information together. Some people are fortunate enough to test and find that their top match is a half-sibling or close family member – others have far more research to do. Discovering your DNA family can be compared to a rollercoaster ride - plenty of highs, lows and moments of absolute frustration and disappointment along the way.

What will my results show? **Ethnicity report** – this relates to the origin of your family hundreds/thousands of years ago. Over time borders have changed, communities have been forced to move and individuals have chosen to migrate. Ethnicity reports are estimates, but still interesting. Many people are only interested in finding out “where they come from” and have no interest in using their results to connect with present-day relatives, which can prove frustrating if they are an important link in your own research.

Match list - other people who have also tested and match your DNA in some way. They will be divided into groups, categorised by how closely related they are to you (eg, for autosomal testing this could include close family, first cousin, 4th – 6th cousin). It is not possible for the testing companies to determine the precise connection between you and every match on your list, so you will need to research how these matches relate to you. Being able to compare your relatives and those of your matches by looking at/building family trees is therefore essential – your Granny is also my Granny, hey, we’re cousins!

How much will it cost? DNA test prices vary, but in the UK they are around £100 (including delivery to you and postage to the lab in America) for autosomal testing, with discounts often available during sale periods. Once your results arrive they will continually be updated. If new research is available then your ethnicity results may alter, new features/analysis may become available and new relatives will continue to be added to your match list – so, even if you do not have close matches when your results arrive, this may change in the future. It is possible to transfer your DNA data between some of the major companies – for example, Ancestry data can be transferred to FTDNA, MyHeritage and various other analysis sites (but not 23andMe), so one test can generate information from several different companies and save you from paying to test at each company individually.

The companies which offer DNA testing as well as research/tree building facilities (Ancestry and MyHeritage) charge separately for the two services. If you have not yet built a tree and want to use census and other records alongside your DNA results to help you do so, then you will also need to pay a subscription.



Where can I test?

There are four main testing companies – Ancestry, Family Tree DNA (FTDNA), 23andMe and MyHeritage, all of which have their pros and cons. DNA samples are gathered either by spitting in a test tube (Ancestry/23andMe) or wiping a swab inside your mouth (Family Tree/MyHeritage).

AncestryDNA

Offers the largest database of people who have tested, as well as the facility to research records and build trees. It is now available in many countries, but not throughout the entire world – for example, tests are not currently for sale in France or Germany. There is a messaging system within the website (which does not appear to be entirely reliable). You can choose to invite individuals to view your DNA results and match list, which is incredibly useful if you think you will need help to interpret the results or compare notes with a new-found cousin.

Family Tree DNA

Established longer than Ancestry, but does not have as large a database. It is the only company to offer Y and MtDNA testing (see below). Email addresses are provided to enable you to contact matches. Family trees can be published on the site but FTDNA does not offer research facilities. FTDNA is for sale in some of the countries where Ancestry is not available.

23andMe

Provides health reports (in some countries) as well as listing DNA matches. Many customers test purely to obtain health information and have no interest in contact with relatives, which can be frustrating. The site underwent a major update in Autumn 2015 and has still not finished rolling out the changes to all users. A messaging system within the website is available. Family trees cannot be created on the site, but there is a system that allows you to link to trees stored elsewhere.

MyHeritage

A relative newcomer to the DNA testing market, having started offering tests during 2016. Their database is therefore currently small, but MyHeritage combines testing and research/tree building facilities.

Take care - there are other testing companies who offer DNA tests that are purely a report on your ethnicity. If it looks like a bargain, do your research carefully! If you pay for a report which consists of a picture of a globe, maps with arrows to show migration patterns and some statistics that say you are 30% Irish, 60% Scandinavian and 10% Mixed European it will not help you to connect with new branches of your family.

Which type DNA test should I buy and who should take the test?

There are several different types of DNA tests available:

- **Autosomal testing** – provides you with matches to people who have also tested (or transferred their data to the company) and have DNA in common with you. This test can be undertaken by men or women and can connect you to people who would have an ancestor in common with you up to around eight generations ago, although you will not necessarily share DNA with all your distant cousins. This test offers the best chance of finding connections to other relatives and is offered by all the major testing companies. Testing with Ancestry first is cost-effective and allows you to transfer to the largest number of other DNA matching/analysis sites.

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- **Y testing** – can only be undertaken by men, and traces back through the tester’s direct male lineage, who in theory should all share the same surname (ie, their father, their father’s father, etc). It goes back much further in time than autosomal testing, but along a very limited line of people, so often provides a very small number of matches. On a more positive note, there are often specialist projects looking at specific surnames and these can provide a wealth of knowledge to help with your research.
 - **Mitochondrial testing (MtDNA)** - can be undertaken by men or women but only traces their direct female lineage – ie, their mother, her mother, her mother’s mother etc. Like Y DNA testing, this can provide results that go further back in time than autosomal testing, but it focuses on a very narrow band of people and is not generally helpful for family tree research – apart from anything else, women’s surnames change with marriage in many cultures, so it is not so easy to identify connections between matches.

A good rule of thumb is to test the oldest relevant relative that is available and willing. DNA connections are lost every time a new generation is created – a child only has half their DNA in common with each parent. If you are looking to find your unknown maternal Grandfather you **will** get results by testing yourself, but if you could test your Mother it would be more useful as she would share more of his DNA than you would.

Is it wise to have my DNA out there for others to see/use?

Many people, quite rightly, are concerned about DNA testing and privacy – often, people associate DNA testing with criminal investigations, or the diagnosis of rare health conditions. Taking a test for family history purposes is not going to result in the police considering you a suspect based on DNA gathered at a crime scene. Using DNA to gain health reports is an option, but one to carefully consider – knowledge is useful, but being told you have a higher risk for a certain condition does not always mean you are going to suffer from it and can cause unnecessary concern. Many of the companies are linked to medical research projects and you may wish to opt in or out of sharing your data for these purposes. These sorts of decisions are very personal choices – make sure you read the terms and conditions, research the companies and their privacy policies and decide what is right for you.

All testing companies allow you to choose a DNA username, so you can make this as cryptic as you want if you do not want to be easily identifiable.

What else should I consider before testing?

It is worth being aware that your test could bring surprises about your existing family. How would you react if a someone appeared on your match list who shared enough of your DNA to be your half-sister but you thought you were an only child? What if you found your Father was not your biological Father?

Where is the best place for me to start?

Unfortunately, there is no way of predicting which testing company will ultimately be the most successful for you. For most people, taking an autosomal DNA test with Ancestry is a very good place to start: [Ancestry DNA Testing](#)

For further help discovering your DNA family, [visit the website](#)



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