

Me and My 1000+ DNA 4th Cousins

Diahan Southard - Your DNA Guide

Author of DNA Quick Guides and Video Tutorials

www.yourDNAguide.com

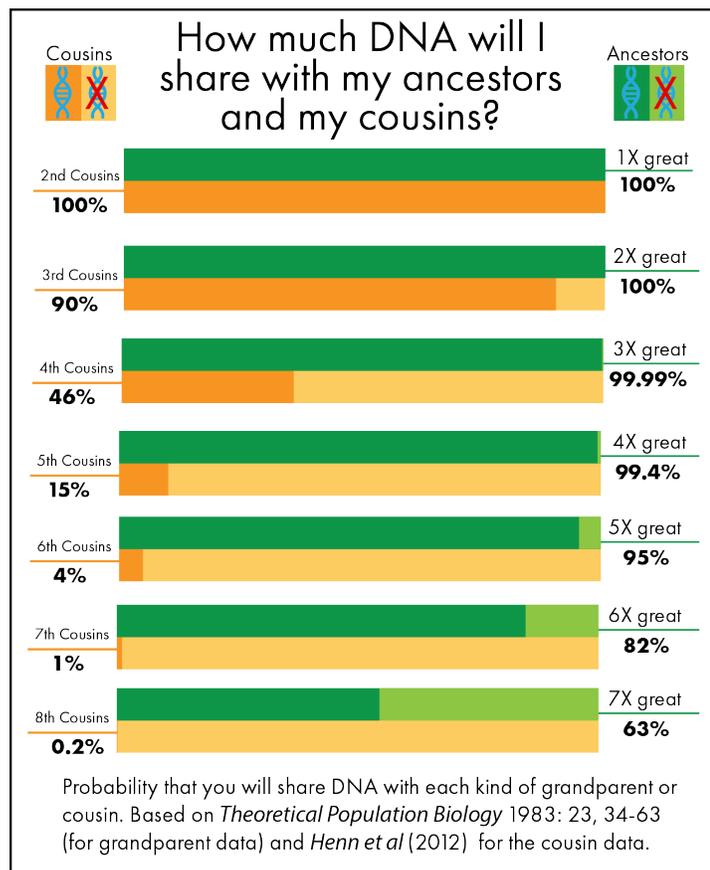
guide@yourDNAguide.com

There is no question that all of us are far more popular than we ever dreamed! Now that likely 15 million people have had their DNA tested, our DNA match lists are getting longer and longer. Before we jump into analyzing that list, let's take just a minute to understand WHY we have so many cousins. Understanding cousin numbers means that we have to start by understanding how many ancestors we have. Thanks to demographer (fancy name for a person who studies human populations) Kenneth Wachtel, we have some numbers to ooh and ah over.

The typical English child born in 1947 would have had around 60,000 theoretical ancestors at the time of the discovery of America. 95% of these people would be different, with 5% duplicated. He continues to say that around 1200 AD we would find about 2 million ancestors, roughly 80% of the population of England. So all 2 million of those ancestors have created cousins for us. Now of course not all of those cousins will show up on our DNA match list, and we don't have DNA from all of those ancestors in us (see the table on the right).

But we don't even have to go back to 1200 to get some overwhelming numbers of ancestors and cousins. Even when we are just talking about 4th cousins, a mere 5 generations ago, it is estimated that our 32 3X great grandparents produced 1,570 (for those of British descent, lower numbers for other regions) 4th cousins for us (see <http://www.yourDNAguide.com/my1000dnacousins> for more details).

If we were master genealogists, our documentation and research could possibly allow us to list all 1570 in our family tree. However, our DNA can not do nearly as well in finding



our 4th cousins. As shown in the table, only about 46% of our 4th cousins will share enough DNA with us to be detected in this test. So while you might be overwhelmed with the number you have in your match list, it is actually not nearly enough! How do you find the rest of them? Test more family members.

Diving Into Your Matches

The most important principle you need to begin your analysis is that all DNA matches are important. That means that you need to first look for your Best Matches. In short, Best Matches are those who have something to do with the genealogy question you are trying to solve. To find them, start by using the surname and location tools at your testing company.

Each company is offering you various kinds of genealogy tools to help you determine how you are related to your match. At every company you can search by surname and location using the provided search box. At both AncestryDNA and MyHeritage, they have hits in the form of shakey leaves and SmartMatches that can help you see connections between your tree and the tree of your match.

One very important genealogy tool offered by some matches at every company is the pedigree chart provided by your match. You will want to review the pedigree chart of your match for genealogical similarities to your own. Importantly, you will want to be sure that you review the correct generation based on your genetic relationship. For example, if you are predicted to be 4th cousins you will want to look at your match's 16 3X great grandparent couples and compare that information against what you currently know about your family.

Genetic Information

While your company may put a match into a 4th cousin category, that is just an estimate, and there are genetic ways we can double check. To get a more accurate estimate of your relationship, you can use the Shared cM Project. For more details, see www.yourDNAguide.com/scp.

Wandering down into the 4th to distant cousin category can be tricky, as not all of those matches will be valuable. After all, there are two reasons you share DNA with someone: you share a recent common ancestor, or you don't. There are some genetic clues that can help us tell the difference, including the total amount of shared DNA, and confidence intervals provided by MyHeritageDNA and AncestryDNA.

The biggest deciding factor on whether or not to pursue a connection with a 4th cousin is likely found in the Shared Matches Tool. Each company has this tool that lets you find groups of individuals who are related to each other. If you have a second cousin that you know is related to an ancestral line you are researching, and you see 4th cousins that are sharing DNA with that 2nd cousin, those individuals are worth investigating, as they likely hold information that could be valuable to your search.