

Genetic Testing

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23andMe® (<https://www.23andme.com>) is a popular genetic testing site. After enrolling online for password access and paying the fee, you download the test-requisition form, and a saliva collection kit is sent to you for submitting your saliva sample to send back to the lab (~6-8 week turnaround). It produces a unique genetic database computer ZIP file for you, which you should download to your computer for safe-keeping after notification that your file is ready. (23andMe tests only for common published genetic variations (~640,000 SNPs in the 2017 version), rather than the entire genome which would be much more expensive and of little additional benefit.)

The 23andMe "**Ancestry Service**" costs \$99 plus shipping and provides interesting information about ancestry and ethnicity, such as where your DNA is from out of 31 populations worldwide (including Neanderthal!), and an optional DNA Relatives tool. (Some additional general health reports such as genetic health risks, wellness, genetic carrier status, and personal traits can be obtained by buying the combination Health + Ancestry Service, \$199 plus shipping, or you can buy these health reports later for an additional fee. However, the genetic database ZIP file that we need is the same for either choice.)

NOTE: Your 23andMe computer file (a huge list of genetic codes in a ZIP file) needs to be uploaded to another website for health-related genetic interpretation. There are several genetic interpretation website choices with different features, which I can guide you on; you will probably need only one of these:

(1) Promethease (www.snpedia.com/index.php/Promethease) is a comprehensive genetic program which you can enroll in for \$5 and upload your data ZIP file directly from 23andMe (needs password access), to create a personal DNA report from published genetic studies cited in SNPedia (which is frequently updated). This produces a very large complex personalized HTML file (thousands of pages) with extensive search topic capability, which you can save on your computer (don't print it out). You can view selected genetic details (such as your **ApoE** genes that influence risk for coronary and Alzheimer's diseases). This is a very complex report, so you will need medical guidance to determine what parts are important for your healthcare.

(2) Methylation support: On Dr Amy Yasko's website, <https://KnowYourGenetics.com>, you can create a free membership (password-protected) and then upload your 23andMe ZIP file from your computer, to obtain a free Methylation Pathway Analysis (MPA) report which you can download. This will explain the critical importance of methylation for repairing biological damage associated with aging, cancer and chronic diseases, explanation of the genes involved in methylation, and discussion of what kinds of nutritional supplements can help you compensate for your genetic pattern here (a very large list of Dr Yasko's brand-name supplements are suggested). These are very complex, so bring this report to me (as a printed PDF file) for medical guidance on supplement suggestions.

(3) GeneticGenie.org will provide a Methylation and/or a Detoxification genetic profile that you can download, after you upload your 23andMe ZIP file there. This provides your status of the most important genes for these 2 areas, but no information about what to do about them. The service is free, but they request a small charitable donation to pay for their costs.