

Evaluation and reflection on predictive gene testing

[Science](#), [Genetics](#)



During the last decades a lot of breakthrough occurred, leading to predictive gene testing. Some of our hereditary genes can actually be mutated or could be more susceptible to certain diseases. That is why some companies like 23andMe are commercialising kits that could potentially tell us what mutated genes we have or what diseases we have higher risks to have in our life. Since we are assuming that the 23andMe product is free I would use it, because if my results were to come back positives I could avoid getting sick by treating myself before any signs of sickness, I could also choose a healthcare that is more adapted to future needs, and let my parents aware of my genetic predispositions and eventually save their lives too because one of them has the same gene as me even if having a mutation in my genes does not necessarily mean I will have the disease it involves.

Overall it is better to know everything about my health and what might happen to me at an early stage so I can take all the measures necessary to save my life (www.eurogentest.org). Having some knowledge in biology and genetics, I would probably be able to understand most of my results. An issue raised in one of the paper (www.time.com) is that most of people don't understand the scientific language which might be problematic and confusing for them because they have this piece of information that they can't comprehend it and might even sometimes read it wrong which could be harmful. Which lead to another issue in these types of tests, if an individual get their results back and see that they don't have a gene that predisposes them to any type of disease, they would just assume they won't have cancer for the rest of their life and will never get a check up which is

the only cons that I really agree with. Some say that an individual getting bad results could suffer from extreme anxiety and could become paranoid.

Although a study which test 135 participants in the Canadian program testing to predict the risk of Huntington's disease which is a hereditary disease that affects progressively the nerves in our brains. When the participants got their results back, they noticed that those who had a positive test were disappointed but also had a new focus on their physical symptoms, and were trying to improve their quality of life through food or exercise, a lot of them had more regular check ups, they did not notice any type of suicidal thoughts although some participants did ask for more counseling. (" The psychological consequences of predictive testing for huntington's disease")When taking the test people should understand that 23andMe don't provide an accurate diagnosis for your entire life, it only gives you percentages of getting infected by something.

One main problem raised with these types of test is privacy, you need to send your saliva to 23andMe laboratories where they will process it in order to send your results, but then who will be in contact with it? How do they destroy it? Could they possibly be sending your DNA to bigger firms? Like ([www. businessinsider. com](http://www.businessinsider.com)) said " We are good at clicking ' agree' and not reading the terms of service," However, I took a closer look to 23andMe privacy policy, and they stated that they don't share your samples with any institution, employers or even the government, it can also be destroyed any time you ask for it. ([www. 23andMe. com](http://www.23andme.com)) which solves these questions. One of the best aspect of this test is that it could be a wake up call. No one wants

to go to the doctor especially in the United States given the cost of healthcare, so most of us just ignore the check ups or think “ it only happen to other people”. Getting your results could actually save your life. You could find out that you have high chances to have a disease you even never heard about.

Some people says that these tests could induce discrimination. Insurance companies could deny some plans to a woman with a gene linked to breast cancer because she has higher risks. Even the employers could use these informations at their advantage. (www. genome. gov) but again the privacy policy for 23andMe specifically states that your results will never be shared so that no insurance company or your future employers will know about your genetic predispositions. One of the last aspect I would talk about is prenatal gene testing which could a life changing for babies as you would know if the baby had any birth defect or active gene disorders such has down syndrome or cystic fibrosis, at an early stage it can give the possibility to the parents to end the pregnancy if the disease will lead to the child’s death or undeveloped brain etc.