

Genetic testing research: pros and cons



**ASSIGN
BUSTER**

Genetic Testing Research

In a rapidly evolving society, genetic testing is one of the new innovations changing the way that people live. Imagine having the knowledge of what diseases people are prone to before they contract them. With the help of genetic testing, which is forms of tests that find changes in proteins, genes, or chromosomes, people can do just that. With the results that consumers receive from genetic tests, they are able to see what risks they are at for passing or developing diseases (“ What is Genetic Testing”). With all the benefits that genetic testing contributes to the future of society, is it worth giving up a genetic code? Genetic testing is a double-edged sword because it aids in catching criminals and improves the accuracy of the medical field, but puts personal privacy at risk.

The future of medicine could tremendously benefit from using genetic testing in numerous ways. Doctors can use tests to predict diseases to which their patients are prone. When talking about testing for diseases such as breast cancer, coronary heart disease, and type two diabetes, the widely known medical science author, Robert Preidt said, “” We’ve known for a long time that there are people out there at high risk for disease based just on their overall genetic variation.” It is extremely simple for people to take a test that can in the end save them from having to battle extreme diseases. With the help of testing doctors can take action and help patients that are predisposed to certain diseases. During an interview that was conducted with Kevin Benson, a board certified doctor at Mayo Clinic, he said, “ Patients get some critical information regarding their risk for developing certain inherited medical conditions and they can intercede.” Not only can it be used

to help people prevent future illnesses, but it can also help determine the best medicine based off a person's specific genes. GeneSight is one of the many companies that helps people determine how their personal genes will react with medications. ADHD or Attention Deficit Hyperactivity Disorder is a disease that GeneSight helps patients avoid medications that will cause harmful side effects (" Genetic Testing & Products"). In the future, people will not have to worry about the side effects of medications. Some side effects can be extremely severe and cause many complications in someone's life. Testing can help eliminate the anxiety that patients face when they do not know the side effects of medication. Two different brands of medicines could have the same results, but one's side effects could be much more drastic. Information on side effects can be found by taking the GeneSight test. The multiple ways that testing can be used to better the future of medicine may be worth giving up genetic code.

As well as improving the field of medicine, genetic testing can also impact the way that police cases are investigated. Cold cases are a form of criminal case that have gone unsolved and need to evidence to be reopened. Many cold cases lack DNA information that could find the answers that the police are searching for. For example, the Golden State Killer, terrorized the streets of California for many years, and in the end they could not track down the killer. However, thirty to forty years later the police were able to submit DNA to multiple commercial testing companies to identify the murderer (Fuller; Grothaus). After solving the case, many doors were opened for the police. Now they are able to go through other cold cases and find suspects with the help of DNA. Also because of the test the families affected by the Golden

State Killer had more peace. They knew who committed the crimes and that after a large amount of years, he is now off the streets. The case was just recently solved this year, so in the future genetic testing can be used even more. Genetic testing can also help people in jail that have been wrongly convicted of crimes be released from prison. The Innocence Project is an organization of lawyer and other people involved in the law to help exonerate people who have been wrongly convicted. They are able to use testing to prove people innocent, "if DNA technology could prove people guilty of crimes, it could also prove that people who had been wrongfully convicted were innocent" ("DNA's Role in Freeing the Innocent"). The organization can benefit by using the test to help prisoners that are put in jail. Many people are put in jail on from eyewitness testimonies. The DNA test can supplies truly accurate evidence to free prisoners. Improving the way that crimes are solved is a way that genetic testing benefits societies future.

Although genetic testing has many positives contributions to the world, there are also many negatives. When consumer mail in their DNA sample, many people think that they are just paying to have results about themselves. In reality though they are giving up genetic information, and they are unaware of where it is going. Kristen Brown said the following about 23andMe,

"When you spit in a test tube in hopes of finding out about your ancestry or health or that perfect, genetically optimized bottle of wine, you're giving companies access to some very intimate details about what makes you, you. Your genes don't determine everything about who you are, but they do contain revealing information about your health, relationships, personality, and family history that, like a social security number, could be easily abused."

<https://assignbuster.com/genetic-testing-research-pros-and-cons/>

Even though people learn interesting details about themselves, such as their hereditary characteristics, future health, or ancestry, there are other things that consumers must be aware of. Genes do not give away all of someone's personal information, but it gives allows companies to have information that could be used against someone. Companies have private information that the closet people in someone's life might not have. Also companies could have information about a client that they do not know about themselves. People are not completely certain that they are receiving all of the data that companies collected. Furthermore, after people receive their result where is their information stored? 23andMe is one of the companies who have google as one of their largest investors. Google is own by the United States government who could be after genetic information (Seife). The companies may be working with the government to collect data without consumers knowing. It is uncertain what they will do with the DNA information that the government is storing. These test can also negatively impact people based on the results that they receive. For example, people may feel scared, depressed or anxious about test conclusions. Family tensions may occur because of data and people are at risk for facing genetic discrimination ("What Are the Risks and Limitations of Genetic Testing?"). Emotionally test can make people scared of information that may not be one hundred percent accurate. Also if test information is shared people may face discrimination. For example, when applying for a job in the future companies can look at genetic tests. Testing puts people's private information in jeopardy and may leak personal information.

Genetic testing is an invention that will be utilized now and in the future. The benefits of testing are astronomical, and will help society. However, testing can also put genetic code at risk making it dangerous. Genetic testing has both positive and negative effects because it can solve cases and can help the medical field, but it can also put genetic information at risk. The double edged sword of genetic testing is something that everyone should look into because in the end the benefits outweigh the negatives.

Works Cited

- Benson, Kevin. Personal interview. 29 October 2018.
- Brown, Kristen V. “ What DNA Testing Companies’ Terrifying Privacy Policies Actually Mean.” *Gizmodo* , Gizmodo, 20 Oct. 2017, <http://www.gizmodo.co.uk/2017/10/what-dna-testing-companies-terrifying-privacy-policies-actually-mean/>
- Fuller, Thomas, and Christine Hauser. “ Search for ‘ Golden State Killer’ Leads to Arrest of Ex-Cop.” *The New York Times* , The New York Times, 25 Apr. 2018, <https://www.nytimes.com/2018/04/25/us/golden-state-killer-serial.html>
- “ Genetic Testing & Products.” *GeneSight* , genesight.com/product/<https://genesight.com/>
- Grothaus, Michael. “ Police Are Using Genetic Testing Companies to Track down Criminals.” *Fast Company* , Fast Company, 27 Apr. 2018, <https://www.fastcompany.com/40564861/police-are-using-genetic-testing-companies-to-track-down-criminals>
- Preidt, Robert. “ Gene Test Predicts Risk of 5 Common Diseases.” *Consumer HealthDay* , 14 Aug. 2018, <https://consumer.healthday.com>

[com/health-technology-information-18/genetics-news-334/gene-test-predicts-risk-of-5-common-diseases-736724.html](https://www.23andme.com/health-technology-information-18/genetics-news-334/gene-test-predicts-risk-of-5-common-diseases-736724.html)

- Seife, Charles. “23andMe Is Terrifying, but Not for the Reasons the FDA Thinks.” *Scientific American*, 27 Nov. 2013, <https://www.scientificamerican.com/article/23andme-is-terrifying-but-not-for-the-reasons-the-fda-thinks/>