

Anyone today can have the option to have their DNA tested. Genetic testing can help individuals know what sorts of diseases they and their family are more susceptible to. With DNA testing growing ever more popular over the years, the question remains whether it is ethical to encourage adolescents to be tested?

Take Auto Dominant Polycystic Kidney Disease (ADPKD) for example. A common disorder found within the kidney, ADPKD causes cysts to form, resulting in symptoms including high blood pressure, kidney failure, and kidney stones. (Mayo Clinic). This disease is caused by a mutation within the gene PKD1 or PKD2. Yet, these symptoms will not surface until around the age of 30s and 40s. In order for a person to know for certain if they have this disease, they may choose to conduct a genetic test. This test will require a blood or saliva sample from the person which will then be transferred to lab personnel who specialize in DNA testing. They will look for any mutation within the PKD1 and PKD2 genes that causes ADPKD. The test result will determine if the person has or have increased chance to get ADPKD. In addition, it also reveals if someone in a family with a history of ADPKD will be likely to develop it later on in life (National Institute of Diabetes and Digestive and Kidney Diseases).

With a disease like ADPKD, many parents will defer to have their children perform a genetic test. Why? Once tested, it will determine if whether the child has the ADPKD or the potential to obtain it once they reach adulthood. And with this information the child's doctor can take precautionary measures to treat ADPKD. For example, the doctor would prescribe angiotensin-converting enzyme inhibitor to the child patient, to slow down the rate at which ADPKD worsens (PKD charity). It can also help the parent make more informed decisions when it comes to the child's lifestyles, such as consuming less sodium on a daily basis to reduce ADPKD advancement (PKD Foundation). Seeing all the benefits, it seems like a good choice to admit an infant to a genetic test. But one must consider the ethical consequences when it comes to genetic testing. When parents take the initiative to have their children's DNA tested, they are also limiting their child's options in the future. Essentially the child won't be able to make that informed decision themselves once they mature into an adult. In addition, once the adolescent is tested, the results affect everyone in the family. The information contained in the outcome, expose health details about other members in the family that they might want to keep private. Another problem that might arise once a child had gone under a genetic test is genetic discrimination. This is when a person is treated differently based on the fact they have a disorder within them (Genetic Home reference). Specifically, to a child it might cause great mental depression when society rejects them due to a disorder that was discovered under genetic testing. It should also be noted that, as of right now, genetic testing results are not precise. For instance, a person who had gone under a recent genetic test might have positive results for PKD disease. But the results are not definite; getting a positive result does not mean that person will get the disease. The test itself will only indicate the possibility of getting the disease, but cannot indicate that the person will definitely get it. Since genetic testing has not been perfected, there is a chance for error (American Cancer Society). The inaccuracy of genetic testing itself is a major

issue. When a patient receives inaccurate details about their conditions it will give them false worries. These worries eventually will grow into stress and emotional anxiety for the child.

While genetic testing can be helpful to adults who want to find what kind of diseases they are likely to come by in the future, children, on the other hand, should not be subjected to a genetic test. There are many ethical concerns that are tied with these tests, many of which are harmful to a young child, especially because of the possible consequences on their formative life stages. It is recommended for a child to mature into an adult first before agreeing to take a genetic test. This way, they will have more of an understanding of the test and how to react properly to it.

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