

## ITSI Biosciences Newsletter

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- Why you may need a DNA test.

## Who Needs A Human DNA Test?

DNA analysis has become an affordable and accessible tool for understanding our genetics, but do you really need a DNA test?

From health insights to discovering family heritage, DNA tests can serve various purposes.

This issue of our newsletter describes who needs a DNA test, who might benefit from taking a DNA test and why you may need a DNA test.

### 1. Paternity

One of the most popular reasons people undergo DNA testing is to establish a biological relationship, especially paternity. This can be for peace-of-mind, court ordered, immigration and to determine if paternity fraud exist. If you're curious about your biological parent or suspect paternity fraud, a DNA test can provide insights into who is your biological father, mother, uncle, sibling and grandparent. Such tests may be necessary in child tracking and inheritance cases.

### 2. Ancestry

Another reason people undergo DNA testing is to explore their ancestry. This is especially popular for Africans, Asians, and Europeans in the diaspora. If you're curious about where your ancestors came from, ancestry tests offered by companies like 23andMe and Ancestry.com can trace lineages back many years and often reveal unexpected connections. A DNA test can be an invaluable tool for building family trees and for confirming genealogical research or uncovering unknown relatives.

*DNA testing has become an accessible tool for understanding our genetics.*

*But before testing, be mindful that the result may sometimes uncover unexpected or life-changing information...*

### 3. Those With Medical Concerns

DNA tests can be crucial for those concerned about inherited health conditions. Genetic predispositions to diseases like Cancer, Alzheimer's, or Cardiovascular issues can be revealed through DNA testing. People with a family history of such conditions may want to undergo genetic testing to determine if they carry any risk-related genes. Early detection through a DNA test can empower individuals to take preventive steps, make lifestyle adjustments to reduce their risks, or undergo further screening.

### 4. Parents or Prospective Parents

For parents or those considering starting a family, DNA testing can provide critical information about genetic traits and potential health risks. Some parents may opt for DNA tests during pregnancy (prenatal genetic testing) to identify any potential genetic disorders in the baby. Couples who are planning to have children can also benefit from carrier testing. This test determines whether they carry genes that could potentially lead to inherited diseases, such as cystic fibrosis or sickle cell anemia, in their offsprings. Having this knowledge allows them to make informed decisions about their family planning, e.g. if the person they want to marry is genetically compatible.

### 5. People With Unexpected Health Issues

Individuals who experience unexplained health symptoms or have rare conditions may find answers through DNA testing. Genetic tests can identify mutations that might not be apparent through standard medical exams. In some cases, rare genetic disorders can be detected, providing clarity and guidance for treatment options. Additionally, genetic testing can help people understand how they might metabolize medications, enabling doctors to tailor treatments more effectively.



## 6. Adoptees or Individuals With Unknown Parentage

Adoptees and those raised in non-biological families often seek DNA testing to discover biological relatives. If you were adopted or don't know your biological parents, a DNA test can help you connect with blood relatives, or in some cases, locate parents or siblings. This can provide a sense of closure, identity, and belonging for many adoptees who may have long wondered about their biological heritage.

## 7. Athletes or Fitness Enthusiasts

Athletes and fitness enthusiasts can also benefit from DNA testing. This is because certain DNA tests can reveal genetic factors that influence athletic performance, endurance, and recovery times. Fitness-focused DNA tests can offer personalized advice on nutrition, workout plans, and injury prevention based on an individual's genetic makeup.

## 8. Human Remains Identification and Disaster Victim Identification

DNA testing is also used in forensic science for human remains, disaster victims and missing persons identification. This is often the only means of human identification when all other methods of identification fail because the body is unrecognizable, body is badly decomposed, body is fragmented or dental records do not exist. In such situations, DNA from the unknown "questioned sample" is compared to the DNA of a known living relative.

## Conclusion

While DNA testing can be a powerful tool for many, not everyone may need one. For those who are simply curious about their biological parents, ancestry, genetic predisposition to inherited diseases, their overall health, or seeking answers about their wider biological families, DNA tests will offer valuable insights.

However, before pursuing a test, it's essential to consider the potential emotional and medical implications, as the results can sometimes bring unexpected or life-altering information. Ultimately, the decision to take a DNA test is a personal one, but for many, the potential benefits make it a worthy consideration.

Organizations such as ITSI-Biosciences ([www.itsibio.com](http://www.itsibio.com)), the Lagos State DNA & Forensic Center ([www.lsdfo.org](http://www.lsdfo.org)) and Concurrent Technologies and Services ([www.ctsdna.com](http://www.ctsdna.com)) offer DNA testing services to help answer different questions in life. Visit their websites to take advantage of their expertise.