

PATERNITY AND PARENTAGE TESTING

Paternity means fatherhood. A paternity test establishes proof as to whether an alleged father is the biological father of a child. Paternity is excluded if a DNA test shows that an alleged father is not the biological father.



What is a paternity test?

DNA paternity tests are genetic tests. Many DNA locations are analysed and these are used to make a unique DNA profile for each individual. DNA is found in all cells of the body and a paternity test can therefore use a variety of specimen types, e.g. cells from the cheeks using buccal swabs, blood or any other type of specimen. It makes no difference which sample is used.

How does DNA paternity testing work?

We inherit half of our genetic material (DNA) from each of our biological parents when we are conceived. In paternity testing, DNA is extracted from samples obtained from a child and the alleged father. The DNA is analysed and compared, to determine whether the DNA of the child was inherited from the alleged father. This analysis assists in determining the likelihood that a man is the biological father of a child.

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During the test, a number of DNA locations are analysed to construct a DNA profile. A person has two numbers at each location (marker). These are inherited from parents at conception. One number comes from the mother and one from the father. The DNA profile of the child is first compared with that of the biological mother. One of the child's numbers will match up with a number from the mother's sample. The other number should match up with a number from the alleged father's sample if he is the biological father. The probability of paternity is then statistically confirmed and reported by the laboratory. If numbers of the child do not match up with the numbers of the alleged father at more than two locations, he is excluded as the biological father.

How accurate is DNA paternity testing?

DNA paternity testing is currently the most accurate and widely-used technology to determine parentage. If numbers between the child and the alleged father do not match at more than two DNA locations, then that alleged father is excluded as the biological father. This means that the probability of paternity is practically zero and he is not the biological father of the child. If the numbers between the mother, child and the alleged father match at every DNA location, then the probability of paternity is 99.8% or greater. This result indicates that the alleged father is the biological father of the child.

Can paternity testing be done without a sample from the mother?

Yes, the DNA profiles of only the child and the alleged father can be compared when the mother is not available, but the mother should be included in the testing, whenever possible.

Why does the mother's DNA sample matter in paternity testing?

Although a sample from the mother is not required for paternity testing, it is advisable to include her.

A number of DNA locations are analysed to construct a DNA profile. These DNA locations are scattered over the chromosomes. Although each person possesses two numbers at each location, a marker by itself is not unique to an individual. These markers are inherited from the parents at conception and it is the pattern of these markers that is unique.

Once it is established which numbers were contributed to the child by the mother, the remaining numbers must come from the father.

Therefore, complete information which includes the mother and father increases the certainty of paternity testing.

How do I get a paternity test performed?

An appointment for the test should be made at the Ampath facility nearest you. Each person being tested is required to bring along an identification document (ID, passport, driver's licence, birth certificate or photo) and will also be required to sign informed consent for the test.

A sample will then be collected from the biological mother, alleged father and child. This can be a cheek swab, saliva or blood.

DNA paternity testing can be performed at any age. Before a child is born, DNA can be obtained from amniotic fluid collected from the mother's womb.

Should you need more information and/or would like to enquire about different paternity testing options and their related costs, please contact our Genetics team at 012 678 1354 or via their email, paternities@ampath.co.za.