repromeda

PANDA

PANEL DIAGNOSTIC ANALYSIS

Preconception genetic test
for couples planning a baby

ALL FOR YOUR BABY‘S HEALTH

UP TO **5 OUT OF 100 COUPLES**
ARE AT RISK OF HAVING A CHILD WITH
A SERIOUS MONOGENIC DISORDER.

What is PANDA?

Are you planning to have a baby in the future and want to find out if he or she is at risk of a severe genetic disorder?

Come to us with your partner, we will take your blood and run a DNA test. Based on the DNA analysis, we are able to identify whether you and your partner are **genetically and reproductively compatible**. In other words, whether your future offspring is at risk of any particular genetic disorder.

Count on PANDA.

PANDA or **PANEL DIAGNOSTIC ANALYSIS** is a genetic test for couples planning to have a baby, both spontaneously or through assisted reproduction methods. **PANDA** will find out if you and your partner are at risk of genetic abnormalities in your baby. The test can even answer some other questions: Why can‘t I get pregnant? And if I get pregnant, will the pregnancy proceed as it should?

Any risk detected by the **PANDA** test can then always be addressed preventively in order to achieve the **birth of healthy offspring**.

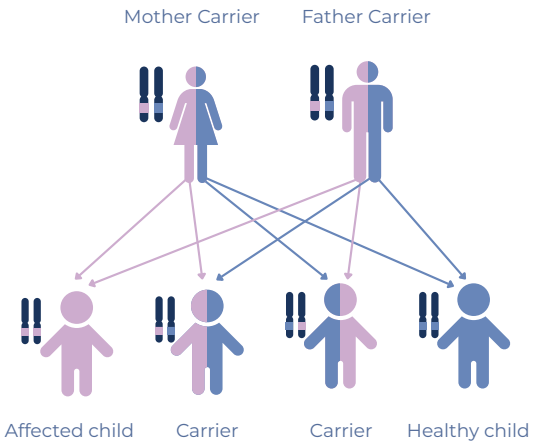
Individuals can also undergo the test.

We offer three types of tests - **PANDA Infertility, PANDA Carrier and PANDA Exom.**

The **PANDA Infertility test,** originally developed in 2018 in Repromeda's molecular genetic laboratory, has completely replaced the preconception genetic diagnosis methods used in the past.

With development of the PANDA Infertility Panel, our research certainly didn't end there; in 2021, we began testing with a new, expanded version of the **PANDA Carrier.**

In 2022, we expanded our testing portfolio with the most comprehensive test, **PANDA Exom**. The test screens for almost all diseases with a known genetic cause and reduces the risk of offspring being born with a monogenic disease to a maximum extent.



Each person has **two copies of the same gene**. One is inherited from the mother and one from the father. For hidden (also known as recessive) genetic disorders, if we inherit the mutation from only one parent, we still have a second copy that is healthy. In this case, we are so-called healthy carriers. But the problem arises **when the two mutated copies of the same gene are brought together**.

Why test ourselves?

Each of us is a carrier of about **2-10 monogenic genetic disorders**. Some of these predispositions do not affect life, but others may cause serious conditions such as cystic fibrosis or spinal muscular atrophy.

If I am just a carrier, then I will not develop the disorder, but if I plan a family with another such carrier, there is a **25% risk of having an offspring with a severe genetic disorder.**

EVEN THOUGH BOTH PARTNERS ARE APPARENTLY HEALTHY, THEY MAY BE **CARRIERS OF A HEREDITARY DISORDER**.

PANDA Infertility

A primary genetic test examining the most common genetic disorders and other important variants or mutations that affect fertility and the success of pregnancy.

WHO IS THE TEST SUITABLE FOR?

- ✓ For couples who want to learn more about their genetic health.
- ✓ For couples who are unable to conceive or who have experienced repeated miscarriages.

Testing is recommended for both couples using assisted reproductive technology and those who are trying or want to try for a baby spontaneously.

WHAT CAN PANDA INFERTILITY DO?

It can detect the most common rare disorders, such as cystic fibrosis or spinal muscular atrophy and also tests for genes that give us more information about:

- ✓ the causes of male or female infertility, the degree of response of the ovaries to hormonal stimulation or the risks associated with hormone replacement therapy after embryo implantation,
- ✓ the genetic cause of infertility or abnormal embryo development,
- ✓ thrombophilic mutations.

PANDA Carrier

An expanded PANDA test that examines up to 110 of the most clinically common recessive monogenic disorders in each couple to reduce the risk of having a baby with a medical burden. According to the recommendations of the American College of Medical Genetics and Genomics, it is advised that a test of such range should be offered to all women and couples planning to conceive.

WHO IS THE TEST SUITABLE FOR?

- ✓ For couples who want to learn as much as possible about their genetic health.
- ✓ For couples with a family history of a severe genetic condition.
- ✓ For all couples planning to start a family now or in the future.

WHAT CAN PANDA CARRIER DO?

In the population, approximately 1-2% of children are born with The monogenic disorder. The PANDA Carrier genetic test cannot completely eliminate this risk, but it can significantly reduce it by approximately ten times..

PANDA Carrier provides diagnostics of:

- ✓ 110 most common monogenic recessive disorders,
- ✓ genetic causes of infertility or embryo development disorders,
- ✓ fertility disorders and their treatment,
- ✓ thrombophilic mutations.

PANDA Exom

The most extensive scope of testing that can be offered for recessive mutations in a couple. The test screens for almost all conditions with known genetic causes and minimizes the risk of monogenic disorder in offspring.

WHO IS THE TEST SUITABLE FOR?

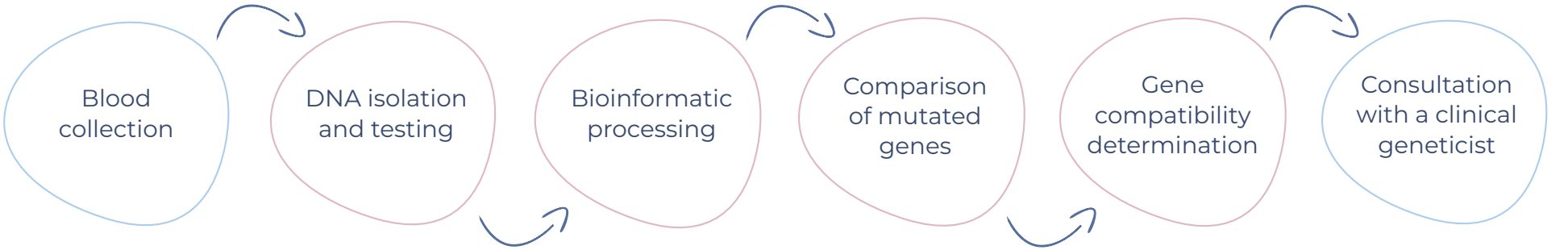
- ✓ For couples at increased risk of rare disorder - ethnic minorities; couples in a consanguineous relationship.
- ✓ For couples with a family history of a serious genetic disorder that cannot be detected by the PANDA Carrier test.
- ✓ For couples who want to minimise the risk of having a child with a monogenic disorder. The test screens for almost all genes that are associated with known disorders.
- ✓ For all couples planning to start a family now or in the future.

WHAT CAN PANDA EXOM DO?

PANDA Exom provides diagnostics of:

- ✓ mutations in all known genes causing monogenic disorders (clinical exome),
- ✓ genetic causes of infertility or embryo development disorders,
- ✓ fertility disorders and their treatment,
- ✓ thrombophilic mutations.

How is the examination carried out?



What will the results reveal?

The tests reveal possible genetic predispositions to **inherited disorders**, inborn tendencies to miscarry, and even enable prediction of embryo development. If you have a history of repeated miscarriages and doctors are unable to determine the exact reason, our test may get not only an answer but also a solution to your situation.

The results of a genetic test provide unique information about the causes of a man or woman's infertility, the extent of a woman's ovarian response to hormonal stimulation, or the risks associated with the administration of hormone replacement therapy after embryo implantation. This can make **infertility treatment** even more tailored to the patient.

UNFORTUNATELY, MOST PARTNERS FIND OUT ABOUT THEIR **GENETIC BURDEN** AFTER THE BIRTH OF THE AFFECTED OFFSPRING.

The most frequently asked questions

WHAT IS THE DIFFERENCE BETWEEN THE PANDA TESTS?

All PANDA tests are predictive examinations that are performed before starting a family. The **PANDA Infertility** test is primary genetic compatibility test for couples that allows for the diagnosis of 4 of the most common rare disorders in the population. Its extended version is the **PANDA Carrier**, which allows the diagnosis of 110 of the most common monogenic recessive disorders. **PANDA Exom** is then the most extensive range of testing that can be offered in the context of testing for hidden (recessive) mutations in a couple.

I WAS TESTED (SOME TIME AGO) ALONE, BUT NOW MY PARTNER AND I ARE ALREADY PLANNING A FAMILY.

If you are not a carrier, testing of your partner is not necessary. If a mutation has been found, your partner can also be tested before you try for a baby. We can also evaluate the compatibility of the couple retrospectively. It will be the same as if you came together.

MY PARTNER AND I BOTH CARRY THE SAME GENETIC ABNORMALITY. DO WE STILL HAVE A CHANCE OF HAVING A HEALTHY BABY?

Yes. Even if the test reveals that you and your partner carry a mutation in the same gene, there is a way to have a healthy baby. It is possible to use the method of **preimplantation genetic testing** of embryos. This test is part of assisted reproduction methods and allows you to select an embryo without genetic burden. Only embryos without mutated genes will be transferred into the mother‘s womb, thus preventing the passing of disorder to the offspring.

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