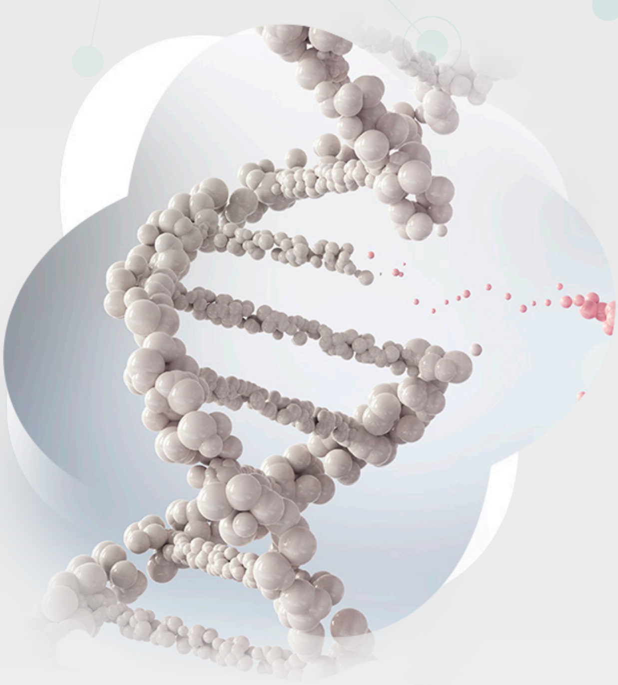
GENESeeker

Determine your child's risk of inheriting a genetic disease

Analyse your DNA and/or your partner's to discover mutations that could have an impact on your baby.



This DNA test helps identify single women or couples at high risk of having an affected child.

GeneSeeker harnesses the latest DNA sequencing technology to test patients for disease causing mutations. Simultaneous analysis of hundreds of genes helps identify couples who are at high risk of having an affected child.

Genetic Diseases

516

GeneSeeker analyzes 256 genes with incidence in 516 diseases

Inherited disorders represent 20% of the causes of infant mortality in developed countries.

When used in gamete donor programs, the information provided by GeneSeeker helps to avoid combinations of donors and patients associated with a high-risk of genetic disorder.
GeneSeeker covers critical regions of the genes assessed including some areas missed by alternative tests.

20%

Who should use GeneSeeker test?

Single mothers and couples carrying the same genetic mutations seeking pregnancy.

If you and your partner are carriers of the same conditions, there are important steps you can consider, together with your Doctor.

- **Prior to an assisted reproduction treatment:**

  It is advised in order to know the risk of transmission so that the best type of treatment can be decided on in each case.

- **Prior to a treatment using donor eggs or semen:**

  In order to be able to select a donor who is not a carrier of the same mutation as the member of the couple who is providing the gametes (ova or spermatozoa) we carry out the test on our donors.

- **Before trying to become pregnant naturally:**

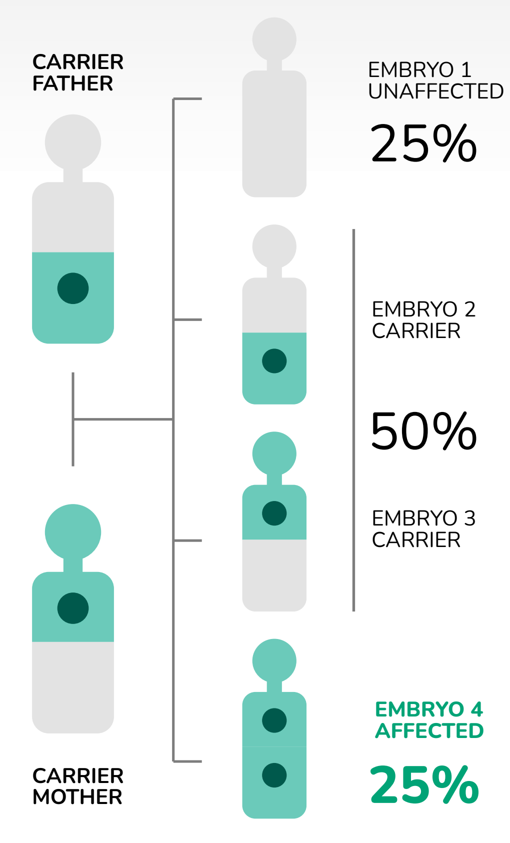
  For any woman who wants to become pregnant, so that she knows the risk of passing on possible diseases to her child.

  Most carriers of genetic mutations don't have a family history of these disorders.

How is it done?

The test is carried out on DNA obtained from blood samples from the father and the mother. The results come through in a month, and we can then find out the probability of your child suffering from a genetic disease.

More than 80% of children with a genetic disorder are born to parents with no family history or symptoms of the disorder.
Blythe SA, et al. Clin Biochem.



GENESeeker PROCESS

1. Pretest genetic counseling with your doctor
2. Doctor draws blood and ships sample
3. Sample arrives at the lab and DNA is extracted and analized
4. Test report is created and shared with your doctor

What happens when a mutation is detected?

When a mutation is detected in one member of a couple, nothing is done unless the other member of the couple has a mutation in the same gene. This would result in there being a high risk of having children who suffer from the genetic disease.

In that case, the options for conceiving a child who is not affected by the disease are:

Treatment with in vitro fertilisation and Pre-implantation Genetic Diagnosis: For the majority of these diseases, we can use this technique to determine which embryos are affected and implant in the mother only those that are free of the disease.

Gamete donation: We can opt for an assisted reproduction treatment using sperm or eggs from a donor who is not a carrier of the disease.

Why perform GeneSeeker?

These diseases have no cure, but can now be prevented

18% There are estimates that, taken together, represent 18% of paediatric hospital admissions (*)

20% They account for 20% of the causes of child mortality in developed countries (**)

(*) Kingsmore S. PLOS Currents Evidence on Genomic Tests. 2012 May 2. Edition 1. doi: 10.1371/4f9877ab8ffa9.
(**) According to the World Health Organization (WHO)

What GeneSeeker gives you

Accuracy
it detects possible mutations in the mother-to-be's DNA and, if applicable, in her partner's.

Adaptation
if the mother-to-be seeks pregnancy through donation, GeneSeeker also analyses the donor's DNA.

Reliability
it helps to discover possible genetic diseases in the baby derived from mutations in the maternal and paternal DNA.

Trust
the report derived from the analysis is presented by your doctor.

GeneSeeker PANEL DEFINITIONS

GSK PATIENT

255 genes

4707 variants

Extra variants for:

CFTR gene
HBB gene
HBA1/HBA2 genes
SMN1 gene
CYP21A2 gene

GSK ESSENTIAL

26 genes
(20 genes on X chr and 6 on autosomes)

1656 variants

Extra variants for:

CFTR gene
HBB gene
SMN1 gene
HBA1/HBA2 genes

GeneSeekerMatch

The GeneSeeker test from **Juno Genetics** provides a powerful and exclusive computerized tool called **GeneSeekerMatch.**

This software allows genetically matched gametes to be selected for a recipient after analyzing the egg or sperm bank of an assisted reproduction clinic.

This **unique system** allows the clinic the opportunity to make a bank available which has been pre-screened for more than **516 genetic diseases.** This includes Cystic Fibrosis and Fragile X Syndrom which have a high prevalence in this group of diseases.

"Our IT Donor Matching tool enables us to keep all patient data in order to successfully match compatible donors"

Your partners in genetic health

JUNO GENETICS

www.junogenetics.com