myDNAmap
genetic matching

myDNAmap
the power of your genetics

myDNAmap is a medical genome company that was established with the aim of helping the general public to access all of the information included in their DNA, so they can better care for their health and that of their family.

myDNAmap offers a unique and comprehensive service in the field of preventative medicine. We sequence the whole genome containing all of the genes associated with a person's health and wellbeing. We provide pre- and post-sequencing advice, which will answer any questions and explain the results. We have developed **myDNAapp,** a mobile app where you can consult your results, contact health and science professionals and enter information regarding your health, which helps to personalise your genetic report. Furthermore, **myDNAmap** offers annual updates, which include the most recent discoveries in the field of genetics.

We know that every one of us is unique and individual just like our DNA.

Knowing your genetic profile will help you to take care of your health and that of your family. Today, tomorrow and always.

Always check **mydnamap.com** for the latest updates of our services.

myDNAmap genetic matching

The genetic matching test is intended for those who:

- are planning to have children
- have a family history of genetic diseases.
- plan to become egg or sperm donors.
- are undergoing fertility treatment with donated gametes.
- have a family history of consanguinity or endogamy.
- are of a reproductive age and interested in knowing their carrier state for the diseases tested.

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myDNAmap Preconceptional Genetic Matching Panel

The periconceptional genetic matching test allows us to know the risk of having a child with a genetic disease, even in the case of two healthy parents. In addition, we assess the risk of passing on a genetic condition to your children. By sequencing the entire genome, we analyse **more than 700 genes** associated with recessive liver diseases, metabolic, neurological, sensory, heart, immunological, dermatological, skeletal, (neuro)muscular, haematological, nephrological, intellectual, hormonal and motor diseases, which can develop in our children.

Understanding our carrier state helps us to work with professionals on alternatives available for our future **family.**

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What are autosomal recessive genetic variants?
Our DNA or genome contains 46 structures call chromosomes. These are grouped into pairs: the first 22 are called autosomal and are present in men and women. Pair 23 represents the sex chromosomes: XX in females and XY in males.

Autosomal recessive genetic variants are those that have an impact on our health when we inherit them from both parents. Nevertheless, if we only inherit them from one parent, they will not impact our life. In this case we say that **"we carry"** a recessive variant.

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What does it mean to be a genetic variant carrier?
A genetic variant is any change in DNA sequencing and is precisely what makes us unique. Genetic variants can be associated with a disease or physical traits, such as eye colour.

A carrier is a person who inherits a specific genetic variant but does not have a disease. Nevertheless, you can pass on this variant to your children. The genetic matching test allows us to identify this risk. Fig. 1

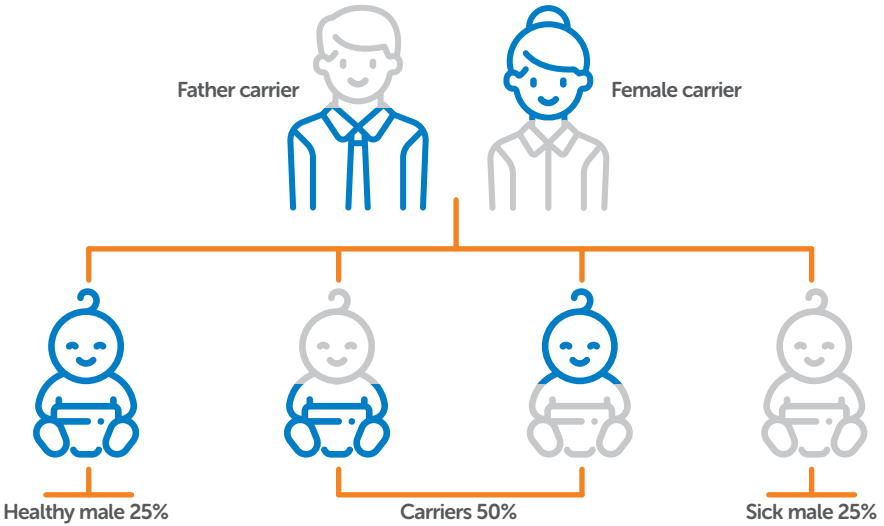

Fig. 1. Carrier of recessive autosomal genetic variants

What are the recessive genetic variants linked to the X chromosome?
They are genetic variants localised in the X chromosome, which determine the female sex.

Females have two copies of the X chromosome . One inherited from a mother and one from the father. Therefore, if one of the X chromosome genes has a mutation, the normal gene of the other chromosome may compensate for the altered copy. Fig. 2

Whereas, if a man has a recessive variant linked to the X chromosome, they are going to have the disease, as men only have a single X chromosome, and therefore there is no compensation process..

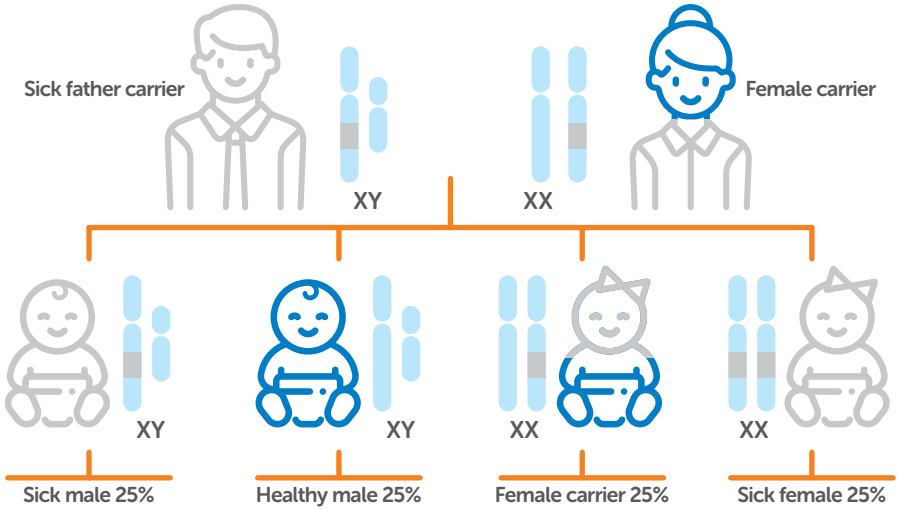

Fig 2. Diagram of disease inheritance linked to the X chromosome of the mother carrier and the sick father

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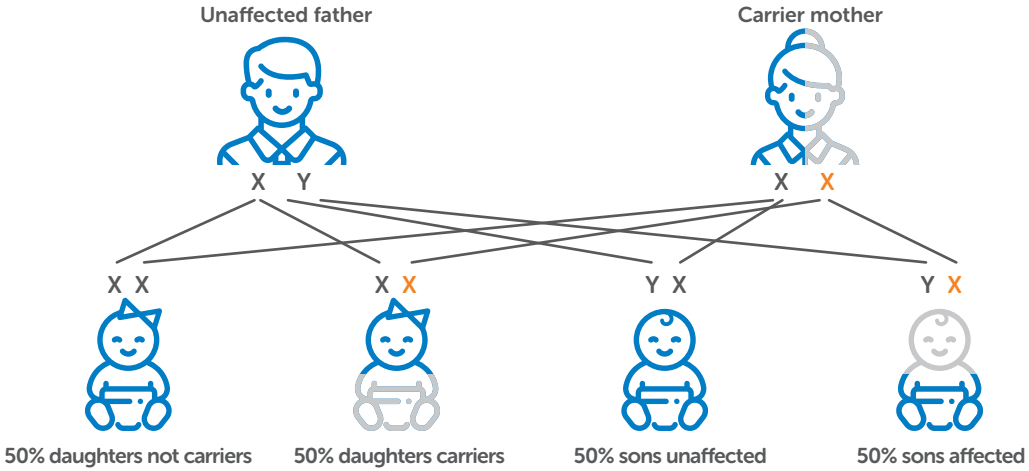
A woman affected by a recessive disease linked to the X chromosome will pass on the mutated allele to all of her children:

- All children will be carriers (but unaffected)
- All children will be affected by the illness

A female carrier has a 50% likelihood of each boy or girl (independent of their sex) inheriting a mutated allele. If a boy inherits it, he will develop the disease and if the girl inherits it she will only be the carrier of the disease. Fig. 3

An affected male, on the other hand, will pass on a mutated allele to all of their daughters, who will be carriers, but not pass it on to any of his sons.



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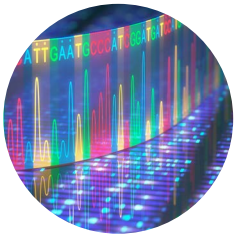
Related panels



myDNAmap neurology

The **myDNAmap** report given to you by our genetic counselors includes the result of the analysis of 10 genetic panels covering the areas of: sport, nutrition, cardiology, fertility, cancer, genetic compatibility, ancestry, pharmacology, addictions and neurology.

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Technology used

Whole genome sequencing (WGS) using Illumina HiSeq X10 or NovaSeq 6000 systems. Illumina PE150, QQ30 ≥80%, aligned with the human reference genome GRCh37/hg19. The classification and analysis of variants is carried out based on the recommendations of the American College of Medical Genetics and Genomics (ACMG). The variants reported are mentioned based on the recommendations of the Human Genome Variation Society (HGVS).

Our report: is the scientific-technical communication of the results. It is written in a precise yet simple manner, intended for both our users and health professionals. It is provided within the framework of a consultation with one of our genetic counsellors. This can take place via videoconference. During the consultation the specialised professional will explain the details, answer any user queries and clear up any doubts that may occur.

Note: the detection of genetic variants only provides a predisposition or potential, but never provides a certainty of developing diseases. Under no circumstances is the genetic information provided valid for diagnostic use. It does not imply the potential to determine the age you will be when it starts nor the type or severity of the disease(s); nor does it allow us to rule out the existence of clinical or genetic heterogeneity.

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