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# 1. Introduction

This report is a fundamental tool for sports practice, both amateur and professional. You will see your genetic predisposition to, for example, suffer injuries, lower heart rate or your capacity for muscle regeneration.

Your genes determine your sport profile, the metabolic and even the overall benefit of the sport for your body. Thanks to the sequencing of your DNA and its subsequent analysis, you can optimize your workouts, discovering what types of exercise your body is best prepared for and in which you have to take special care if you want to avoid certain injuries.

As usual in our reports, in the first pages you will find an iconographic summary of each of the analyzed values, which we develop more broadly in later pages.

We remind you that any changes you want to make in your diet or your heath treatments should be guided by health professionals. Any doubts you have about any genetic test should be checked against health personnel who are experts in Genetic Diagnosis or Specialized Physicians.

### 1.1. Frequently Asqued Questions

#### Should I make drastic changes in my health management with the data of this test?

No at all, any changes you want to make in your health management should be analyzed by an expert geneticist and the medical specialists. Any doubts you have about any genetic test should be checked by healthcare experts in Genetic Diagnosis.

#### Does it all depend on my genes?

No at all, our body responds to many conditions. Our genes are certainly an important parameter. Lifestyle, sport, food, and many other circumstances influence our body. Knowing yourself certainly helps to treat our body in the most appropriate way. And this is what these genetic reports aren all about: more information.

#### Are all the analyzed genes listed in the sections?

We include only a sample of the genes that we analyze, some of the sections are determined by the analysis of more genes that we did not indicate in the report. Our algorithms combine your genotypes from the analyzed markers.

#### What is this report based on?

This test is based on different genetic studies internationally consolidated and accepted by the scientific community. There are certain scientific databases where studies are published where there is a certain level of consensus. Our genetic tests are carried out by applying these studies to the genotype of our clients. In each section you will see some of the studies publications on which it is based. There are sections where more studies are used than the ones listed.

The information provided in this report is valid only for research, information and educational uses. It is not valid for clinical or diagnostic use.

# 2. Summary

### Sport profile

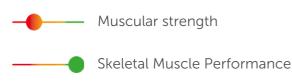


# Resistance Strength Resilience

#### Caption:

- Your analyzed genotype is favorable.
- Your analyzed genotype is a little favorable.
- Your analyzed genotype doesn't particularly affect you.
- Your analyzed genotype is a little unfavorable.
- Your analyzed genotype is unfavorable.

### Muscle Profile



# Muscle response to resistance training

Muscular fatigue

#### Caption

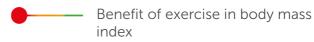
- Your analyzed genotype is favorable.
  - Your analyzed genotype is a little favorable.
- ——— Your analyzed genotype doesn't particularly affect you.
- Your analyzed genotype is a little unfavorable.
- Your analyzed genotype is unfavorable.

### Metabolic Profile



Muscle regeneration capacity

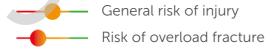




### Caption:

- Your analyzed genotype is favorable.
- Your analyzed genotype is a little favorable.
- ——— Your analyzed genotype doesn't particularly affect you.
- Your analyzed genotype is a little unfavorable.
- Your analyzed genotype is unfavorable

# Injury Risk





### Caption:

- Your analyzed genotype is favorable.
- Your analyzed genotype is a little favorable.
- —— Your analyzed genotype doesn't particularly affect you.
- Your analyzed genotype is a little unfavorable.
- Your analyzed genotype is unfavorable.

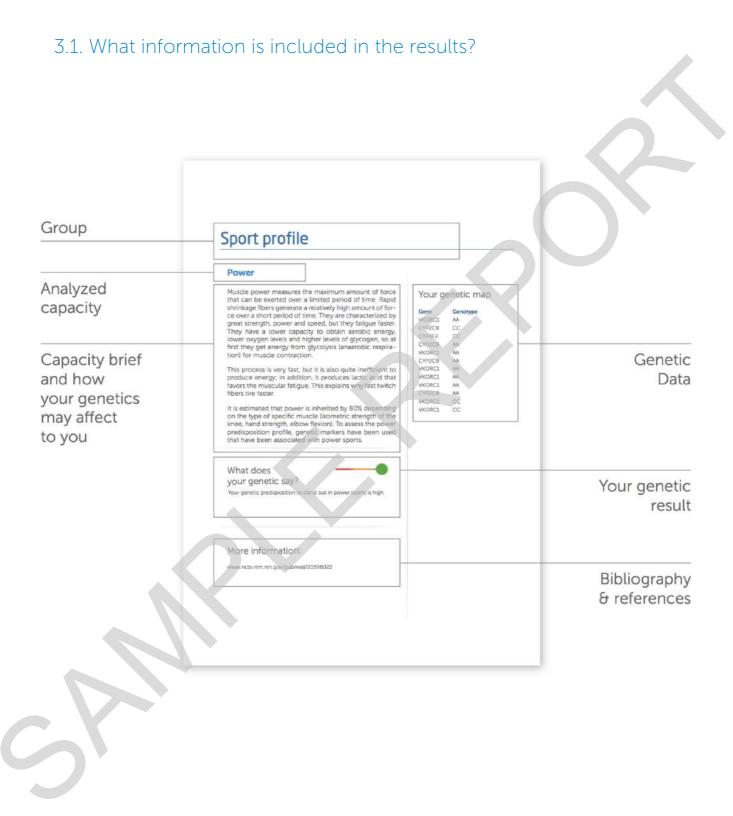
# Cardiovascular profile



#### Caption:

- Your analyzed genotype is favorable.
- Your analyzed genotype is a little favorable.
- ——— Your analyzed genotype doesn't particularly affect you.
- Your analyzed genotype is a little unfavorable.
- Your analyzed genotype is unfavorable.

# 3. Genetic Results



# 3.2. Your genetic results

# Sport profile

### **Strength**

In what implies to the physical condition, we will define the force as the capacity to overcome a resistance with the contraction produced by the muscles, that is to say, with the capacity that they have to perform a work.

The quality of the strength is determined by the muscular structure itself: it depends on the orientation and types of muscle fibers and the length of the muscle; by temperature: muscle contraction is more rapid and potent when the internal temperature is slightly higher than normal; by the osteoarticular system: the force depends on the type of lever that makes the movement; and, finally, of age and sex. Training is another important factor because it improves the factors that influence the level of muscular strength: metabolism and fuel deposits that allow the increase of muscle fiber thickness and the number of myofibrils and the delay in the appearance of muscle fatigue.

In addition, genetic factors have been associated with a greater benefit in increasing strength after training.

What does your genetic say?

Strength training is less beneficial to people with your genotype, as you are likely to gain fat mass. Moderate training is recommended.

### More information:

https://www.ncbi.nlm.nih.gov/pubmed/19105843

Your genetic map

Gene Genotype

INSIG2 CG

# Sport profile

### **Cardio capacity**

The cardiac function has a direct impact on the exercise and vice versa. Scientists have shown that regular exercise increases cardiac capacity and strengthens the heart.

This capacity is measured as heart rate, which are the times that the heart performs the complete cycle of filling and emptying its chambers in a certain time. Cardiac capacity decreases with age, so it is especially important to maintain and monitor the health of our heart.

Some people are carriers of genes that make them have a better cardiac capacity, allowing them to have better strength and strength during exercise.

# Your genetic map

Gene	Genotype
NPY	IT
NOS3	CC
ADRB1	СС
APOE	TT
APOE	TC

What does your genetic say?



Your profile in terms of heart capacity is intermediate.

### More information:

https://www.ncbi.nlm.nih.gov/pubmed/11701704

# Metabolic Profile

### **Benefits of Exercise in Cholesterol**

One of the benefits of exercise is the improvement in cholesterol levels. HDL cholesterol is known as good cholesterol and having high levels of HDL is beneficial. Many people can improve their HDL levels with exercise.

Research has shown that exercise stimulates enzymes that help move bad cholesterol from the blood to the liver, allowing it to be excreted with bile. It has also been stipulated that exercise increases the size of protein particles that carry cholesterol through the blood, reducing the possibility that small particles clog arteries.

Individuals with certain genetic variants will do well to increase their good cholesterol levels while exercising, while carriers of other genetic variants are less likely to lower their bad cholesterol levels alone with exercise.

### Your genetic map

Gene Genotype
CETP CC
PPARD TT

# What does your genetic say?



Your genotype is not associated with an extra benefit to regulate your cholesterol levels with exercise.

### More information:

https://www.ncbi.nlm.nih.gov/pubmed/21252145

# Injury Risk

## Risk of injury to joints

Many sports-related injuries involve joint damage. The most common are wrist or ankle sprains, excessive elbow extension, or damage to the knee ligaments.

When exercising you have a higher risk of injury from excessive use of joints, but you can strengthen and avoid injury by doing the exercise correctly and doing stretching. The risk of joint damage is associated with an increased genetic predisposition to osteoarthritis.

Knowing personal risk is important to adjust the duration and intensity of training sessions. Sports and high-impact activities can lead to cartilage injuries and damage to the joints. Your risk of injury is calculated on genetic variations that are associated with joint problems.

# Your genetic map

Gene	Genotype
GNL3	AG
FTO	TT
SUPT3H	AA
IL1A	GG

What does your genetic say?



You have a low chance of injuring your joints.

### More information:

https://www.ncbi.nlm.nih.gov/pubmed/22763110