



GENETIC PROFILING

YOUR QUESTIONS ANSWERED

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Why do a genetic profile test?

As humans, we each have between 20,000 and 25,000 genes. Most genes are the same in all of us, but there will be differences in less than one percent of them, which is what makes us unique.

The science of genetics is helping us to understand what these small differences mean.

Research has shown that your genes affect how you respond to your surroundings and experiences. Tiny variations can affect how your muscles form and behave, how your body uses the major food groups and whether you are likely to lack certain vitamins or minerals.

That's why genetic testing is becoming increasingly popular and useful. A genetic test is very easy to do. Usually all that is needed is a swab to take a small sample of cells from inside your cheek or some saliva.

Your whole genetic story will be in these few cells. Theswab is analysed in a laboratory and then experts in sports science, nutrigenomics and health, who understand all the current research, interpret the results for you.

If you are interested in the details you can find out more online at www.snpedia.com



FACT

We can use genetic analysis to find out more about your health, how you can develop your athletic ability and plan your diet to meet your specific needs.

What are genes and DNA?

A gene is a basic building block for all living things. Through your genes you inherit traits from your parents that are easy to see, like the colour of your eyes and hair, while others, like your blood type, are less obvious.

Each gene is made up of DNA (deoxyribonucleic acid) Like a recipe in a cookery book, your DNA provides the instructions needed to build and maintain all the different parts of your body.

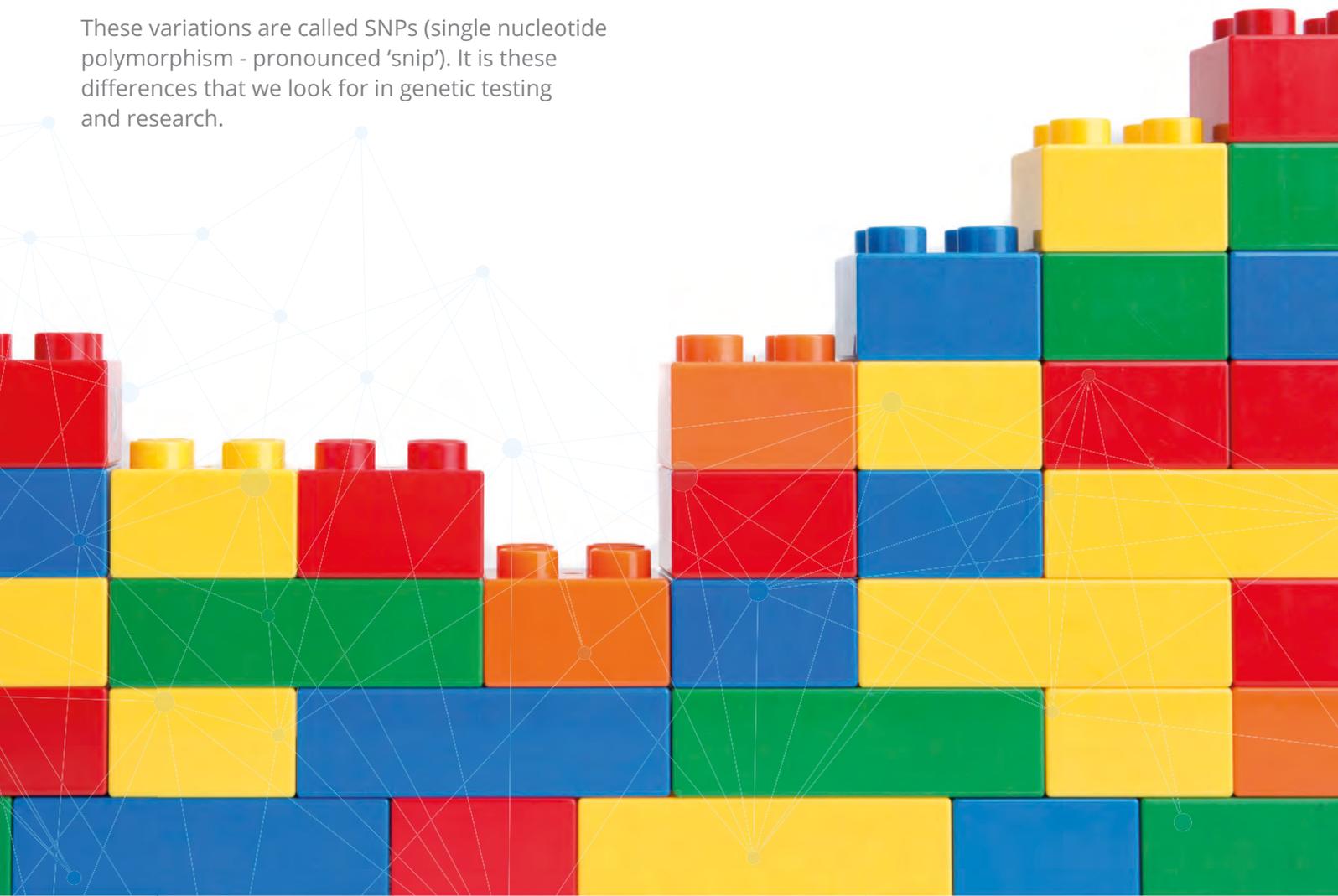
DNA is like a set of chains - some long, some short - made up of four different types of molecules (nucleotides) that, for ease, are labelled A, C, G, and T.

A variation in the position of just one of these nucleotides in a DNA chain could make a difference to how your body works.

These variations are called SNPs (single nucleotide polymorphism - pronounced 'snip'). It is these differences that we look for in genetic testing and research.

FACT

Even though identical twins technically have the same DNA, the genetic equivalent of 'typing mistakes' can take place in their genetic code as cells grow and are copied.



How can genetic analysis help me?

Knowing that you will have variations in your DNA is the starting point. Genetic analysis can identify these tiny differences.

For this information to be useful to you, it is also important to understand what you want to achieve in terms of your health, fitness and lifestyle.

Then we can interpret your options and actions you can take.

See Paul's example on the right

Paul



1

Paul has a variant in a gene that means conversion of beta-carotene into usable vitamin A will be poor.

2

As a vegetarian Paul is likely to struggle to get enough vitamin A, even with plenty of yellow, red and leafy green vegetables at meal times.

3

On average Paul's conversion will be almost a third lower than most people. Amongst other things, vitamin A is important for Paul's immune system.

4

Eating additional good sources of vitamin A, such as dairy food and perhaps taking a dietary supplement can help Paul to keep healthy.

How can genetic profiling help with fitness and exercise?

Around the world researchers, doctors, healthcare providers and many big businesses are exploring genetics to help find cures for diseases.

As their understanding of genetics grows, they are also discovering a lot about how the human body works.

This information is now making a real difference to our approach to fitness and exercise.

This is where the experts come in to interpret and use this information to help you.

See Sarah's example on the right



1 Sarah is a keen runner.

2 We know that the genes that affect blood pressure may also affect the rate at which blood and oxygen go to Sarah's muscles. This is called vasodilation.

3 We can use our understanding of these genes to help Sarah plan a programme that includes plenty of endurance training, as vasodilation will affect aerobic work.

How can DNA testing help with highlighting health predispositions?

We will all be genetically predisposed to various health conditions, such as bone mineral density, high blood pressure and type 2 diabetes.

Knowing which ailments you are more prone to developing will allow you to put in place certain lifestyle changes that should mitigate some of these risk factors.

You must also remember that nature as well as nurture are both important factors that contribute towards developing a particular ailment.

See Jon's example on the right



1

Jonathan has been suffering from mild arthritis and low energy levels for a number of years.

2

Understanding his genetic predispositions to certain health factors such as inflammation, bone and joint health to which vitamins and minerals that he'll need to include in his diet has proved extremely useful.

3

It has allowed him to tweak his lifestyle slightly, removing the danger foods as well as incorporating the vitamins that he was missing.

4

Following a few easy and simple steps has helped Jonathan alleviate some of his symptoms.

How about diet and nutrition?

We all know that eating a balanced diet is important for our health.

Still, each year, millions of people use weight loss products, slimming aids, plans and diets that just can't be maintained.

Understanding your genetics is the key to having a safe, sustainable diet that is tailored for your individual needs and how you respond to certain food groups.

Your unique genetic code can give you answers to important dietary and nutritional questions, such as:

- Are you extra sensitive to weight gain with simple carbohydrate intake?
- Should your fat intake be lowered, or even increased?
- How well do you use protein?
- Will unsaturated fats actually decrease your fat mass, even if your calories increase?



Why choose Bio-Synergy?

At Bio-Synergy we're committed to giving you the most comprehensive DNA profile available with our accurate, state of the art laboratories and science. We do this by analysing over 1,000 snips (genetic variants) and providing you with 300 reports tailored to your DNA.

We don't look at your ancestry as we believe that your future health is more important. Whatever your health objective is our interactive app will give you all the information you need right at your fingertips! So

even if your goal is fat loss, muscle building, fitness & endurance or general health & wellbeing, Bio-Synergy is with you every step of the way – because your health matters.

- The World's first Epigenetic tracking test
- Global leaders in DNA and bio-marker science
- We provide 300 reports on over 1,000 analysed snips (genetic variants)
- Hyper-personalised nutrition and training plan
- Use your genetic make-up to meet your health goals



What does a Bio-Synergy DNA test analyse for you?

Diet and nutrition:

Find a healthy, sustainable diet specifically designed for you through a better understanding of your responses to protein, fats, carbohydrates and calorie restriction. Your overall health can be significantly improved when you understand your risks for deficiencies in vitamins A, B6, B9, B12, and D as well as minerals such as magnesium and selenium.



Fitness and exercise:

Improve your overall fitness with a better understanding of your capacity for the following: power; endurance; flexibility; increased muscle size (muscle hypertrophy); lactate threshold; oxygen use (VO2 max); respiration (ATP) recovery rate; injury recovery rate; lean body mass; and power to weight ratio.



Health and wellbeing:

Our analysis can also highlight your genetic predisposition for a variety of health conditions such as bone mineral density, risks for type 2 diabetes, obesity, hypertension and infection risk from colds/flu.



Psychology:

Find out more about your body's dopamine response, which can affect behaviour, cognition and motivation. And as to whether you are a worrier or warrior or sit nicely in between?



DNA Profiling

Our interactive dashboard allows you to switch between four health goals. Using sophisticated machine learning we then provide you with tailored health and fitness recommendations aligned to your genetic profile, together with a personalised meal and workout plan to help you achieve your goal.



Health & Wellbeing

Increase your energy, focus and body health to improve your quality of life without having to set foot in the gym.



Fat Loss

Reduce, manage and maintain your body fat & weight through leveraging your genetic profile to make health, fitness and nutritional changes.



Fitness & Endurance

Build fitness, endurance, speed and overall performance aligned with your genetic profile.



Build Muscle

Build muscle, improve strength and get leaner using your genetic profile to make micro and macro adjustments.

Additional Modes

In addition to the four health goals above, we unlock the below aspects about your health:



Stress Management

Understand the reasons why you respond to stress the way you do and help control your anxiety.



Eye Health

Our eyes are precious and change over time as we age. Find out how our genes play a role in this process.



Anti-Ageing

Learn how your genetics affect your age, bones and skin and gain the secrets on how to stay youthful.



Skin Health

The biggest organ in the body deserves some love, find out how your genes can change your skin.



Sleep Management

Getting a good night's sleep is vital to your health but are you a night owl? Do you struggle with waking up?



Gut Health

Your gut affects our overall health. Understand how your genes are affecting your gut so you can change how your gut affects you.



Heart Health

Keep ahead of the beat and keep your heart healthy by understanding your genes.



Addiction

Certain traits link us to a likelihood of addictive behaviours. Understand how you respond and how you can control your urges.



Mental Health

Keeping your body healthy is one thing, but keeping a sharp mind is vital to everyday quality of life.



Injury Prevention

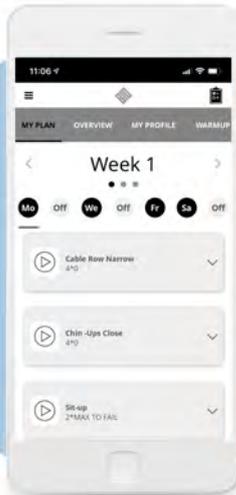
No one likes injuries, understand if you are at risk and stop them before they even occur.

The Bio-Synergy App



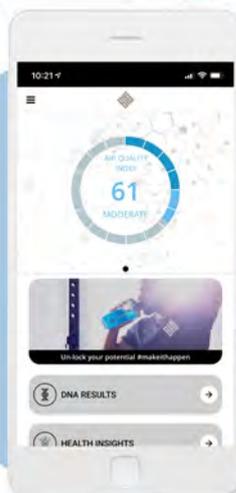
Recipes Personalised to your Genes

Hyper-personalised food recommendations and recipes that will support wellness at every stage of life, with easy to follow step by step cooking and preparation guides.



Your Personal Trainer in your Pocket

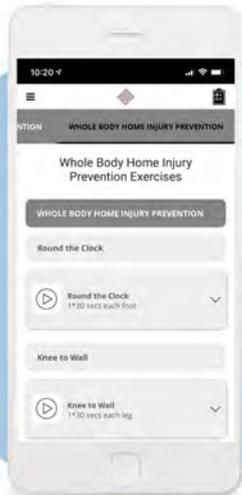
The Bio-Synergy app recommends truly personalised recipes and workouts that align to your genetic profile, your level of experience and your health goal. You can change your goal, alter your meal preferences and adjust the frequency and length of your training at any time.



Unlock your Genetic Gifts

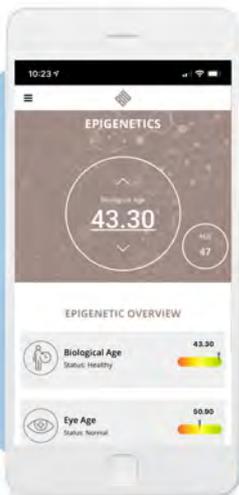
DNA and epigenetic profiling can help you improve your cognitive function, creativity, working memory and reading comprehension. We can also help you reduce stress, anxiety, depression and prevent injury. Our app helps you understand your genetic make-up to provide you with the knowledge and tools to make the right choices about your health.

The Bio-Synergy App



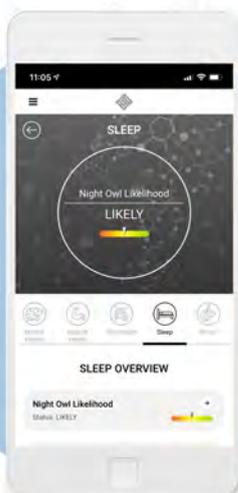
Injury Prevention

Injuries, also known as physical traumas, are damage to the body and are usually caused by external force. However, weakening of the body's defences can often lead to injury. Major trauma to the body can cause long lasting damage, paralysis, scarring and death; in fact injuries are the sixth-leading cause of death in the world.



Biological Age

The majority of us will be completely unaware that we actually have two ages. Chronological age, which is the exact number of years that you have been alive and biological age, which is a true reflection of how your cells are ageing and how they have been affected by your diet, exercise, lifestyle and environment. The difference between your biological age and chronological age is calculated by taking the average methylation status of the genes associated with people within your age range. Methylation is a chemical process that sits above your genes and regulates their function and how they express themselves.



Sleep Management

Sleep has multiple health benefits and is essential for the correct functioning of the immune system. Genetics plays a significant role in the development of certain sleep disorders, as well as quantity and quality of your sleep. Once you understand your individual genetic markers there are a variety of lifestyle and nutritional recommendations that can improve the quality of your sleep.