



YOUR DNAFit DIET REPORT

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Date of Birth:	1981-12-20
Sample Number:	aaaaaaaaaaaaapbx
Date of Test:	2014-07-10



DNAFit[®]
PREMIUM+ DIET



WELCOME TO YOUR PERSONAL DNAFit DIET PREMIUM+ REPORT!

It gives us great pleasure to enclose your unique DNA results. Our laboratory has tested your swabs for a selection of key genes associated with diet, nutrition and weight management.

Your individual results are presented for you in this report, along with a basic grounding in genetic science and the role genetics can play for our personal wellbeing and our ability to manage weight effectively.

The recent explosion in genetic science has revealed new connections between our genes and nutrition needs. To fulfill your health or body goals, it can therefore be extremely important to make the appropriate choices to best match your unique genetic make-up. By helping understand how your genetic profile affects you, DNAFit Diet provides unparalleled insight and knowledge to help you optimise your nutrition and diet choices.

Armed with your DNAFit Diet results, it now becomes possible to integrate DNA as a new parameter in the battle for health and fitness, helping you to further define your own ideal activity and nutrition plan

WHAT DOES MY DNAFit DIET PREMIUM+ REPORT TELL ME?

From your DNAFit results, we provide a unique scientific deep-dive into the following areas:



Your Ideal Diet Type



Carbohydrate & Saturated Fat Sensitivity



Lactose and Gluten Intolerance Risk



LEGAL DISCLAIMER

This report is based on your unique DNA results obtained by testing your swabs for your response to a selection of key genes that are associated with health and fitness.

Any assertions or recommendations in the report as to an exercise regime or diet, whether specific or general, are based on the following assumptions:

1. that you are in a good state of health and do not have any medical problems that you are aware of;
2. that you have not had any recurring illness in the past 12 months;
3. that no medical practitioner has ever advised you not to exercise;
4. that you are not on any prescribed medication that may affect your ability to exercise safely or your diet;
5. that you do not have any food allergies; and
6. that there is no other reason why you should not follow the assertions or recommendations in the report.

If you have any concerns at any time about whether or not these assumptions are correct in your particular circumstances, before acting, or not acting, on any of the assertions or recommendations, you must consult a medical practitioner.

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UNDERSTANDING GENETICS

Before reading your full report, please take a moment to read this background information to help you better understand your results and to guide you on how best to make use of what you learn from your DNAFit DIET+ results.

WHAT ARE GENES?

A gene is a segment of the DNA (short for deoxyribonucleic acid) molecule that contains the instructions for how, when and where your body makes each of the many thousands of proteins required for life. Each gene is comprised of many combinations of four letters that make up your genetic code: A, T, C, and G. Each gene's code combines these "letters" in various ways, spelling out the "words" that specify which amino acid is needed at every step in the process of making the proteins required for your body to develop and function. Increasingly, your genes can also tell you whether you are predisposed to specific health risks.

WHAT ARE GENE POLYMORPHISMS?

All of us have small differences in the information that our DNA contains, and it's these differences that make each of us unique. Gene polymorphisms are slight changes in the genetic code that are present in at least one percent of the population.

For example - one genetic "letter" (A, T, C, or G) may be replaced by another. These polymorphisms can lead to different processes in the body, just as altering one letter in a word can completely change its meaning. When the change affects only one genetic letter, it is called a "single nucleotide polymorphism" (or SNP, pronounced "snip").

WHAT IS NUTRIGENETICS?

Nutrigenetics is the study of the effects of our individual genetic variations in response to our diet, exercise and lifestyle, all of which can cause the genes to be "expressed" in a positive or negative way. Nutrigenetic testing helps us to identify where we are on our journey towards achieving our personal, optimal health potential.

HOW TO READ THIS REPORT

Example Gene Table		
Gene	Your Allele Result	Effect
ACE	DD	●●
PPARG	Pro-Pro	●
TCF7L2	CC	—

KEY

- = Very Strong Association
- = Strong Association
- = No Association



YOUR PERSONAL GENETIC REPORT

This report provides your results and any additional information you need to know in order to make informed modifications to your diet and lifestyle to help improve your health and wellbeing. Please read this report carefully and feel free to discuss the report with a nutritionist or health professional, who will be able to help you plan any recommended changes.

Remember:

Your genes cannot change, but your lifestyle can.

As a result, this is why we consider the two together; by identifying genetic traits, we can combine this knowledge with best practice in our lifestyle to make appropriate exercise, dietary and lifestyle recommendations.

YOUR GENETIC OVERVIEW

Your Optimal Diet

Low Fat Plan

Your Recommended Exercise Type

High Intensity

Your Recommended Nutrient Overview

Lactose Intolerance

Lactose tolerant

Celiac Risk

Possible predisposition
for celiac disease





WHAT IS THE BEST DIET FOR ME?

Anyone who has ever tried losing weight will have experienced the dizzying array and often conflicting advice of the various diets available. Similarly, you may have found that a diet that worked for someone else was perhaps not so effective for you, or vice-versa. This is down to many different factors, from personal preference to lifestyle, but research has also shown that our genetics may play an important role in identifying the most effective diet and weight-loss plan for our bodies. Correct diet management obviously does not depend on DNA alone, many other factors play a part. However, it has now been clearly shown that genetics do impact the different ways in which different people respond to different diets.

There are three particular aspects that we can use to gauge your genetic variation and explain why the phrase “a calorie is a calorie” is not always true:

- **Refined carbohydrate sensitivity:** The higher your sensitivity, the higher your risk of weight gain and glycaemia when eating refined carbohydrate.
- **Saturated fat sensitivity:** Our genetic control of fat metabolism means that different people absorb and transport saturated fat at different rates.
- **Recommended Exercise Type:** Our genetics can affect the intensity of exercise our bodies require to achieve our desired results.

Armed with the new information you'll learn from this report, you can use this deeper understanding of your genes to help make the correct diet choices - starting you on the path to healthy living, with a boost from your DNA!





YOUR CARBOHYDRATE SENSITIVITY



VERY LOW

LOW

MEDIUM

HIGH

VERY HIGH

★ Your Tips ★

Consume a maximum of 8 % of your daily calories through refined carbohydrates

Aim for a Glycaemic Load maximum of 80

Consume 28g of fibre per day

There are two kinds of carbohydrate: Simple carbohydrates, such as everyday white sugar, and complex carbohydrates such as rice or potato. When the body digests carbohydrates, it breaks both kinds down into a sugar called glucose. Too much glucose can disrupt the body's blood sugar level, which can then be harmful to your health and ability to manage your weight effectively.

There are certain genes that can affect how we respond to both refined and complex carbohydrates, and from this we can provide recommended levels of refined carbohydrates and fibre in your daily eating.

Your Gene Results		
Gene	Your Allele Result	Effect
ACE	II	
PPARG	CG	
TCF7L2	TT	**
ADRB2	GG	*
FABP2	ND	
<p>You have a high sensitivity to carbohydrates – this is an overall measure of the potential effects of your combined genotype on aspects such as carbohydrate metabolism and assimilation, short term glucose fluctuations and longer term insulin sensitivity.</p>		



WHAT DO WE MEAN BY GLYCEMIC LOAD AND GLYCEMIC INDEX?

Carbohydrates are one of the body's main energy sources. How your body responds to the various carbohydrates in food depends on the Glycemic Index (GI) of the food. Glycemic Index is a rating scale that marks the carbohydrate content of a food on a scale from 0 to 100. Foods are ranked according to how much they raise blood-sugar levels after eating. High GI foods are digested and absorbed quickly, which may result in large changes in blood sugar levels. Low GI foods are digested and absorbed more slowly, and may result in more stable levels of blood sugar. Glycemic Load (GL) is a reference that takes into account both the Glycemic Index of a food and the amount of carbohydrate content per 100g of this food

The higher the Glycemic Load, the greater the increase in blood sugar.

To help maintain long-term health, consider consuming foods with a lower GL to help keep blood sugar levels stable.

Some general tips for following a low-GL diet:

- Consume whole grains. The fibrous coat of the hull or skin from grains slows down the digestion and absorption of carbohydrates. E.g. Brown rice – this has the lowest GI compared to other rice.
- Pasta has a relatively low GI, but a large portion can result in a high GL.

Controlling blood sugar levels is associated with a number of positive effects on our health

1. Lower risk of Type-2 Diabetes
2. Lower risk of cardiac disease
3. Stay fuller, for longer
4. Reduce sweet cravings





Some example foods and their Glycemic Load score:

FOOD TYPE	GI SCORE	SERVING SIZE (GRAMS)	GL SCORE
BREAD AND CAKES			
Sponge cake, plain	46	63	17
Baguette, white, plain	95	30	15
Hamburger bun	61	30	9
White bread	71	30	10
DRINKS			
Coca Cola®	63	250 ml	16
Fanta®, orange soft drink	68	250 ml	23
Orange juice, unsweetened	50	250 ml	12
CEREAL			
All-Bran™	55	30	12
Cornflakes™	93	30	23
Muesli	66	30	16
Special K™	69	30	14
GRAINS			
Couscous	65	150	9
Quinoa	53	150	13
White rice	89	150	43
Brown rice	50	150	16
DAIRY PRODUCTS			
Ice cream, regular	57	50	6
Milk, skim	32	250 ml	4
Reduced-fat yogurt with fruit	33	200	11
FRUITS			
Apple	39	120	6
Banana	62	120	16
Orange	40	120	4
BEANS AND NUTS			
Baked beans	40	150	6
Chickpeas, canned in brine	38	150	9
Peanuts	7	50	0
PASTA			
Spaghetti, white, boiled	46	180	22
Spaghetti, wholemeal, boiled	42	180	17
VEGETABLES			
Green peas	51	80	4
Carrots	35	80	2
Sweet potato	70	150	22



YOUR SATURATED FAT SENSITIVITY



VERY LOW

LOW

MEDIUM

HIGH

VERY HIGH

★ Your Tips ★

Consume a maximum of 8 % of your daily calories through saturated fat

Consume a maximum of 15 % of your daily calories through Monounsaturated Fatty Acids

Consume a maximum of 12 % of your daily calories through Polyunsaturated Fatty Acids

There are two types of fat – Unsaturated and Saturated. Fats that are solid at room temperature have a higher amount of saturated fats within them – such as animal fat. An excess of saturated fats in your diet is said to raise cholesterol levels in the blood and therefore it is often recommended that these be monitored as part of a healthy lifestyle.

Scientific research has clearly indicated that genetics play a role in the transport and metabolism of the fat we take on as part of our daily eating, and the resultant effect on our cholesterol level, for example.

Gene	Result	Effect
ADRB2	GG	*
ADRB3	TT	
APOA2	TC	*
FABP2	ND	
FTO	AA	**
PPARG	CG	
TCF7L2	TT	**

Your combined genotype for lipid related genes indicates a medium sensitivity which affects various aspects including fat absorption from food in the intestines, transport and metabolism and the effect of saturated and unsaturated fats on your blood lipid profile.

How Do Saturated Fats Affect Our Health?

Fats provide us with a concentrated form of energy. They supply essential fatty acids the body itself cannot produce, help the body store energy, insulate tissues, and absorb fat-soluble vitamins and hormones. Saturated fats can raise LDL cholesterol levels, and high LDL cholesterol has been linked to cardiovascular disease. Other fat types to be aware of are trans fatty acids because they can also increase LDL cholesterol and lower HDL cholesterol, which has been shown to be associated with a number of positive health effects.



YOUR GENERAL RECOMMENDED EXERCISE TYPE



LOW INTENSITY
LONG DURATION

MEDIUM INTENSITY
MEDIUM DURATION

HIGH INTENSITY
SHORT DURATION

Based on a selection of the genes we test for Diet markers, we are also able to provide an initial general recommendation as to the type of exercise that may suit your genetic makeup.

**Want to find out more about your personal genetics and the best training for you?
Contact us now to add DNAFit Premium to your package at a special discounted
price just for our DNAFit Diet customers!**

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★ Your Tips ★

Aim for: 30-45 minutes of exercise 5 days a week with at least half from high intensity exercises .

What is High Intensity exercise ?

- Your breathing will be deep and rapid
- 80-85% of your maximum heart rate
- Will break a sweat after 3-5 minutes.
 - You can only talk in short phrases.
- Keep your heart rate at 80-85% of your maximum

Example High Intensity Exercise

- Running
- Swimming – fast crawl
- Fast cycling (15-20 mph)
- Vigorous walking uphill



LACTOSE INTOLERANCE & COELIAC PREDISPOSITION



Lactose Intolerance Risk

Lactose is a sugar present in milk and most dairy products, it is digested by an enzyme called Lactase. However, in most parts of the world the presence of this enzyme decreases significantly with age. This results in a reduced ability to digest lactose itself, thus creating lactose intolerance.

In Europe, a genetic variation results in lactose persistence, i.e. the ability to continue to digest lactose throughout life. However, lactose intolerance is becoming increasingly common, even in areas it was once rare, and we can test for the genetic risk of lactose intolerance.

Your Lactose Intolerance Risk



LOW

MEDIUM

HIGH

Gene	Your Allele Result
LCT	TC
Lactose tolerant	

Your Result, CT, means that you have inherited one copy of the version of the gene (T) that leads to lactase persistence and an ability to continue to digest lactose from dairy products.



Coeliac Predisposition

Coeliac disease is a relatively common digestive condition that occurs when a person has an adverse reaction to gluten, a protein found in grains such as wheat, barley and rye.

For those with coeliac disease, eating gluten can create an immune reaction in the small intestine, causing a wide-range of symptoms from diarrhoea to malnutrition.

Genetic testing can give us an idea of a person's genetic predisposition for coeliac disease.

Gene	Your Allele Result
HLA DQ2/DQ8	DQ2.2 0 DQ8
Possible predisposition for coeliac disease	

A positive genetic test result does not mean that you will certainly develop coeliac disease and it is not a reason for you to avoid gluten unless an intolerance has actually been diagnosed.



GLOSSARY

Aerobic:

Anything relating to, involving, or requiring oxygen. E.g. "Aerobic exercise"

Allele:

An allele is an alternative form of a gene (one member of a pair) that is located at a specific position on a specific DNA chromosome. E.g. "You have the DD alleles of the ACE gene."

Anti-Oxidant:

A substance, such as vitamin E, vitamin C, or beta-carotene, thought to protect body cells from the damaging effects of oxidation.

Cruciferous Vegetables:

Relating to or denoting plants of the Cruciferae or Brassicaceae family, valued for their health benefits.

Endurance:

A sport or activity that requires the ability to perform for long periods of time at low intensities, such as marathon running and cross-country skiing.

Free Radical:

An atom or group of atoms that has at least one unpaired electron and is therefore unstable and highly reactive. In human tissue, free radicals can damage cells and cause health problems.

Folate:

A salt or ester of folic acid.

Folic Acid:

Part of the B complex of vitamins, found especially in leafy green vegetables, liver, and kidney.

Genotype:

The genetic constitution of an individual organism.

HCA (Heterocyclic Amines) and PAH (polycyclic aromatic hydrocarbons):

Possibly harmful chemicals formed when meat is cooked at high temperatures.

Lipid:

Any of a group of organic compounds, including fats, oils, waxes, sterols, and triglycerides, that are insoluble in water.

Micronutrient:

A substance such as a vitamin or mineral, that is essential in small amounts for our body's health and growth.

Monounsaturated Fatty Acids:

A type of fat that has only one double bond per molecule, they are mostly liquid at room temperature but can turn solid when chilled. E.g. Olive Oil

Nutrigenetics:

A branch of nutritional science, which investigates the effect of genetic variations on the individual response to nutrients and other dietary components.

Osteoporosis:

A medical condition in which the bones become brittle and fragile from loss of tissue, typically as a result of hormonal changes, or deficiency of calcium or vitamin D.

Polyunsaturated Fatty Acids:

A type of fat that has more than one double bond per molecule, they are typically liquid both at room temperature and when chilled.

Power:

A sport or activity that requires the ability to perform at a high intensity for short periods of time, such as sprinting and power lifting.

Tendinopathy:

A chronic or acute injury to a tendon, such as the Achilles tendon, often also referred to as tendonitis.

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