The Wellness Gene™

DNA OPTIMIZED HEALTH

HEALTH AND MEDICAL CARE

Powered By MediPro DIRECT Slim

Personal Info

First Name	**Sample report**
Last Name	**20April2012**
Gender	?
Date of Birth	**00-Dec-0000**
Date Sample Taken	**20-Apr-2012**
Date Sample Received	**20-Apr-2012**
Date Report Issued	**20-Apr-2012**

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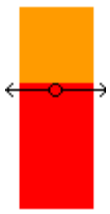
Results

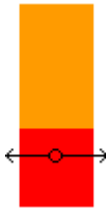
CARDIOVASCULAR HEALTH - LIPID LEVELS	
	GENERAL CONCLUSION
	This overall genetic profile has been associated with increased risk for cardiovascular disease, due to disruptions in lipid metabolism. Individuals deal with increased risk for elevated levels of lipids in blood circulation, which is a harmful factor for the health of heart and vessels.
	Executive Summary
	Bring the results of this DNA profiling to your Doctor's attention. Consult a Cardiologist. Reduce your body weight in case you are overweight. Maintain normal body weight or BMI < 24.9. If you are smoking it is strongly recommended to quit. Regular exercise is strongly recommended. Emphasize duration rather than intensity. Increase intake of ω-3 fatty acids. Increase intake of dietary fiber. Limit intake of saturated fat.

Limit intake of sugar.
If you are drinking, limit alcohol consumption.

The following nutritional supplement from the genecouture nutraceutical series is recommended:

POLYUNSATURATED FATTY ACIDS (N2)

CARDIOVASCULAR HEALTH - HOMOCYSTEINE LEVELS



GENERAL CONCLUSION

This overall genetic profile has been associated with increased risk for cardiovascular disease, due to disruptions in homocysteine metabolism. This can result to elevated homocysteine levels, which can have toxic effects on heart and vessels.

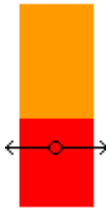
Executive Summary

Bring the results of this DNA profiling to your Doctor's attention.
Consult a Cardiologist.
Have a regular check up of homocysteine levels and folic acid.
Increase intake of folic acid.
Increase intake of Vitamins B6 and B12.

The following nutritional supplement from the genecouture nutraceutical series is recommended:

OPTIMUM FRUIT & VEGETABLE MIX (N3)

CARDIOVASCULAR HEALTH - CORONARY ARTERY DISEASE



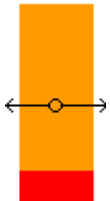
GENERAL CONCLUSION

This overall genetic profile has been associated with increased risk for coronary artery disease.

Executive Summary

Bring the results of this DNA profiling to your Doctor's attention.
Consult a Cardiologist.
Reduce your body weight in case you are overweight.
Maintain normal body weight or BMI < 24.9.
If you are smoking it is strongly recommended to quit.
Maintain normal blood pressure.
Stress management is strongly recommended.
Regular exercise is strongly recommended. Emphasize duration rather than intensity.
Increase intake of ω-3 fatty acids.
Increase intake of dietary fiber.
Limit intake of saturated fat.
Limit intake of sugar.
If you are drinking, limit alcohol consumption.

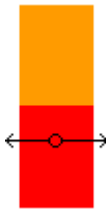
CARDIOVASCULAR HEALTH - ATRIAL FIBRILLATION



GENERAL CONCLUSION

This overall genetic profile has NOT been associated with increased risk for atrial fibrillation.

TYPE 2 DIABETES



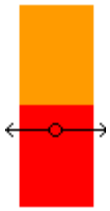
GENERAL CONCLUSION

This overall genetic profile has been associated with increased susceptibility to insulin resistance, which is indicative of the metabolic syndrome and can progressively lead to type 2 diabetes.

Executive Summary

Bring the results of this DNA profiling to your Doctor's attention.
Reduce your body weight in case you are overweight.
Maintain normal body weight or BMI < 24.9.
If you are smoking it is strongly recommended to quit.
Regular exercise is strongly recommended. Emphasize duration rather than intensity.
Increase intake of ω-3 fatty acids.
Increase intake of dietary fiber.
Limit intake of saturated fat.
Limit intake of sugar.
If you are drinking, limit alcohol consumption.

BONE HEALTH - OSTEOPOROSIS



GENERAL CONCLUSION

This overall genetic profile has been associated with increased susceptibility to osteoporosis. The body may function less than optimally to maintain healthy bones, which can result to reduce Bone Mass Density and increased bone fractures.
Osteoporosis is a condition observed more often in women, especially after menopause. However the increased risk defined by the genetic profile in men, requires also corrective actions and should not be ignored.

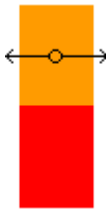
Executive Summary

Bring the results of this DNA profiling to your Doctor's attention.
Cautious exposure to sunlight (15min, 3-4 times every week) is recommended.
If you are smoking it is strongly recommended to quit.
Reduce your body weight in case you are overweight.
Maintain normal body weight or BMI < 24.9.
Increase intake of Calcium.
Increase intake Vitamin D.
Limit caffeine intake.

The following nutritional supplement from the genecouture nutraceutical series is recommended:

OPTIMUM BONES & JOINTS MIX (N6)

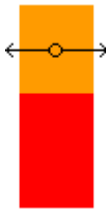
INFLAMMATORY - AUTOIMMUNE CONDITIONS



GENERAL CONCLUSION

This overall genetic profile has NOT been associated with increased susceptibility of individuals to inflammatory conditions.

INFLAMMATORY - AUTOIMMUNE CONDITIONS - RHEUMATOID ARTHRITIS



GENERAL CONCLUSION

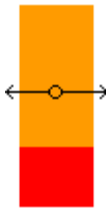
This overall genetic profile has NOT been associated with increased risk for Rheumatoid Arthritis.

INFLAMMATORY - AUTOIMMUNE CONDITIONS - ANKYLOSING SPONDYLITIS

GENERAL CONCLUSION

This overall genetic profile has NOT been associated with increased risk for Ankylosing Spondylitis.

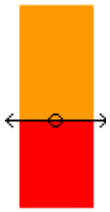
INFLAMMATORY - AUTOIMMUNE CONDITIONS - MULTIPLE SCLEROSIS



GENERAL CONCLUSION

This overall genetic profile has NOT been associated with increased risk for multiple sclerosis.

INFLAMMATORY - AUTOIMMUNE CONDITIONS - PSORIASIS



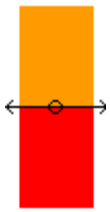
GENERAL CONCLUSION

This overall genetic profile has been associated with increased risk for psoriasis.

Executive Summary

Bring the results of this DNA profiling to your Doctor's attention.
Consult a Dermatologist.
Reduce your body weight in case you are overweight.
Maintain normal body weight or BMI < 24.9.
Cautious exposure to sunlight (15min, 3-4 times every week) is recommended.
Stress management is strongly recommended.
Increase intake Vitamin D.
Increase intake of ω-3 fatty acids.
Fish oil (especially cod liver oil) intake may have importantly protective effects against psoriasis.
Limit intake of saturated fat.
Limit intake of sugar.
Limit caffeine intake.
If you are drinking, limit alcohol consumption.

VENOUS THROMBOEMBOLISM



GENERAL CONCLUSION

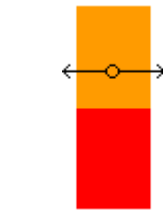
This overall genetic profile has been associated with increased risk for venous thrombosis.

Executive Summary

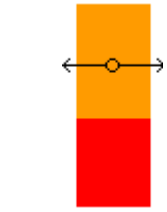
Bring the results of this DNA profiling to your Doctor's attention.
If you are smoking it is strongly recommended to quit.
Ensure as possible environmental factors that will reduce the risk for accidents.
Regular exercise is strongly recommended. Emphasize duration rather than intensity.
Prophylactic anti-coagulation treatment is recommended in cases of risk factors, such as large periods of immobility, surgical intervention, childbed period, when individuals take the contraceptive pill.

	Maintain balanced intake of Vitamin K through diet. Increase intake of foods high in folic acid. Increase intake of Vitamins B6 and B12. The following nutritional supplement from the genecouture nutraceutical series is recommended: OPTIMUM FRUIT & VEGETABLE MIX (N3)

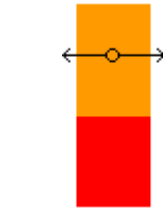
ATOPIC DISEASES - ASTHMA & ALLERGIES

	GENERAL CONCLUSION
	This overall genetic profile has NOT been associated with increased risk for atopy (allergic hypersensitivity).

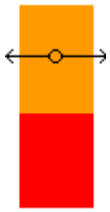
NEOPLASIA - PROSTATE CANCER

	GENERAL CONCLUSION
	This overall genetic profile has NOT been associated with increased risk for prostate cancer.

NEOPLASIA - COLORECTAL CANCER

	GENERAL CONCLUSION
	This overall genetic profile has NOT been associated with increased risk for colorectal cancer.

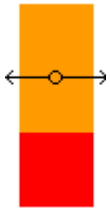
NEOPLASIA - BREAST CANCER (SPORADIC)



GENERAL CONCLUSION

This overall genetic profile has NOT been associated with increased risk for breast cancer (sporadic).

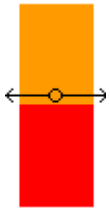
SKIN CANCER - BASAL CELL CARCINOMA



GENERAL CONCLUSION

This overall genetic profile has NOT been associated with increased risk for basal cell carcinoma.

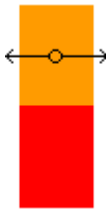
ALZHEIMER'S DISEASE



GENERAL CONCLUSION

This overall genetic profile has NOT been associated with increased risk for Alzheimer’s disease.

HAEMOCHROMATOSIS



GENERAL CONCLUSION

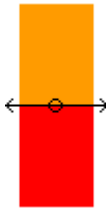
This overall genetic profile has been NOT been associated with higher risk for iron overload.

PERIODONTITIS

GENERAL CONCLUSION

This overall genetic profile has NOT been associated with increased risk for Periodontitis.

EXFOLIATION GLAUCOMA



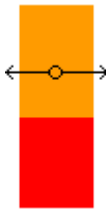
GENERAL CONCLUSION

This overall genetic profile has been associated with increased risk for exfoliation glaucoma.

Executive Summary

Bring the results of this DNA profiling to your Doctor's attention.
Consult an Eye care professional (Ophthalmologist).
Have a comprehensive eye exam at least once every two years.
Increase consumption of fresh fruits and vegetables.

MACULAR DEGENERATION



GENERAL CONCLUSION

This overall genetic profile has NOT been associated with increased risk for macular degeneration.

DEPRESSION

GENERAL CONCLUSION

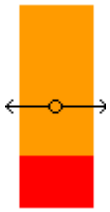
This overall genetic profile has NOT been associated with increased risk for depression.

PHARMACOGENOMICS - WARFARIN SENSITIVITY

GENERAL CONCLUSION

This overall genetic profile has NOT been associated with increased sensitivity to the anti-thrombotic drug warfarin. It is more likely that individuals will be normal metabolizers of this drug.

PHARMACOGENOMICS - ASPIRIN & COAGULATION



GENERAL CONCLUSION

This overall genetic profile has been associated with a good response to aspirin, regarding its anti-coagulation effects.

PHARMACOGENOMICS - STATINS & CHOLESTEROL

GENERAL CONCLUSION

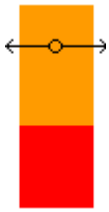
This overall genetic profile has been associated with a good response to statins, when this type of drugs is used to lower cholesterol levels in individuals prone to high cholesterol or heart disease.

PHARMACOGENOMICS - CLOPIDOGREL (Plavix) RESPONSE

GENERAL CONCLUSION

This overall genetic profile has been associated with normal function of the enzyme and normal metabolism of clopidogrel (Plavix), a drug with anti-coagulation effects. Individuals are more likely to respond normally to this drug, when prescribed to reduce the risk for heart attack and stroke.

PHARMACOGENOMICS - 5-FU (5-fluorouracil) TOXICITY



GENERAL CONCLUSION

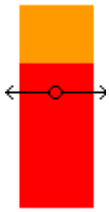
This overall genetic profile has NOT been associated with increased toxicity of the drug 5-FU when used in cancer chemotherapy.

PHARMACOGENOMICS - THIOPURINES TOXICITY

GENERAL CONCLUSION

This overall genetic profile has NOT been associated with increased toxicity of thiopurine drugs, like azathioprine, 6-mercaptopurine and 6-thioguanine.

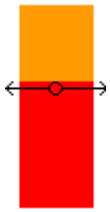
PHARMACOGENOMICS-ANTIDEPRESSANTS (type SSRIs: Selective Serotonin Re-uptake Inhibitors)



GENERAL CONCLUSION

This overall genetic profile has been associated with reduced response of individuals to Anti-Depressants, in particular the group of SSRIs: Selective Serotonin Re-uptake Inhibitors.

NUTRIGENOMICS - LIPID METABOLISM



GENERAL CONCLUSION

This overall genetic profile has been associated with higher risk for disruptions in lipids metabolism, which can result to elevated lipids in blood circulation.

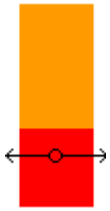
Executive Summary

Regular check up of total cholesterol, HDL cholesterol, LDL-cholesterol, triglycerides, HDL-C, and total cholesterol/HDL cholesterol ratio, glucose levels is strongly recommended.
Reduce your body weight in case you are overweight.
Maintain normal body weight or BMI < 24.9.
If you are smoking it is strongly recommended to quit.
Regular exercise is strongly recommended. Emphasize duration rather than intensity.
Increase intake of ω-3 fatty acids.
Increase intake of dietary fiber.
Limit intake of saturated fat.
Limit intake of sugar.
If you are drinking, limit alcohol consumption.

The following nutritional supplement from the genecouture nutraceutical series is recommended:

POLYUNSATURATED FATTY ACIDS (N2)

NUTRIGENOMICS - FOLIC ACID METABOLISM



GENERAL CONCLUSION

This overall genetic profile has been associated with impaired homocysteine removal, which can have toxic effects in cells. Individuals are more likely to deal with disruptions in Vitamin B complex metabolism that will increase their needs for this Vitamin.

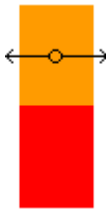
Executive Summary

Have a regular check up of homocysteine levels and folic acid.
Increase intake of folic acid.
Increase intake of Vitamins B6 and B12.

The following nutritional supplement from the genecouture nutraceutical series is recommended:

OPTIMUM FRUIT & VEGETABLE MIX (N3)

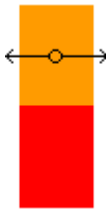
NUTRIGENOMICS - IRON ABSORPTION & STORAGE



GENERAL CONCLUSION

This overall genetic profile has been NOT been associated with higher risk for iron overload.

NUTRIGENOMICS - INFLAMMATORY RESPONSE



GENERAL CONCLUSION

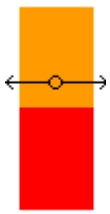
This overall genetic profile has NOT been associated with increased susceptibility of individuals to inflammatory conditions.

NUTRIGENOMICS - ANTIOXIDATION ABILITY

GENERAL CONCLUSION

This overall genetic profile has been associated with satisfactory anti-oxidant protection.

NUTRIGENOMICS - DETOXIFICATION ABILITY



GENERAL CONCLUSION

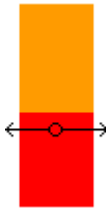
This overall genetic profile has been associated with satisfactory detoxification ability.

NUTRIGENOMICS - SALT SENSITIVE HYPERTENSION

GENERAL CONCLUSION

This overall genetic profile has NOT been associated with increased risk for hypertension, after salt intake through diet.

NUTRIGENOMICS - ALCOHOL METABOLISM



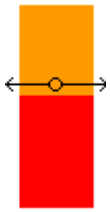
GENERAL CONCLUSION

This overall genetic profile has been associated with slow metabolism of alcohol. Individuals, is more likely to find alcohol pleasant and be prone to increased alcohol consumption.

NUTRIGENOMICS - CAFFEINE METABOLISM

GENERAL CONCLUSION

This overall genetic profile has been associated with fast caffeine metabolism. Coffee has normal or even in cases reduced stimulating effects. Individuals are more tolerant to caffeine consumption.

NUTRIGENOMICS - GLUTEN TOLERANCE	
	GENERAL CONCLUSION
	This overall genetic profile has NOT been associated with increased risk for Gluten Intolerance (Celiac Disease).

INTRODUCTION

Predictive Genomics for the Detection and Reduction of Health Risks

The Health and Medical Care Predictive Genomics Test analyzes genes for mutations associated with certain conditions and diseases, all documented in scientific literature. It aims at detecting genetic factors that increase the risk of individuals to common multi-factorial conditions, for which preventive measures and lifestyle interventions are of undisputed value.

The test focuses on a panel of conditions for which both environmental factors and genetic background play a significant role for the manifestation of the disease. It also investigates genes associated with the response of individuals to certain drugs. The knowledge of the genetic profile indicates whether specific measures should be taken to reduce the health risks.

A personalized form of Medicine is more feasible as guidelines (medical and nutritional) are tailored according to the needs of individuals, based on their genetic make up. Positive changes in the lifestyle can contribute significantly in the effort to reduce possible health risks.

The test results could have also a significant value in the cases that the disease occurs, despite the measures taken. They can provide clinicians with important information which can contribute to the best possible monitoring and management of the disease.

Explore your genes and take the chance for a healthier life!!

GLOSSARY

- **Apoptosis** is the programmed death of cells. It is a mechanism of the organism to maintain a relative constant and normal number of cells. It also includes a cascade of biological processes that result to the death of a cell, when it is seriously damaged or infected by a virus.

- **Adipocyte** is the main type of cells that compose adipose tissue and are also known as fat cells, or lipocytes. Their main function is to store energy in the form of fat.

- **Allele** is one member of the pair that makes up a gene. Genes come in pairs and each allele is an alternative form of the gene.
- **Amino acids** are components of proteins. Some are synthesized by the body (nonessential amino acids) and others must be obtained through diet (essential amino acids).
- **Antioxidant** is a substance that can protect the cells from damages caused by conditions of oxidative stress.
- **β (beta)-pancreatic cells** are a type of cells in pancreas which are responsible for the production and secretion of insulin.
- **BMD (Bone Mineral Density)** is a measure of bone density. BMD test is used to define loss of bone mass and detect osteoporosis.
- **BMI (Body Mass Index)** is a statistical measurement, used to estimate whether individuals have normal body weight. It compares weight and height based on the mathematic formula: BMI= mass (kg)/ height^2(m^2)
- **Carcinogen** is an agent (substance or radiation) that is involved in the development of cancer. Carcinogens can cause serious damage either to the DNA or the metabolic functions of cells.
- **Detoxification** is the process of removing or inactivating toxic substances from the body. It is crucial for cells to maintain their ability to detoxify themselves from substances, which have the potential to cause serious damages.
- **DNA** is a large molecule found in the nucleus of the cell. It contains the essential genetic information for the function of living organisms and has a significant role in the development of all traits that define our individuality. Its molecular structure in place has the shape of a double spiral, called double helix.
- **DNA sequence** is a succession of nucleotides in the DNA molecule.
- **DNA testing** utilizes techniques that enable scientists to define the DNA sequence or detect certain nucleotides at specific positions of the DNA.
- **Carbohydrate** is a compound of carbon, hydrogen and oxygen. It is an important source of energy found in food.
- **Cell** is the smallest functioning unit in the structure of an organism. It is enclosed by a membrane and contains a nucleus and organelles with certain functions (mitochondria, lysosomes, ribosomes).
- **Cell cycle** is the series of events that result to cell division and cell proliferation. A process very important for development, growth, wound healing.
- **Cholesterol** is a waxy, fat-like substance essential for the structure of cell membrane. It is also a component of certain hormones and some Vitamins and is transported with lipoproteins through blood circulation.
- **Chromosome** is a rod-shaped compound of DNA and proteins found in a cell nucleus. The structure serves the DNA package in the nucleus and the control of DNA functions. A human body cell normally contains 46 chromosomes arranged in 23 pairs.
- **Chromatin** is the combination of DNA and proteins which when condensed makes up chromosomes.

- **Enzyme** is a protein that controls biochemical reactions, resulting to either production or inactivation of substances in cells.
- **Genes represent** small segments of the DNA molecule which are the structural units of heredity in all living organisms. They contain the genetic information which can be used by cells. The human genome contains approximately 30,000 genes, which are located at specific positions on chromosomes.
- **Genetic** profile results from analysis of several genes in the DNA of an individual. It can be informative for the genetic tendencies of individuals regarding the trait under consideration.
- **Genotype** describes the constitution of gene (the type of the gene). It refers each time to a specific gene under investigation, describing the alleles that the gene contains. It often refers to the pair of the nucleotides found at a specific position of the DNA sequence.
- **Genome** is the total genetic material of a cell. It is the full complement of genetic information that an organism inherits from parents.
- **Glucose** is a very important carbohydrate in biological systems. It is used by cells as a source of energy and is also an intermediate of metabolism.
- **HDL (High Density Lipoprotein)** transports lipids through blood circulation. Due to its ability to remove cholesterol from arteries to liver and prevent serious damages, it is also called "good cholesterol".
- **Homeostasis** is a state of equilibrium (balance) or the tendency to reach equilibrium. It is the ability of a living organism to regulate its internal environment in order to maintain a stable condition.
- **Homocysteine** is an amino acid, important for the production of another amino acid called Cysteine. Homocysteine metabolism and maintenance of normal levels is crucial for the health, as elevated homocysteine levels in blood associate primarily with problems of the cardiovascular system.
- **HR max (Heart Rate max)** is the maximal number of heartbeats per unit of time. It should be estimated by specialized medical staff before an individual begins an exercise training program.
- **HR reserve (Heart Rate reserve)** describes the difference between a person's HR max and resting Heart rate (heart beats during resting). It is used in some cases of measuring the intensity of physical exercise.
- **Immune response** is the response of the immune system: the mechanism activated to defend against foreign harmful substances that come into the body, pathogens, and tumor cells.
- **Inflammation** is a process by which the body activates certain types of cells to protect us from infections and substances recognized as foreign.
- **Insulin** is a hormone produced in pancreas. It causes cells of fat tissue, liver and muscle to take up glucose from blood and use it as energy source.
- **LDL (Low Density Lipoprotein)** transports lipids through blood circulation. LDL is often called "bad cholesterol" as elevated LDL levels are harmful for the cardiovascular system.
- **Lipid** is a molecule naturally produced in the body with the main role of energy storage. Certain types of lipids are obtainedthrough diet from fats contained in food. With lipid metabolism, the body synthesizes or degrades the fats to produce lipids with the essential characteristics. Triglycerides and fatty acids belong to lipids.
- **Lipoprotein** is a compound of lipid and protein which transport lipids (fats) and cholesterol around the body

through blood circulation. HDL, LDL, and VLDL belong to lipoproteins.

- **Metabolism** is a group of chemical reactions that take place in a living organism to maintain life, develop and reproduce. It includes the processes of constructing components of cells (anabolism) and breaking down compounds (catabolism) to produce energy.

- **Molecule** is the smallest part of a chemical compound which can exist independently. It consists of one or more atoms held together by chemical forces.

- **Mutagen** is an agent which can cause a change in the genetic material of an organism.

- **Mutation** is a change in the genetic material of an organism. Regarding human cells, mutation refers to a change in the sequence of the DNA. Mutations are responsible to a significant degree for the variability of characteristics observed in the human population. Mutations can be beneficial, harmful or even neutral, having no effect. They result to different forms of alleles in genes, and are often called polymorphisms. The effect of mutations is often affected by environmental factors.

- **Nucleotides** are the structural molecules of the genetic material. In DNA each nucleotide is represented by a letter, which can be A, T, C, or G, each defined by the base that the nucleotide contains (Adenine, Thymine, Cytosine, or Guanine). When they are joined together and based on their succession, nucleotides define certain genetic information.

- **Oxidative stress** is caused in cells due to their reduced ability to fight against oxidative factors, which are substances like peroxides and free radicals. These can be either by-products of normal functions of cells or can be produced by environmental toxic substances when they enter the body. In both cases they can have toxic effects as they can damage seriously the components of cells (proteins, lipids, DNA).

- **Pharmacogenomics** is the field of Pharmacology and Genetics, which investigates how the DNA of individuals affects their response to drugs. Based on DNA testing, it aims to identify which drugs have increased efficacy or cause reduced toxicity to an individual.

- **Predictive genomics** is the field of Medicine which identifies mutations in the DNA of an individual in order to predict the likelihood of this individual to develop certain characteristics, abilities or conditions.

- **Proteins** are molecules made of amino acids. They are essential parts of organisms and take part in energy metabolism.

- **Vitamin** is a compound necessary for an organism to function properly. A compound is characterized as Vitamin, when it is essential to be provided by diet as it cannot be synthesized in adequate amounts by an organism.

- **VLDL (Very Low Density Lipoprotein)** transport lipids through blood circulation.

- **VO2** max is the maximal oxygen consumption, describing the amount of oxygen transported and used during physical exercise of individuals. It is an important factor for the physical fitness.

- **Xenobiotic** is a chemical which can be found in an organism but it is not normally produced by it nor obtained by diet. Drugs and antibiotics are examples of xenobiotics.

HOW TO READ THE REPORT

In the following pages you will find personal information about your genetic profile. The genes are analyzed independently of sex and age.
Some genes may be analyzed for more than one condition or trait, as one gene can have an important effect on various biological systems.
For some genes, more than one mutation (polymorphism) may be analyzed. You will be able to see the genes

analyzed and the results (genotype) of the analysis.

What is the effect of each genotype?

The influence of each genotype is described in colored circles. Based on the color of the circle for each type of the gene, you can see whether a certain genotype shows an increased, an average or a reduced risk always compared to the risk of general population.

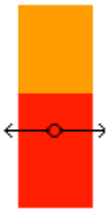
The red circle means increased risk.

The yellow circle means average (risk of general population).

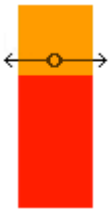
One green circle means reduced risk.

How is your genetic profile evaluated?

The conclusion for your genetic profile in a category is shown at the beginning of the report with a “bar” chart. The region with the red color represents the region of increased risk, whereas the region with orange color represents the region that is NOT associated with increased risk.
The line with the two arrow heads on the bar graph shows the position of your genetic profile.

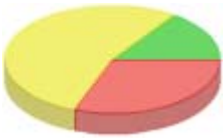


The lower this line is found in red region the higher is the risk.



The higher this line is found in orange region the lower is the risk.

The “pie” chart compares for each category the proportion of genotypes with negative, neutral and positive effect.



The red part represents the proportion of negative genotypes, the yellow part represents the proportion of neutral genotypes and the green part represents the positive genotypes.

The general conclusion for each gene category is drawn according to the importance of each negative genotype. This means that even if there are more green circles or yellow than the red ones, the conclusion for the specific section of the test may show increased risk. The term "increased risk" is compared to the relative risk of general population.
When a type of a gene or a genetic profile is associated with a certain ability or risk, this does not mean that the trait under investigation will be certainly manifested.
Information obtained from DNA testing are informative to an important degree for the tendencies of individuals but are neither descriptive nor predict with certainty what will eventually happen.
The company focuses mainly on traits and conditions for which environmental factors play a significant role, so that the possible genetic disadvantages can be to a degree modifiable.
The information supplied to you does not confirm or replace any medical diagnosis or status conferred by a health care professional, a Doctor or a Genetic counsellor.
When feasible, appropriate guidelines will follow according to your genetic profile for the category under investigation. The guidelines may be in cases provided based on the particular genotype of a gene.
Specific medical advice will not be provided, and the company urges you to consult with a qualified physician for diagnosis and for answers to your personal questions.

CARDIOVASCULAR HEALTH - LIPID LEVELS			
Gene	Biological effect	Genotype	
APOE	Cholesterol Level Regulation	E4E4	
This type of the gene is associated with a significant increase of lipids in blood. Individuals have a high risk for cardiovascular disease, due to accumulation of fat in the arteries walls. A heart attack or a stroke can be the consequence of blood flow obstruction. Appliance of appropriate diet which is poor in saturated fats has a very positive effect on eliminating the genetic disadvantage.			
APOA5	Lipid Metabolism	GG	
Individuals who have this type of the gene have significant increased levels of lipids in blood. The blood circulation can become difficult because lipids narrow and harden the arteries. With the combination of other factors like high glucose and high blood pressure, these individuals deal with a high risk of cardiovascular disease. This can be experienced as a heart attack or stroke. The risk is modified by dietary and pharmaceutical measures.			
APOC3	Triglyceride Metabolism	GG	
This type of the gene is associated with significant increased levels of triglycerides in blood. Individuals have increased risk for developing atherosclerosis, a condition in which arteries wall are hardened and narrowed. They deal with increased risk for cardiovascular disease.			
CETP	Cholesterol Metabolism HDL Metabolism	TC	
This type of the gene is associated with reduced levels of HDL. Individuals, especially those not exercising and following a diet rich in saturated fats, have increased risk for cardiovascular disease. They deal with significant risk for development of atherosclerosis, a condition in which arteries are hardened and narrowed. This can obstruct blood flow resulting to heart attack or stroke.			
LIPC	Lipid Metabolism	AG	
This type of the gene is associated with impaired lipids metabolism when the intake of animal fat is high. In this case, especially women and sedentary people have increased risk for cardiovascular disease. The risk is eliminated when fat is of vegetable origin and individuals are physically active.			
LPL	Lipoprotein Metabolism Triglyceride Metabolism	CC	
This type of the gene is associated with increased levels of VLDL and triglycerides in blood, especially when animal fat intake is high. Individuals in this case have increased risk for cardiovascular disease. The risk can be significantly reduced by appropriate nutritional guidelines that will increase the levels of HDL, also known as ‘good’ cholesterol.			
PON1	HDL synthesis	AT	
This type of the gene is associated with increased levels of blood LDL (Low Density Lipoprotein) and reduced levels of blood HDL (High Density Lipoprotein). Individuals have increased risk for atherosclerosis and cardiovascular disease.			

PON1	HDL synthesis	GA	
This type of the gene is associated with increased levels of blood LDL (Low Density Lipoprotein) and reduced levels of blood HDL (High Density Lipoprotein). Individuals have increased risk for atherosclerosis and cardiovascular disease.			
APOA5	Lipid Metabolism	AA	
APOB	Lipid Metabolism	GG	
APOC3	Triglyceride Metabolism	TT	
FABP2	Intestinal absorption of fatty acids Lipid metabolism	GG	
GJA4 (CX37)	Lipid metabolism	CC	
HMGCR	Lipid metabolism	CC	
APOA1	Lipid Metabolism	GG	
CETP	Cholesterol Metabolism HDL Metabolism	GG	
Conclusion			
This overall genetic profile has been associated with increased risk for cardiovascular disease, due to disruptions in lipid metabolism. Individuals deal with increased risk for elevated levels of lipids in blood circulation, which is a harmful factor for the health of heart and vessels.			
CARDIOVASCULAR HEALTH - HOMOCYSTEINE LEVELS			
Gene	Biological effect	Genotype	
COMT	Homocysteine Metabolism	AA	
This type of the gene is associated with significant reduced inactivation of the hormones called dopamine. Individuals, especially those having increased levels of blood Homocysteine and following a diet poor in folic acid, deal with an increased risk for cardiovascular disease.			
MTRR	Folic Acid Metabolism Vitamin B12 Metabolism	GG	
This type of the gene is associated with negative effects on Homocysteine regulation. Individuals, especially those following a diet poor in Vitamin B complex, have an increased risk for cardiovascular disease.			
TCN2	Homocysteine concentration	GG	

This type of the gene is associated with reduced levels of Homocysteine removal. Individuals, especially those following a diet poor in Vitamin B-Complex, have increased risk for cardiovascular disease.

MTHFR	DNA Synthesis & Repair Folic Acid Metabolism Homocysteine Metabolism	AC	

This type of the gene is associated with reduced function of the investigated factor, resulting to a risk for increased levels of Homocysteine in blood, which is toxic for the vascular walls. Individuals, especially those following a diet poor in Vitamins B-complex (folic acid, B6, B12) have increased risk for cardiovascular disease.

MTHFR	DNA Synthesis & Repair Folic Acid Metabolism Homocysteine Metabolism	CT	

This type of the gene is associated with reduced function of the investigated factor, resulting to a risk for increased levels of Homocysteine in blood, which is toxic for the vascular walls. Individuals, especially those following a diet poor in Vitamins B-complex (folic acid, B6, B12) have increased risk for cardiovascular disease.

MTR	Folic Acid Metabolism Homocysteine Metabolism	AA	

This type of the gene is associated with increased levels of Homocysteine in blood. Individuals, especially those following a diet poor in Vitamin B Complex (B6, B9, B12), deal with an increased risk for cardiovascular disorders.

CBS	Homocysteine Removal Vitamin B6 Metabolism	AG	

Conclusion

This overall genetic profile has been associated with increased risk for cardiovascular disease, due to disruptions in homocysteine metabolism. This can result to elevated homocysteine levels, which can have toxic effects on heart and vessels.

CARDIOVASCULAR HEALTH - CORONARY ARTERY DISEASE

Gene	Biological effect	Genotype	
1p13.3	Genetic locus associated with the condition	AA	

This genotype is associated with increased risk for coronary artery disease.

9p21	Genetic locus associated with the condition	CC	

This genotype is associated with importantly increased risk for coronary artery disease.

10q11.21	Genetic locus associated with the condition	AA	

This genotype is associated with increased risk for coronary artery disease.

2q36.3	Genetic locus associated with the condition	AC	

Conclusion
This overall genetic profile has been associated with increased risk for coronary artery disease.

CARDIOVASCULAR HEALTH - ATRIAL FIBRILLATION			
Gene	Biological effect	Genotype	
4q25	Genetic locus associated with the condition	GG	
This genotype is associated with increased risk for atrial fibrillation.			
4q25	Genetic locus associated with the condition	CC	
Conclusion			
This overall genetic profile has NOT been associated with increased risk for atrial fibrillation.			

TYPE 2 DIABETES			
Gene	Biological effect	Genotype	
HHEX	Insulin Response Decreased Insulin Secretion Lower Insulinogenic index	GG	
This type of the gene is associated with disruptions of pancreatic ß-cells' functions, impaired insulin secretion and reduced insulin degradation from liver. The cells of the body have increased risk to develop insulin resistance and consequently individuals deal with significantly increased risk for diabetes type 2.			
IGF2BP2	Regulates the IGF2: Growth & development mediator	TT	
This type of the gene is associated with disruptions in pancreatic ß-cells' function, impaired insulin secretion and impaired response of cells to insulin. Individuals deal with importantly increased risk to develop insulin resistance and diabetes type 2. Malnutrition during fetus development can affect negatively glucose metabolism and result to increased susceptibility to diabetes type 2 in the future.			
SLC30A8	Insulin maturation-storage in pancreatic cells	CC	
This type of the gene is associated with dysfunctions in pancreatic ß-cells and importantly reduced insulin secretion in response to glucose. Individuals deal with an increased risk for diabetes type 2.			
VDR	Regulation of collagen formation Bone formation and replacement Connective tissue degradation	GG	

This type of the gene is associated with impaired function of Vitamin D, which influences insulin secretion from pancreas. Individuals have increased insulin resistance and consequently increased risk for diabetes type 2.			
VDR	Regulation of collagen formation Bone formation and replacement Connective tissue degradation	TT	
This type of the gene is associated with impaired function of Vitamin D, which influences insulin secretion from pancreas. Individuals have increased insulin resistance and consequently increased risk for diabetes type 2.			
ADAMTS9	Cleavage of proteoglycans, organ shape during development, inhibition of angiogenesis Insulin sensitivity	CC	
This type of the gene has been associated with reduced insulin sensitivity, increasing the risk for diabetes type 2.			
CDC123/CAMK1D	Cell cycle regulation	AA	
This type of the gene has been associated with increased risk for diabetes type 2. It results to defects in ß-cell function, causing reduced glucose-stimulated insulin secretion and reduced insulin response.			
CDKAL1	Insulin Response	AG	
This type of the gene is associated with disruptions in ß-cells function and impaired insulin response. Individuals have increased risk for diabetes type 2.			
CDKN2A/2B	Tumor suppressor Glucose sensing	TT	
This type of the gene has been associated with defects in pancreatic ß-cells and increased risk for diabetes type 2.			
KCNJ11	Potassium channel Insulin release	TT	
This type of the gene has been associated with reduced insulin secretion and increased risk for diabetes type 2.			
PPARg2	Adipocyte differentiation Lipid metabolism Insulin sensitivity Adipose tissue regulator	CC	
This type of the gene is associated with reduced sensitivity of cells to insulin. Individuals, especially obese people, have increased risk to develop insulin resistance and diabetes type 2.			
TCF7L2	Blood glucose homeostasis	TC	
This type of the gene is associated with impaired function of pancreatic ß-cells, reduced insulin secretion in response to glucose and enhanced rate of glucose production from liver. Individuals have increased risk for diabetes type 2.			

THADA	ß-pancreatic cells function	TT	
This type of the gene has been associated with defects in pancreatic ß-cells response to glucose and increased risk for diabetes type 2.			
TSPAN8	Signal transduction Insulin sensitivity	CC	
This type of the gene has been associated with reduced insulin sensitivity and increased risk for diabetes type 2.			
VDR	Regulation of collagen formation Bone formation and replacement Connective tissue degradation	TT	
This type of the gene is associated with impaired function of Vitamin D, which influences insulin secretion from pancreas. Individuals have increased insulin resistance and consequently increased risk for diabetes type 2.			
JAZF1	Transcriptional factor/repressor	AG	
This type of the gene has been associated with increased risk for diabetes type 2.			
WFS1	Protein folding/transport in Endoplasmic Reticulum Maturation of pro-insulin in pancreatic cells	AG	
This type of the gene has been associated with reduced insulin secretion and increased risk for diabetes type 2.			
ACE	Blood Pressure regulation Muscle performance Lipids & Glucose levels	INSDEL	
IL6	Inflammatory Response Bone Recycling Glucose usage	GG	
MTNR1B	Regulation of blood glucose levels	CC	
NOTCH2	Development of several organs in embryo (including ß-pancreatic cells) Tissue repair	GG	
TNF-a	Inflammatory response Insulin response	GG	
Conclusion			
This overall genetic profile has been associated with increased susceptibility to insulin resistance, which is indicative of the metabolic syndrome and can progressively lead to type 2 diabetes.			

BONE HEALTH - OSTEOPOROSIS

Gene	Biological effect	Genotype	
LPR5	Skeletal homeostasis transducing signals by Wnt proteins	GG	
This type of the gene is associated with importantly increased vertebral fractures and reduced bone mineral density (BMD). Individuals deal with increased risk for osteoporosis.			
VDR	Regulation of collagen formation Bone formation and replacement Connective tissue degradation	GG	
This type of the gene is associated with impaired use of Vitamin D and importantly reduced absorption of calcium. The bones resorption exceeds bone formation, resulting to progressive loss of bone mass. Individuals tend to exhibit significantly reduced BMD that raises their risk for osteoporosis and related bone fractures. For these individuals, dietary calcium supplementation is required to achieve similar BMD to those without this gene variant.			
VDR	Regulation of collagen formation Bone formation and replacement Connective tissue degradation	TT	
This type of the gene is associated with impaired use of Vitamin D and reduced absorption of calcium. The bones resorption exceeds bone formation, resulting to progressive loss of bone mass. Individuals have reduced BMD and increased risk for osteoporosis, particularly at the lumbar spine in women which could be as much as three times the normal risk.			
ACE	Blood Pressure regulation Muscle performance Lipids & Glucose levels	INSDEL	
This type of the gene is associated with higher ACE activity and has a negative effect regarding the risk for osteoporosis. Increased production of Angiotensin II results to accelerated bone resorption, a process in which a microscopic amount of bone tissue is being removed without the balanced replacement from a new tissue. Individuals have increased risk for osteoporosis.			
CTR	Calcium homeostasis Bone Mass Density	TT	
This type of the gene is associated with reduced BMD (Bone Mineral Density) and increased risk for osteoporosis. Individuals, especially postmenopausal women deal with increased risk for osteoporotic bone fractures.			
ESR1 PvuII	Cell proliferation & development Bone Mass Density	CT	
This type of the gene is associated with reduced BMD (Bone Mineral Density) and increased susceptibility to osteoporosis. Individuals, especially postmenopausal women, deal with increased risk for bones' fractures related to osteoporosis.			
ESR1 XbaI	Cell proliferation & development Bone Mass Density	AG	

This type of the gene is associated with reduced BMD (Bone Mineral Density) and increased susceptibility to osteoporosis. Individuals, especially postmenopausal women, deal with increased risk for bones' fractures related to osteoporosis.

IL6	Inflammatory Response Bone Recycling Glucose usage	GG	

This type of the gene is associated with accelerated bone resorption, without the balanced replacement of bone tissue. Individuals, especially older pre-menopausal women, have reduced BMD (Bone Mineral Density) and increased risk for osteoporosis.

TNF-a	Inflammatory response Insulin response	GG	

This type of the gene is associated with accelerated bone resorption, which exceeds bone formation. This is a process during which a microscopic amount of bone tissue is being removed, without the balanced replacement of bone tissue. As a result Bone Mineral Density (BMD), a crucial factor for bones health, can be significantly reduced due to accelerated bone loss. Individuals deal with increased risk for osteoporosis. Older women, in particular, have increased risk for hip fractures.

TNFRSF11B	Negative regulator of bone resorption	TC	

This type of the gene is associated with increased risk for osteoporosis, due to defects in bone resorption regulation.

COL1A1	Collagen formation in cartilage, bone, skin connective tissue	GG	
LPR5	Skeletal homeostasis transducing signals by Wnt proteins	CC	
TNFRSF11B	Negative regulator of bone resorption	TT	
VDR	Regulation of collagen formation Bone formation and replacement Connective tissue degradation	TT	

Conclusion

This overall genetic profile has been associated with increased susceptibility to osteoporosis. The body may function less than optimally to maintain healthy bones, which can result to reduce Bone Mass Density and increased bone fractures. Osteoporosis is a condition observed more often in women, especially after menopause. However the increased risk defined by the genetic profile in men, requires also corrective actions and should not be ignored.

INFLAMMATORY - AUTOIMMUNE CONDITIONS

Gene	Biological effect	Genotype	
IL6	Inflammatory Response Bone Recycling Glucose usage	GG	

This type of the gene is associated with increased levels of the inflammation factor IL-6. Individuals have increased susceptibility to inflammatory conditions.

CRP	Inflammatory Response	TC	
TNF-a	Inflammatory response Insulin response	GG	

Conclusion

This overall genetic profile has NOT been associated with increased susceptibility of individuals to inflammatory conditions.

INFLAMMATORY - AUTOIMMUNE CONDITIONS - RHEUMATOID ARTHRITIS

Gene	Biological effect	Genotype	
TRAF1-C5	Inflammatory response	GG	

This type of the gene is associated with importantly increased risk for Rheumatoid Arthritis.

HLA-DRB1	Activation of Immune system	AA	
PTPN22	Activation of Immune system Inflammatory response	GG	
STAT4	Mediator in immune response	GG	

Conclusion

This overall genetic profile has NOT been associated with increased risk for Rheumatoid Arthritis.

INFLAMMATORY - AUTOIMMUNE CONDITIONS - ANKYLOSING SPONDYLITIS

Gene	Biological effect	Genotype	
ARTS1	Inflammatory response	CC	
HLA_B27	Activation of Immune system Inflammatory response	NEGNEG	
IL23R	Regulation of Immune system's activity	CC	

Conclusion

This overall genetic profile has NOT been associated with increased risk for Ankylosing Spondylitis.

INFLAMMATORY - AUTOIMMUNE CONDITIONS - MULTIPLE SCLEROSIS			
Gene	Biological effect	Genotype	
IL7R	Differentiation and activation of T lymphocytes	CC	
This type of the gene has been associated with increased production of Interleukin receptor 7 and increased risk for multiple sclerosis resulting to an autoimmune attack of the myelin in neurons.			
HLA-DRA	Immune response Antigen presenting	CC	
Conclusion			
This overall genetic profile has NOT been associated with increased risk for multiple sclerosis.			

INFLAMMATORY - AUTOIMMUNE CONDITIONS - PSORIASIS			
Gene	Biological effect	Genotype	
IL12B	Immune response Memory Th1 cells development	AA	
This type of the gene has been associated with increased risk for psoriasis.			
HLA-C	Immune response Antigen presenting	CC	
IL23R	Regulation of Immune system's activity	GG	
Conclusion			
This overall genetic profile has been associated with increased risk for psoriasis.			

VENOUS THROMBOEMBOLISM			
Gene	Biological effect	Genotype	
PAI-1	Inhibitor of blood clots degradation	DELDEL	
This type of the gene is associated with significant increased activity of PAI-1 protein, resulting to reduced resolution of blood clots. Individuals have increased risk for venous thrombosis, especially those who have also other defective types of genes related to coagulation.			
FGB	Fibrin Precursor Platelet aggregation	AG	
This type of the gene is associated with elevated FGB levels, especially in smokers. Individuals deal with increased risk for venous thrombosis, especially when they have the defective type of the gene for factor V Leiden.			

Factor V	Coagulation factor Hereditary resistance in Activated Protein C Thrombophilia	AG	
This type of the gene is associated with abnormal shape of the factor V. As a result this factor is not properly broken down by proteins S and C, but remains in blood for a longer period, mediating its coagulation effects. Individuals have increased risk for venous thrombosis, due to increased tendency of blood to clot, a condition called thrombophilia. The risk is further increased in the case that individuals have the other defective type of the gene for Factor V.			
MTHFR	DNA Synthesis & Repair Folic Acid Metabolism Homocysteine Metabolism	AC	
This type of the gene is associated with reduced function of the investigated factor, resulting to a risk for increased levels of Homocysteine in blood. Individuals, especially those following a diet poor in Vitamins B-complex (folic acid, B6, B12) have increased risk for venous thrombosis. The risk is not high when this gene is examined independently, but becomes significant in the presence of defective types of other genes associated with venous thrombosis susceptibility.			
MTHFR	DNA Synthesis & Repair Folic Acid Metabolism Homocysteine Metabolism	CT	
This type of the gene is associated with reduced function of the investigated factor, resulting to a risk for increased levels of Homocysteine in blood. Individuals, especially those following a diet poor in Vitamins B-complex (folic acid, B6, B12) have increased risk for venous thrombosis. The risk is not high when this gene is examined independently, but becomes significant in the presence of defective types of other genes associated with venous thrombosis susceptibility.			
Factor II	Coagulation factor Thrombophilia	GG	
Factor V	Coagulation factor Hereditary resistance in Activated Protein C Thrombophilia	GG	
Factor VII	Coagulation Initiation Blood Pressure Regulator	CC	
Factor VII	Coagulation Initiation Blood Pressure Regulator	DELDEL	
ITGA2 (GPIa)	Adhesion of platelets to collagen Pro-coagulant activity	CC	
ITGB3 (GPIIIa)	Platelet aggregation	TT	
Conclusion			
This overall genetic profile has been associated with increased risk for venous thrombosis.			
ATOPIC DISEASES - ASTHMA & ALLERGIES			
Gene	Biological effect	Genotype	

GSTT1	Detoxification Xenobiotics-carcinogens-mutagens Environmental pollutants	DELDEL	
The investigated detoxifying agent in this case is absent and antioxidant protection relies on other enzymes. Individuals, especially those consuming a diet poor in anti-oxidants, have increased risk for atopic diseases (allergic hypersensitivity). Their cells in lungs are less protected from oxidative damage which can be caused by several environmental pollutants, like automobile emissions, tobacco smoke and ozone. This can lead to airway inflammation and damage seriously the airway epithelium. The risk for atopic diseases (allergic hypersensitivity) is further increased when the defective types of genes GSTM1 and GSTP1 are present. The negative effects of this type of the genes are significant even from childhood since these genes are important for the lung function growth.			
IL6	Inflammatory Response Bone Recycling Glucose usage	GG	
This type of the gene is associated with increased levels of the inflammation factor IL-6. Individuals have increased susceptibility to develop chronic inflammatory conditions, like atopic diseases (allergic hypersensitivity).			
PTGS2-(COX2)	Inflammatory Response	AA	
This type of the gene is associated with increased susceptibility to airway inflammation. Individuals have an important increased risk for asthma, and more likely for mild asthma.			
ADAM33	T Cell-cell and cell-matrix interactions issue response to chronic inflammation	AC	
This type of the gene has been associated with increased risk for atopic diseases (allergic hypersensitivity) and in particular for asthma, especially in individuals who have also the negative form of the other variant tested from this gene.			
ADAM33	T Cell-cell and cell-matrix interactions issue response to chronic inflammation	TC	
This type of the gene has been associated with increased risk for atopic diseases (allergic hypersensitivity) and in particular for asthma, especially in individuals who have also the negative form of the other variant tested from this gene.			
EMSY (locus 11q13)	Chromatin Remodelling Inflammatory Response	TT	
This type of the gene is associated with increased IgE levels and increased risk for atopic diseases (allergic hypersensitivity).			
GSTP1	Detoxification Xenobiotics-carcinogens-mutagens Environmental pollutants	GA	
This type of the gene is associated with reduced function of the investigated detoxifying agent. Individuals, especially those consuming a diet poor in anti-oxidants, have increased risk for atopic diseases (allergic hypersensitivity). Their cells in lungs are less protected from oxidative damage which can be caused by several environmental pollutants, like automobile emissions, tobacco smoke and ozone. This can lead to airway inflammation and damage seriously the airway epithelium.			

The risk for asthma is further increased when the defective types of genes GSTT1 and GSTM1 are present. The negative effects of this type of the genes are significant even from childhood since these genes are important for the lung function growth.			
ORMDL3	Immunological process Inflammation	CT	
This type of the gene is associated with susceptibility to inflammatory conditions in lungs. Individuals have increased risk for asthma.			
SPINK5	Hair & Skin morphogenesis Inflammatory Response	AG	
This type of the gene is associated with increased risk for mild asthma, especially in the case of individuals who suffer from atopic disease like atopic dermatitis.			
COL29A1	Maintenance of tissue integrity (epidermis, lungs, gastrointestinal tract)	CT	
This type of the gene has been associated with increased risk for atopic disease. In particular it has been associated with the manifestation of atopic dermatitis and maybe food allergies in infants that later very often continues with the development of asthma.			
CHI3L1	Immune Response Inflammatory process	CC	
FCERIA	Regulation of Immune Response IgE Receptor	TC	
FLG	Epidermal barrier function	CAGTCAGT	
FLG	Epidermal barrier function	CC	
GSTM1	Detoxification Xenobiotics-carcinogens-mutagens Environmental pollutants	INS_	
IL13	Regulation of Immune & Inflammatory Response	CC	
IL13	Regulation of Immune & Inflammatory Response	CC	
IL1RL1	Helper T-cell function Inflammatory Response	GG	
IL33	Inflammatory Response Activating mast cells and Th2 lymphocytes	GG	
RAD50	DNA double-strand break repair, cell-cycle checkpoint activation, telomere maintenance, meiotic recombination IgE levels	GG	

TNF-a	Inflammatory response Insulin response	GG	

Conclusion
This overall genetic profile has NOT been associated with increased risk for atopy (allergic hypersensitivity).

NEOPLASIA - PROSTATE CANCER			
Gene	Biological effect	Genotype	
GSTT1	Detoxification Xenobiotics-carcinogens-mutagens Environmental pollutants	DELDEL	
The investigated detoxifying agent is absent and protection from toxins relies on other enzymes. Individuals, especially those consuming a diet poor in anti-oxidants, have increased risk for serious cell damage. They have an increased susceptibility to prostate cancer. The risk is not high when this gene is investigated independently, but is significantly increased when it is combined with other genetic factors and harmful lifestyle habits, like smoking. A diet rich in fruit and vegetables can benefit individuals with this type of the gene to reduce the risk for cancer.			
17q24.3	Genetic locus associated with the condition	GG	
This type of the gene is associated with increased risk for prostate cancer.			
TP63	Transcriptional factor Possible role in apoptosis (TP53 mediated)	AA	
This type of the gene is associated with increased risk for prostate cancer.			
TERT	Telomeres Length (protective regions at the end of chromosomes) Genomic integrity	CT	
This type of the gene is associated with deregulation of the TERT enzyme and increased susceptibility to prostate cancer. The risk is not high when this gene is independently examined, but increases significantly when it is combined with other genetic factors and environmental carcinogens.			
17q12	Genetic locus associated with the condition	GA	
8q24 region 1	Genetic locus associated with the condition	CC	
8q24 region 2	Genetic locus associated with the condition	CC	
8q24 region 3	Genetic locus associated with the condition	TT	
AURKA	Cell Cycle Regulator	TT	

CASP8	Participation In Programmed Cell Death (Apoptosis)	GC	
ESR2	Inhibition of Cells' Proliferation In Prostate Tissue	TT	
IGF1	Growth & development mediator	AA	
IGF1	Growth & development mediator	TT	
MYC	Regulation of Cell Differentiation, Proliferation, Apoptosis (Programmed Cell Death)	GG	
CYP17	Testosterone Biosynthesis	TG	
Conclusion			
This overall genetic profile has NOT been associated with increased risk for prostate cancer.			
NEOPLASIA - COLORECTAL CANCER			
Gene	Biological effect	Genotype	
GSTT1	Detoxification Xenobiotics-carcinogens-mutagens Environmental pollutants	DELDEL	
The investigated detoxifying agent is absent and protection from toxins relies on other enzymes. Individuals, especially those consuming a diet poor in anti-oxidants, have increased risk for serious cell damage. They have an increased susceptibility to colorectal cancer. The risk is not high when this gene is investigated independently, but is significantly increased when it is combined with other genetic factors and harmful lifestyle habits, like smoking. A diet rich in fruit and vegetables can benefit individuals with this type of the gene to reduce the risk for cancer.			
8q24 region 3	Genetic locus associated with the condition	TT	
AURKA	Cell Cycle Regulator	TT	
CASP8	Participation In Programmed Cell Death (Apoptosis)	GC	
TP53	DNA Damage Repair & Induction of Programmed Cell Death (Apoptosis)	GG	
SMAD7	Nuclear protein Associated with Colorectal cancer	CT	
Conclusion			

This overall genetic profile has NOT been associated with increased risk for colorectal cancer.

NEOPLASIA - LUNG CANCER			
Gene	Biological effect	Genotype	
CHRNA3	Nicotine receptor	TT	

This gene type may be implicated in disruptions of lung cell proliferation, increasing the risk for lung cancer. This type of the gene is also associated with increased risk for nicotine dependence, due to alterations in the receptor of nicotine. Nicotine may have a key role in nicotine-mediated suppression of apoptosis (programmed cell death) in lung cancer. Thus this type of the gene is associated with a higher risk for lung cancer, either being causative or in an indirect way in case of heavy smokers/nicotine addicts.

NEOPLASIA - BREAST CANCER (SPORADIC)			
Gene	Biological effect	Genotype	
BRCA2	DNA repair Genomic integrity Tumor suppression	GG	

This type of the gene is associated with disruption of BRCA2 function and an increased risk for breast cancer. This risk is relatively small when the gene variant is investigated independently, but is cumulatively significant in the presence of other negative genetic and environmental factors. It is mainly associated with sporadic breast cancer, which is caused by a number of DNA variants, each making a small contribution to overall cancer risk.

CHEK2	DNA repair activation Cell cycle check point regulation	DELDEL	

This type of the gene is associated with complete loss of CHEK2 function and significant susceptibility to neoplasia. In particular it is associated with increased risk for breast cancer.
Individuals, especially women, deal with a risk for breast cancer which is more than double compared to the risk of general population without this gene variant. They may benefit from preventive examinations for breast cancer, preferably excluding ionizing radiation.

2q35	Genetic locus associated with the condition	AG	

This genotype is associated with increased risk for breast cancer.

19p13	Genetic locus associated with the condition	CC	
AURKA	Cell Cycle Regulator	TT	
BRCA1	DNA repair Genomic integrity Tumor suppression	AA	
CASP8	Participation In Programmed Cell Death (Apoptosis)	GC	

CHEK2	DNA repair activation Cell cycle check point regulation	TT	
FGFR2	Fibroblast Growth Factor Influences cell proliferation and differentiation	CC	
LSP1	Cytoskeletal protein Neutrophil motility, adhesion to fibrinogen matrix proteins, transendothelial migration	TT	
TNRC9-TOX3	Chromatin (DNA form) Structure	CC	
TP53	DNA Damage Repair & Induction of Programmed Cell Death (Apoptosis)	GG	
Conclusion			
This overall genetic profile has NOT been associated with increased risk for breast cancer (sporadic).			
NEOPLASIA - BREAST CANCER (FAMILIAL)			
Gene	Biological effect	Genotype	
BRCA1	DNA repair Genomic integrity Tumor suppression	AGAG	
BRCA1	DNA repair Genomic integrity Tumor suppression	CC	
BRCA1	DNA repair Genomic integrity Tumor suppression	DELDEL	
BRCA1	DNA repair Genomic integrity Tumor suppression	GG	
BRCA2	DNA repair Genomic integrity Tumor suppression	CTTATCTTAT	
BRCA2	DNA repair Genomic integrity Tumor suppression	GG	
BRCA2	DNA repair Genomic integrity Tumor suppression	TT	
SKIN CANCER - BASAL CELL CARCINOMA			

Gene	Biological effect	Genotype	
PADI6	Posttranslation enzyme Cancer development	AG	
This type of the gene is associated with increased risk for basal cell carcinoma.			
TERT	Telomeres Length (protective regions at the end of chromosomes) Genomic integrity	CT	
This type of the gene is associated with deregulation of the TERT enzyme and increased susceptibility to basal cell carcinoma. The risk is not high when this gene is independently examined, but increases significantly when it is combined with other genetic factors and environmental carcinogens.			
1q42	Genetic locus associated with the condition	TT	
Conclusion			
This overall genetic profile has NOT been associated with increased risk for basal cell carcinoma.			
SKIN CANCER-MELANOMA			
Gene	Biological effect	Genotype	
MC1R	UV damage repair Sun sensitivity	CC	
ALZHEIMER'S DISEASE			
Gene	Biological effect	Genotype	
APOE	Cholesterol Level Regulation	E4E4	
This type of the gene is associated with a high risk for Alzheimer’s disease. This risk is modifiable by a supporting lifestyle, that includes exercise (mental and physic) and diet.			
GALP	Physiological functions in CNS Regulation of Homeostasis	GC	
This type of the gene is associated with a slight increase of the risk for Alzheimer’s disease.			
5-HT2A	Effects on the Reward Centre of Brain Energy balance	GG	
APOC1	Modulates interaction of APOE with lipids	AA	
MTHFD1L	Homocysteine metabolism	GG	

PCK1	Regulation of blood glucose levels	AA	
TOMM40	Movement of proteins-Aß(Amyloid beta) process	GG	
Conclusion			
This overall genetic profile has NOT been associated with increased risk for Alzheimer's disease.			
HAEMOCHROMATOSIS			
Gene	Biological effect	Genotype	
HFE	Iron Absorption & Storage Hereditary Haemochromatosis	GC	
This type of the gene is associated with a disability to reduce iron absorption, when iron levels in body are increased. Consequently, individuals deal with the risk for iron overload and a condition called Haemochromatosis. Iron is stored in the body as ferritin, which breaks down to hemosiderin. Iron overload results to high levels of Hemosiderin, which are toxic for tissues.			
HFE	Iron Absorption & Storage Hereditary Haemochromatosis	AA	
HFE	Iron Absorption & Storage Hereditary Haemochromatosis	GG	
Conclusion			
This overall genetic profile has been NOT been associated with higher risk for iron overload.			
CYSTIC FIBROSIS			
Gene	Biological effect	Genotype	
CFTR	Channel in cells transporting Chloride Lungs and Pancreas function	GG	
CFTR	Channel in cells transporting Chloride Lungs and Pancreas function	TCTTCT	
CLUSTER HEADACHES			
Gene	Biological effect	Genotype	
HCRTR2	Central Nervous Functions	GG	

This type of the gene is associated with increased susceptibility to cluster headaches. Individuals have significantly increased risk to develop symptoms of severe, frequent headaches. Most patients have the episodic subtype, in which the headaches occur in clusters during a period lasting from a week to a year though separated by attack-free intervals of 1 month or more.

PERIODONTITIS			
Gene	Biological effect	Genotype	
GLT6D1	Cell Signaling	CG	
This type of the gene has been associated with increased risk for periodontitis.			
DEFB1	Anti-microbiotic agent	AG	
IL10	Anti-Inflammatory factor	GG	
IL1B	Immune Response-Infammation Cell proliferation Apoptosis	CC	
TL4R	Immune Response	AA	
Conclusion			
This overall genetic profile has NOT been associated with increased risk for Periodontitis.			

EXFOLIATION GLAUCOMA			
Gene	Biological effect	Genotype	
LOXL1	Connective tissue biogenesis Formation of crosslinks in collagens and elastin	TC	
This type of the gene is associated with importantly increased risk for exfoliation glaucoma, due to accumulation of the exfoliation material.			
LOXL1	Connective tissue biogenesis Formation of crosslinks in collagens and elastin	GG	
This type of the gene is associated with importantly increased risk for exfoliation glaucoma, due to accumulation of the exfoliation material.			
LOXL1	Connective tissue biogenesis Formation of crosslinks in collagens and elastin	TG	

This type of the gene is associated with increased risk for exfoliation glaucoma, due to accumulation of the exfoliation material.

Conclusion
This overall genetic profile has been associated with increased risk for exfoliation glaucoma.

MACULAR DEGENERATION			
Gene	Biological effect	Genotype	
C3 (Complement Component 3)	Innate and adaptive immune responses	CC	
This type of the gene is associated with importantly increased risk for macular degeneration.			
CFH	Regulating innate defense mechanism to microbial infection	TC	
This type of the gene is associated with increased risk for macular degeneration.			
HTRA1	Regulator of availability of insulin-like growth factors (IGFs) Regulator of cell growth	GG	
Conclusion			
This overall genetic profile has NOT been associated with increased risk for macular degeneration.			

DEPRESSION			
Gene	Biological effect	Genotype	
BDNF	Neuron Growth Differentiation & Survival Synapse Formation Motivation to Exercise Energy balance	GA	
FKBP5	Hypothalamic-Pituitary-Adrenal axis (HPA-axis) pathway Stress Hormone Regulation	CC	
MTHFR	DNA Synthesis & Repair Folic Acid Metabolism Homocysteine Metabolism	CT	
SLC6A4/5HTT	Transport & Re-Uptake of Serotonin in Brain	INSDEL	
Conclusion			

This overall genetic profile has NOT been associated with increased risk for depression.

PHARMACOGENOMICS - TRIPTANS			
Gene	Biological effect	Genotype	
GNB3	Regulation of lipogenesis Blood pressure regulation	CC	

This type of the gene is associated with reduced efficiency of triptans in therapy of cluster headaches. Triptans, which are a class of tryptamine-based drugs used to treat migraines and related headache symptoms, cause changes in the nerve cells which halt the headache attack. This type of the gene is associated with reduced transmission of the drugs effects.

PHARMACOGENOMICS - WARFARIN SENSITIVITY			
Gene	Biological effect	Genotype	
VKORC1	Vit K Metabolism	TC	

This type of the gene is associated with reduced metabolism of warfarin. Individuals should be treated with a lower dose of this anti-thrombotic drug, as they are more sensitive to its effects. Otherwise they deal with an increased risk for serious bleeding.

CYP2C9	Drug Metabolism	AA	

This type of the gene is associated with normal warfarin metabolism. Individuals are more likely to respond with the average sensitivity to this anti-coagulant drug.

CYP2C9	Drug Metabolism	CC	

This type of the gene is associated with normal warfarin metabolism. Individuals are more likely to respond with the average sensitivity to this anti-coagulant drug.

Conclusion
This overall genetic profile has NOT been associated with increased sensitivity to the anti-thrombotic drug warfarin. It is more likely that individuals will be normal metabolizers of this drug.

PHARMACOGENOMICS - ASPIRIN & COAGULATION			
Gene	Biological effect	Genotype	
ITGB3 (GPIIIa)	Platelet aggregation	TT	

This type of the gene is associated with normal response of individuals to anti-coagulative effects of aspirin.

LPA	Lipoprotein-Risk factor for atherosclerosis	TT	

This type of the gene is associated with a normal response to aspirin, when this drug is used to reduce cardiovascular risk.

Conclusion

This overall genetic profile has been associated with a good response to aspirin, regarding its anti-coagulation effects.

PHARMACOGENOMICS - BETA BLOCKERS & HYPERTENSION

Gene	Biological effect	Genotype	
ADRB1	Energy Expenditure Lipolysis Regulation Blood Pressure Regulation	CC	

This type of the gene is associated with a significant reduce of blood pressure in response to metoprolol treatment of hypertension.
Metoprolol belongs to Beta blockers; a group of medications used for lowering high blood pressure (anti-hypertensives).

PHARMACOGENOMICS - BETA BLOCKERS & HEART FAILURE

Gene	Biological effect	Genotype	
ADRB1	Energy Expenditure Lipolysis Regulation Blood Pressure Regulation	CC	

This type of the gene is associated with a significant better response of individuals to bisoprolol and carvedilol, which are drugs used to treat heart failure.

PHARMACOGENOMICS - STATINS & CHOLESTEROL

Gene	Biological effect	Genotype	
HMGCR	Lipid metabolism	AA	

This type of the gene is associated with a better response to statins; the drugs commonly used to lower cholesterol levels in individuals prone to high cholesterol or heart disease.

HMGCR	Lipid metabolism	TT	

This type of the gene is associated with a better response to statins; the drugs commonly used to lower cholesterol levels in individuals prone to high cholesterol or heart disease.

Conclusion

This overall genetic profile has been associated with a good response to statins, when this type of drugs is used to lower cholesterol levels in individuals prone to high cholesterol or heart disease.

PHARMACOGENOMICS – SIMVASTATIN INDUCED MYOPATHY

Gene	Biological effect	Genotype	
SLCO1B1	Organic anion-transporting polypeptide Hepatic uptake of statins	TT	

This type of the gene is associated with a significantly increased risk for Simvastatin-induced Myopathy, especially in cases of high dose (80mg) treatment with Simvastatin.
Either you are about to start Simvastatin therapy or you already take this drug; bring the results of this DNA profiling to your Doctor's attention.

PHARMACOGENOMICS - CLOPIDOGREL (Plavix) RESPONSE

Gene	Biological effect	Genotype	
CYP2C19	Drugs metabolism	GG	

This type of the gene is associated with normal fuction of the enzyme and normal metabolism of clopidogrel (Plavix), a drug commonly prescribed to reduce the risk of heart attacks and strokes due to its anti-thrombotic and anti-coagulation effects.

Gene	Biological effect	Genotype	
CYP2C19	Drugs metabolism	GG	

This type of the gene is associated with normal fuction of the enzyme and normal metabolism of clopidogrel (Plavix), a drug commonly prescribed to reduce the risk of heart attacks and strokes due to its anti-thrombotic and anti-coagulation effects.

Conclusion

This overall genetic profile has been associated with normal function of the enzyme and normal metabolism of clopidogrel (Plavix), a drug with anti-coagulation effects. Individuals are more likely to respond normally to this drug, when prescribed to reduce the risk for heart attack and stroke.

PHARMACOGENOMICS - 5-FU (5-fluorouracil) TOXICITY

Gene	Biological effect	Genotype	
DPYD	Catalysis of uracil and thymine reduction 5-FU degradation	GG	

This type of the gene is not associated with increased toxicity of the drug 5-FU when used in cancer chemotherapy.

Gene	Biological effect	Genotype	
MTHFR	DNA Synthesis & Repair Folic Acid Metabolism Homocysteine Metabolism	CT	

This type of the gene is associated with increased response to the drug 5-FU when used in cancer chemotherapy.

Conclusion

This overall genetic profile has NOT been associated with increased toxicity of the drug 5-FU when used in cancer chemotherapy.

PHARMACOGENOMICS - THIOPURINES TOXICITY			
Gene	Biological effect	Genotype	
TPMT	Thiopurine drugs metabolism	AA	
This type of the gene is not associated with increased toxicity of thiopurine drugs.			
TPMT	Thiopurine drugs metabolism	GG	
This type of the gene is not associated with increased toxicity of thiopurine drugs.			
Conclusion			
This overall genetic profile has NOT been associated with increased toxicity of thiopurine drugs, like azathioprine, 6-mercaptopurine and 6-thioguanine.			
PHARMACOGENOMICS - TAMOXIFEN RESPONSE			
Gene	Biological effect	Genotype	
CYP2D6	Drugs metabolism	GG	
This type of the gene is associated with normal response to Tamoxifen, a drug used extensively in hormonal therapy of breast cancer.			
PHARMACOGENOMICS - ASTHMA DRUG RESPONSE			
Gene	Biological effect	Genotype	
ADRB2	Lipolysis Regulation Thermo genesis Drug Response	GG	
This type of the gene has no effect on response to drugs used in asthma therapy. Inhalers containing beta-agonists (albuterol, salbutamol, salmeterol) are effective for asthma therapy in cases of individuals who have this type of the gene.			
PHARMACOGENOMICS - ANTIDEPRESSANTS			
Gene	Biological effect	Genotype	
ABCB1	Mediator of cells' resistance to drugs	TT	
This type of the gene is associated with a reduced response of individuals to anti-depressant drugs that use as a substrate the P-glycoprotein (like citalopram, paroxetine, amitriptyline, and venlafaxine).			
PHARMACOGENOMICS-ANTIDEPRESSANTS (type SSRIs: Selective Serotonin Re-uptake			

Inhibitors)			
Gene	Biological effect	Genotype	
FKBP5	Hypothalamic-Pituitary-Adrenal axis (HPA-axis) pathway Stress Hormone Regulation	CC	
SLC6A4/5HTT	Transport & Re-Uptake of Serotonin in Brain	INSDEL	
Conclusion			
This overall genetic profile has been associated with reduced response of individuals to Anti-Depressants, in particular the group of SSRIs: Selective Serotonin Re-uptake Inhibitors.			
PHARMACOGENOMICS - ANTI-EPILEPTIC DRUGS MAXIMUM DOSE TOLERANCE			
Gene	Biological effect	Genotype	
SCN1	Neuronal voltage-sensitive sodium channel	CC	
This type of the gene is associated with significant reduction in clearance levels and maximum tolerated dose of phenytoin (PHT) and carbamazepine (CBZ). In case you are under anti-epileptic therapy with either of PHT or CBZ, bring the results of this DNA profiling to your Doctor's attention. This gene variant together with evaluation of drug concentration levels in serum can be strong indicators for the need to reduce the dose of the drug.			
CYP2C9	Drug Metabolism	AA	
NUTRIGENOMICS - LIPID METABOLISM			
Gene	Biological effect	Genotype	
APOE	Cholesterol Level Regulation	E4E4	
This type of the gene is associated with impaired lipid metabolism and a significant increase of lipids in blood, in particular triglycerides and cholesterol.			
APOA5	Lipid Metabolism	GG	
Individuals who have this type of the gene have impaired lipid metabolism and significant increased levels of lipids in blood, especially triglycerides.			
APOC3	Triglyceride Metabolism	GG	
This type of the gene is associated with impaired lipid metabolism and significant increased levels of triglycerides in blood.			

CETP	Cholesterol Metabolism HDL Metabolism	TC	
This type of the gene is associated with impaired cholesterol metabolism and reduced levels of HDL.			
LIPC	Lipid Metabolism	AG	
This type of the gene is associated with impaired lipid metabolism when the intake of animal fat is high.			
LPL	Lipoprotein Metabolism Triglyceride Metabolism	CC	
This type of the gene is associated with increased levels of VLDL and triglycerides in blood, especially when animal fat intake is high.			
PON1	HDL synthesis	AT	
This type of the gene is disadvantageous regarding lipid metabolism, as it is associated with increased levels of blood LDL (Low Density Lipoprotein) and reduced levels of blood HDL (High Density Lipoprotein).			
PON1	HDL synthesis	GA	
This type of the gene is disadvantageous regarding lipid metabolism, as it is associated with increased levels of blood LDL (Low Density Lipoprotein) and reduced levels of blood HDL (High Density Lipoprotein).			
APOA5	Lipid Metabolism	AA	
APOB	Lipid Metabolism	GG	
APOC3	Triglyceride Metabolism	TT	
FABP2	Intestinal absorption of fatty acids Lipid metabolism	GG	
GJA4 (CX37)	Lipid metabolism	CC	
HMGCR	Lipid metabolism	CC	
APOA1	Lipid Metabolism	GG	
CETP	Cholesterol Metabolism HDL Metabolism	GG	
Conclusion			
This overall genetic profile has been associated with higher risk for disruptions in lipids metabolism, which can result to elevated lipids in blood circulation.			

NUTRIGENOMICS - FOLIC ACID METABOLISM			
Gene	Biological effect	Genotype	
COMT	Homocysteine Metabolism	AA	
This type of the gene is associated with significant reduced inactivation of the hormones called catechol-estrogens. It is also involved in defective Homocysteine removal.			
MTRR	Folic Acid Metabolism Vitamin B12 Metabolism	GG	
This type of the gene is defective regarding folic acid metabolism and is associated with increased levels of Homocysteine, especially when individuals follow a diet poor in Vitamin B complex.			
TCN2	Homocysteine concentration	GG	
This type of the gene is associated with increased levels of Homocysteine, especially when individuals follow a diet poor in Vitamin B-Complex.			
MTHFR	DNA Synthesis & Repair Folic Acid Metabolism Homocysteine Metabolism	AC	
This type of the gene is associated with reduced function of the investigated factor. This results to defective metabolism of folic acid and increased levels of Homocysteine, especially when individuals follow a diet poor in Vitamins B-complex (folic acid, B6, B12).			
MTHFR	DNA Synthesis & Repair Folic Acid Metabolism Homocysteine Metabolism	CT	
This type of the gene is associated with reduced function of the investigated factor. This results to defective metabolism of folic acid and increased levels of Homocysteine, especially when individuals follow a diet poor in Vitamins B-complex (folic acid, B6, B12).			
MTR	Folic Acid Metabolism Homocysteine Metabolism	AA	
This type of the gene is associated with defective folic acid metabolism and is associated with increased Homocysteine levels, especially when individuals follow a diet poor in Vitamin B Complex (B6, B9, B12).			
CBS	Homocysteine Removal Vitamin B6 Metabolism	AG	
Conclusion			
This overall genetic profile has been associated with impaired homocysteine removal, which can have toxic effects in cells. Individuals are more likely to deal with disruptions in Vitamin B complex metabolism that will increase their needs for this Vitamin.			
NUTRIGENOMICS - IRON ABSORPTION & STORAGE			
Gene	Biological effect	Genotype	

HFE	Iron Absorption & Storage Hereditary Haemochromatosis	GC	
This type of the gene is associated with a disability to reduce iron absorption, when iron levels in body are increased. Consequently, individuals deal with the risk for iron overload and a condition called Haemochromatosis. Iron is stored in the body as ferritin, which breaks down to hemosiderin. Iron overload results to high levels of Hemosiderin, which are toxic for tissues. Individuals with increased risk for Haemochromatosis have reduced risk to exhibit footstrike haemolysis after daily intensive exercise.			
HFE	Iron Absorption & Storage Hereditary Haemochromatosis	AA	
HFE	Iron Absorption & Storage Hereditary Haemochromatosis	GG	
Conclusion			
This overall genetic profile has been NOT been associated with higher risk for iron overload.			
NUTRIGENOMICS - INFLAMMATORY RESPONSE			
Gene	Biological effect	Genotype	
IL6	Inflammatory Response Bone Recycling Glucose usage	GG	
This type of the gene is associated with increased levels of the inflammation factor IL-6. Individuals have increased susceptibility to inflammatory conditions.			
CRP	Inflammatory Response	TC	
TNF-a	Inflammatory response Insulin response	GG	
Conclusion			
This overall genetic profile has NOT been associated with increased susceptibility of individuals to inflammatory conditions.			
NUTRIGENOMICS - ANTIOXIDATION ABILITY			
Gene	Biological effect	Genotype	
SOD2-MnSOD	Free radical removal Anti-oxidative ability	CT	
This type of the gene is associated with reduced anti-oxidant function of the investigated factor. Reduced protection from free radicals can result to damages in cells.			

UCP2	Free radical removal Anti-oxidative ability	CT	
This type of the gene is associated with reduced anti-oxidant function of the investigated factor. Individuals, especially those following a diet poor in anti-oxidants, have a risk for increased damages in cells. This type of the gene is also associated with impaired energy metabolism and insulin resistance.			
CAT	Free radical removal Anti-oxidative ability	GG	
GPX1	Cellular Aging Detoxification Anti-oxidative ability	CC	
SELS	Free radical removal Anti-oxidative ability	CC	
SOD2-MnSOD	Free radical removal Anti-oxidative ability	TT	
SOD3	Free radical removal Anti-oxidative ability	CC	
Conclusion			
This overall genetic profile has been associated with satisfactory anti-oxidant protection.			
NUTRIGENOMICS - DETOXIFICATION ABILITY			
Gene	Biological effect	Genotype	
GSTT1	Detoxification Xenobiotics-carcinogens-mutagens Environmental pollutants	DELDEL	
The investigated detoxifying agent is absent and protection from toxins relies on other enzymes. Individuals, especially those consuming a diet poor in anti-oxidants, have increased risk for serious cell damage. This risk is further increased when the defective types of genes GSTM1 and GSTP1 are present. The negative effects of this gene can be diminished by applying appropriate lifestyle and nutritional guidelines, especially increase of anti-oxidant intake.			
EPHX1	Detoxification Xenobiotics carcinogens-mutagens Environmental pollutants	TT	
This type of the gene is associated with reduced protection from environmental pollutants, especially from substances found in traffic emissions, tobacco smoke and grilled meat. Individuals, especially those consuming a diet poor in anti-oxidants, deal with an increased risk for conditions related to oxidative damages to cells.			
GSTP1	Detoxification Xenobiotics-carcinogens-mutagens Environmental pollutants	GA	
This type of the gene is associated with reduced function of the investigated detoxifying factor. Individuals, especially those who follow a diet poor in anti-oxidants, have increased risk for cell damage. This risk is further increased when the defective types of genes GSTM1 and GSTT1 are present. The negative effects of this gene can be diminished by applying appropriate lifestyle and nutritional guidelines, especially increase of anti-oxidant intake.			

GSTM1	Detoxification Xenobiotics-carcinogens-mutagens Environmental pollutants	INS_	
GSTP1	Detoxification Xenobiotics-carcinogens-mutagens Environmental pollutants	CC	
NQO1	Cellular aging Detoxification	CC	
EPHX1	Detoxification Xenobiotics carcinogens-mutagens Environmental pollutants	AA	
Conclusion			
This overall genetic profile has been associated with satisfactory detoxification ability.			
NUTRIGENOMICS - SALT SENSITIVE HYPERTENSION			
Gene	Biological effect	Genotype	
AGTR1	Regulation of lipogenesis Blood pressure regulation	AC	
This type of the gene is associated with abnormalities in blood pressure regulation. Individuals have increased risk for hypertension.			
CYP11B2	Renal Sodium Resorption Regulation of blood pressure	TC	
This type of the gene is associated with disruption in sodium balance, due to increased sodium reabsorption in kidneys caused by aldosterone. Individuals have increased risk for disruption in blood pressure regulation and particularly for hypertension.			
ACE	Blood Pressure regulation Muscle performance Lipids & Glucose levels	INSDEL	
ADD1	Sodium Retention in Cells Blood Pressure regulation	GG	
AGT	Regulation of blood pressure Electrolyte balance	CC	
AGT	Regulation of blood pressure Electrolyte balance	TT	
Conclusion			
This overall genetic profile has NOT been associated with increased risk for hypertension, after salt intake through diet.			
NUTRIGENOMICS - ALCOHOL METABOLISM			

Gene	Biological effect	Genotype	
ADH1B-ADH2-(ADH2-2)	Alcohol metabolism Acetaldehyde clearance levels	GG	
This type of the gene is associated with slow activity of the enzyme responsible for the alcohol metabolism. Individuals are prone to increased alcohol consumption.			
ALDH2	Alcohol metabolism Acetaldehyde clearance levels	GG	
OPRM1	Alcohol cravings	AA	
ADH4	Alcohol metabolism Acetaldehyde clearance levels	AC	
ADH1C-ADH3	Alcohol metabolism Acetaldehyde clearance levels HDL levels	CC	
Conclusion			
This overall genetic profile has been associated with slow metabolism of alcohol. Individuals, is more likely to find alcohol pleasant and be prone to increased alcohol consumption.			

NUTRIGENOMICS - CAFFEINE METABOLISM

Gene	Biological effect	Genotype	
CYP1A2-1C	Caffeine metabolism	GG	
CYP1A2-1F	Caffeine metabolism	AA	
Conclusion			
This overall genetic profile has been associated with fast caffeine metabolism. Coffee has normal or even in cases reduced stimulating effects. Individuals are more tolerant to caffeine consumption.			

NUTRIGENOMICS - LACTOSE TOLERANCE

Gene	Biological effect	Genotype	
MCM6	Lactose Metabolism	TT	
This type of the gene is associated with the condition of lactose intolerance. It is more likely that individuals with this gene variant are incapable of metabolizing lactose properly in the small intestine, due to the inactivation of lactase. After consumption of milk and dairy products in general, lactose will pass to colon, where it will be fermented by enteric bacteria. Possible abdominal symptoms include cramps, bloating and flatulence.			

NUTRIGENOMICS - GLUTEN TOLERANCE			
Gene	Biological effect	Genotype	
IL21	Regulation of Immune Response	GG	
This type of the gene has been associated with importantly increased risk for Gluten Intolerance (Celiac Disease).			
IL18RAP	Immune Response Pro-Inflammatory Cytokine	AA	
This type of the gene has been associated with increased risk for Gluten Intolerance (Celiac Disease).			
LPP	Cell Shape and Motility Immune Response	TG	
This type of the gene has been associated with importantly increased risk for Gluten Intolerance (Celiac Disease).			
RGS1	Immune Response B-cells activation & proliferation	TT	
This type of the gene has been associated with increased risk for Gluten Intolerance (Celiac Disease).			
SH2B3	Immune Response Activation of T-cells	CT	
This type of the gene has been associated with increased risk for Gluten Intolerance (Celiac Disease).			
CCR3	Migration of immune system cells	CC	
HLA-DQ	Antigen Presenting Molecule Immune Response	GG	
IL12A	Immune Response Growth factor for T and Natural Killer cells	AA	
TAGAP	Immune Response T-cells activation	GG	
Conclusion			
This overall genetic profile has NOT been associated with increased risk for Gluten Intolerance (Celiac Disease).			

GENERAL CONCLUSION

CARDIOVASCULAR HEALTH - LIPID LEVELS
This overall genetic profile has been associated with increased risk for cardiovascular disease, due to disruptions in lipid metabolism. Individuals deal with increased risk for elevated levels of lipids in blood circulation, which is a harmful factor for the health of heart and vessels. Medical guidelines

Bring the results of this DNA profiling to your Doctor's attention and consult a Cardiologist.

Reduction of body weight if overweight.

Maintain normal body weight or BMI < 24.9.

If you are smoking it is strongly recommended to quit.

*Increase aerobic activity (40-60min, or 2 sessions of 20-30min daily for 3-7 days/week), using large muscle activities, at 40-70% of VO2max, minimum 1000-1200kcal/week as an initial goal, optimal goal 2000-3500kcal/week.

Emphasize duration rather than intensity.

* ACSM Exercise Management for Person with Chronic Disease and Disabilities

Recommended clinical evaluations

Regular check up of total cholesterol, HDL cholesterol, LDL-cholesterol, triglycerides, HDL-C, and total cholesterol/HDL cholesterol ratio.

Echocardiogram

Aorta cardiogram

Triplex

Check levels of urea, uric acid, creatinin, K+, Na+

Nutritional guidelines

Fat intake should not account for more than 20-25% of total calories. Prefer ω-3 fatty acids (foods like salmon, sardines etc) – and consume fish at least twice every week.

Reduce saturated fat (animal fat) intake must be limited to a maximum of 5-7% of total calories.

Use only olive oil for cooking.

Limit cholesterol intake to 150mg / day or less.

Reduce consumption of sugars or concentrated sweets such as sugar, syrup, jam, crackers, pies, cakes, donuts, sodas, chocolate, fruit punches, pastries, raisin, grapes, pears, apples, watermelon, banana etc.

Use whole grain cereal rather than spaghetti or rice.

Consume seeds and nuts.

Consume garlic.

Moderate alcohol intake (1-2gl of wine /day).

CARDIOVASCULAR HEALTH - HOMOCYSTEINE LEVELS

This overall genetic profile has been associated with increased risk for cardiovascular disease, due to disruptions in homocysteine metabolism. This can result to elevated homocysteine levels, which can have toxic effects on heart and vessels.
Medical guidelines

Bring the results of this DNA profiling to your Doctor's attention and consult a Cardiologist.

Recommended clinical evaluations

Have a regular check up of homocysteine levels and folic acid.

Echocardiogram

Aorta cardiogram

Triplex

Check levels of urea, uric acid, creatinin, K+, Na+

Nutritional guidelines

Increase dietary intake of foods high in folic acid such as liver, green leafy vegetables (e.g. spinach, broccoli, asparagus, whole wheat products, avocado, legumes, and citrus fruits).

Also increase dietary intake of foods high in Vit B6 and B12 such as yeast extracts, long grain rice, seeds, egg yolk, beef, and seafood and dairy products.

CARDIOVASCULAR HEALTH - CORONARY ARTERY DISEASE

This overall genetic profile has been associated with increased risk for coronary artery disease.
Medical guidelines

Bring the results of this DNA profiling to your Doctor's attention and consult a Cardiologist.

Reduction of body weight if overweight is strongly recommended.

Maintain normal body weight or BMI < 25.

If you are smoking it is strongly recommended to quit.

Maintain normal blood pressure.

Stress management is strongly recommended.

*Increase aerobic activity (40-60min, or 2 sessions of 20-30min daily for 3-7 days/week), using large muscle activities, at

40-70% of VO2max, minimum 1000-1200kcal/week as an initial goal, optimal goal 2000-3500kcal/week.

Emphasize duration rather than intensity.

* ACSM Exercise Management for Person with Chronic Disease and Disabilities

Recommended clinical evaluations

Have a regular check up of total cholesterol, HDL cholesterol, LDL-cholesterol, triglycerides, HDL-C, and total cholesterol/HDL cholesterol ratio.

Have a regular check up of homocysteine levels and folic acid.

Check levels of urea, uric acid, creatinin, K+, Na+

When your doctor suspects that you may have coronary artery disease the following tests may be recommended:

Electrocardiogram

Stress Testing

Echocardiography

Chest X Ray

Electron-Beam Computed Tomography

Coronary Angiography and Cardiac Catheterization

Nutritional guidelines

Fat intake should not account for more than 20-25% of total calories. Prefer ω-3 fatty acids (foods like salmon, sardines etc) – and consume fish at least twice every week.

Reduce saturated fat (animal fat) intake must be limited to a maximum of 5-7% of total calories.

Use only olive oil for cooking.

Limit cholesterol intake to 150mg / day or less.

Reduce consumption of sugars or concentrated sweets such as sugar, syrup, jam, crackers, pies, cakes, donuts, sodas, chocolate, fruit punches, pastries, raisin, grapes, pears, apples, watermelon, banana etc.

Use whole grain cereal rather than spaghetti or rice.

Consume seeds and nuts.

Consume garlic.

Moderate alcohol intake (1-2gl of wine /day).

Increase dietary intake of foods high in folic acid such as liver, green leafy vegetables (e.g. spinach, broccoli, asparagus, whole wheat products, avocado, legumes, and citrus fruits).

Also increase dietary intake of foods high in Vit B6 and B12 such as yeast extracts, long grain rice, seeds, egg yolk, beef, and seafood and dairy products.

TYPE 2 DIABETES

This overall genetic profile has been associated with increased susceptibility to insulin resistance, which is indicative of the metabolic syndrome and can progressively lead to type 2 diabetes.
Medical Guidelines

Bring the results of this DNA profiling to your Doctor's attention.

Reduction of body weight - if overweight – is recommended.

Maintain normal body weight or BMI < 24.9

If you are smoking it is strongly recommended to quit.

Increase physical activity: at least 150 min/week of moderate intensity aerobic physical activity (40 –60% of VO2max or 50–70% of HRmax) and/or at least 90 min/week of vigorous aerobic exercise (_60% of VO2max or _70% of maximum heart rate). The physical activity should be distributed over at least 3 days/week and with no more than 2 consecutive days without physical activity. Perform resistance exercise three times a week, targeting all major muscle groups, progressing to three sets of 8–10 repetitions at a weight that cannot be lifted more than 8–10 times (8–10 RM). It is recommended an initial supervision and periodic reassessments by a qualified exercise specialist.

Recommended clinical evaluations

Glucose curve test

Insulin curve test

Check levels of Cholesterol, Triglycerides, HDL, glucose, uria, uric acid, creatinin, glucosylated HbA,

Heart ECHO

Aorta ECHO

Triplex

Nutritional Guidelines

Reduce drastically intake of foods with high glycemic index.

Moderate protein and moderate fat intake.

Increase fiber intake.

Increase intake of vegetables, poultry, fish, legumes, and fruit in your daily diet.

Limit alcohol to no more than 1 oz/day of ethanol, 10oz of wine, 20oz of beer or 2oz of whiskey for men.

Use olive oil.

Fat intake should not account for more than 20-25% of total calories. Prefer ω-3 fatty acids (foods like salmon, sardines etc) – and consume fish at least twice every week.

Reduce saturated fat (animal fat) intake must be limited to a maximum of 5-7% of total calories.

Limit cholesterol intake to 150mg / day or less.

Reduce consumption of sugars or concentrated sweets such as sugar, syrup, jam, crackers, pies, cakes, donughts, sodas, chocolate, fruit punches, pastries, raisin, grapes, pears, apples, watermelon, banana etc.

Use whole grain cereal rather than spaghetti or rice.

Consume seeds and nuts.

Consume garlic.

BONE HEALTH - OSTEOPOROSIS

This overall genetic profile has been associated with increased susceptibility to osteoporosis. The body may function less than optimally to maintain healthy bones, which can result to reduce Bone Mass Density and increased bone fractures. Osteoporosis is a condition observed more often in women, especially after menopause. However the increased risk defined by the genetic profile in men, requires also corrective actions and should not be ignored.
Medical guidelines

Bring the results of this DNA profiling to your Doctor's attention.

Maintain normal body weight or BMI < 24.9.

If you are smoking it is strongly recommended to quit.

*Increase aerobic activity (30-60min, 3-6 days/week), using large muscle activities, at 50-80% of HRmax or 40-70% of HR reserve or 40-70% of VO2max, 700kcal/week as an initial goal).

Weight-bearing exercises are more beneficial.

Increased exposure to sunlight (15min, 3-4 times every week).

* ACSM Exercise Management for Person with Chronic Disease and Disabilities

Recommended clinical evaluations

Check the BMD, with DEXA.

Check levels of Ca+2, P-3, parathyroid hormone, T3, T4, TSH.

24-hours urine test is recommended.

Nutritional guidelines

Increase intake of foods rich in Vitamin D. Good sources include oily fish, eggs, fortified foods such as margarine, breakfast cereal or powdered milk. Liver and liver products are also good sources of vitamin D but they are also rich in vitamin A, so you may avoid using them very often.

Increase intake of foods rich in Calcium by consuming dairy foods such as yogurt, milk, egg, cheese (yellow, ricotta, cheddar, mozzarella, feta cheese etc), milk shakes, and pudding.

Nondairy foods also contain calcium. Good sources of nondairy foods are Salmon, sardines, spinach, okra, broccoli, peas, sesame seeds, almonds, and tofu.

Calcium-fortified foods include: Calcium-fortified breakfast cereal, calcium-fortified orange juice, instant oatmeal.

Reduce caffeine intake (less than 3 cups /day).

INFLAMMATORY - AUTOIMMUNE CONDITIONS - PSORIASIS

This overall genetic profile has been associated with increased risk for psoriasis.
Medical guidelines

Bring the results of this DNA profiling to your Doctor's attention and consult a Dermatologist.

Reduce your body weight if overweight.

Maintain normal body weight or BMI < 25.

If you are smoking it is strongly recommended to quit.

Exposure –with caution- to sunlight (15min, 3-4 times every week) is recommended.

Stress management is recommended.

Recommended clinical evaluations

Usually diagnosis is made by visual examination, but in cases a skin biopsy may be required from your Doctor.

Nutritional guidelines

Follow a generally healthy diet:

avoiding saturated fats (animal fats) and cholesterol rich foods

preferring ω-3 fatty acids found in fish (salmon, sardines, tuna, swordfish, etc.)

avoiding foods with high sugar content,

Use salt in moderation.

increase consumption of fresh fruits and vegetables which are rich in anti-oxidants

Fish oil (especially cod liver oil) intake may have importantly protective effects against psoriasis.

Increase intake of foods rich in Vitamin D. Good sources include oily fish, eggs, fortified foods such as margarine, breakfast cereal or powdered milk.

VENOUS THROMBOEMBOLISM

This overall genetic profile has been associated with increased risk for venous thrombosis.
Medical guidelines

Bring the results of this DNA profiling to your Doctor's attention.

Ensure as possible environmental factors that will reduce the risk for accidents.

Increase physical activity.

Prophylactic anti-coagulation treatment is recommended in cases of risk factors, such as large periods of immobility, surgical intervention, childbed period, when individuals take the contraceptive pill.

If you are smoking it is strongly recommended to quit.

Recommended clinical evaluations

PT, PTT,INR

Fibrinogen

HbA

Platelets

Lower limb triplex

Liver ECHO

SOT, SGPT, Γgt

Fe, Ferritin

Nutritional guidelines

Increase consumption of food-rich in Vitamin K.

Increase consumption of food-rich in Vitamins B6, B12 and folic acid.

NEOPLASIA - LUNG CANCER

This gene type may be implicated in disruptions of lung cell proliferation, increasing the risk for lung cancer. This type of the gene is also associated with increased risk for nicotine dependence, due to alterations in the receptor of nicotine. Nicotine may have a key role in nicotine-mediated suppression of apoptosis (programmed cell death) in lung cancer. Thus this type of the gene is associated with a higher risk for lung cancer, either being causative or in an indirect way in case of heavy smokers/nicotine addicts.Medical guidelines

Bring the results of this DNA profiling to your Doctor's attention.
If you are smoking it is strongly recommended to quit. Avoid passive smoking.
Maintain a normal body weight or BMI<25.
Reduction of body weight – if overweight.
Be physically active for at least 30 min/day.

Recommended clinical evaluations

Chest X-ray
Sputum cytology

Nutritional guidelines

A healthy and balanced diet is recommended for protection against lung cancer.
Eat daily 5 servings at least of fresh fruits and vegetables.
Avoid foods rich in saturated fats, like red meat and processed meat products and pastries.
Maintain adequte intake of lutein, found in collard greens, spinach, broccoli, and orange juice
Maintain adequte intake of lycopene, found in tomatoes and especially tomato sauces, pink grapefruit, watermelon, and guava.
Drink often tea – especially green tea in case you are a smoker.

EXFOLIATION GLAUCOMA

This overall genetic profile has been associated with increased risk for exfoliation glaucoma.
Medical guidelines

Bring the results of this DNA profiling to your Doctor's attention and consult an Eye care professional (Ophthalmologist).

Have a comprehensive eye exam at least once every two years.

Recommended clinical evaluations

Visual acuity test

Visual field test

Dilated eye exam

Tonometry

Pachymetry

Nutritional guidelines

Eat a healthy diet, which is rich in anti-oxidants (found in fresh fruits and vegetables).

PHARMACOGENOMICS - WARFARIN SENSITIVITY

This overall genetic profile has NOT been associated with increased sensitivity to the anti-thrombotic drug warfarin. It is more likely that individuals will be normal metabolizers of this drug.

PHARMACOGENOMICS - ASPIRIN & COAGULATION

This overall genetic profile has been associated with a good response to aspirin, regarding its anti-coagulation effects.

PHARMACOGENOMICS - STATINS & CHOLESTEROL

This overall genetic profile has been associated with a good response to statins, when this type of drugs is used to lower cholesterol levels in individuals prone to high cholesterol or heart disease.

PHARMACOGENOMICS - CLOPIDOGREL (Plavix) RESPONSE

This overall genetic profile has been associated with normal function of the enzyme and normal metabolism of clopidogrel (Plavix), a drug with anti-coagulation effects. Individuals are more likely to respond normally to this drug, when prescribed to reduce the risk for heart attack and stroke.

PHARMACOGENOMICS - 5-FU (5-fluorouracil) TOXICITY

This overall genetic profile has NOT been associated with increased toxicity of the drug 5-FU when used in cancer chemotherapy.

PHARMACOGENOMICS - THIOPURINES TOXICITY

This overall genetic profile has NOT been associated with increased toxicity of thiopurine drugs, like azathioprine, 6-mercaptopurine and 6-thioguanine.

PHARMACOGENOMICS-ANTIDEPRESSANTS (type SSRIs: Selective Serotonin Re-uptake Inhibitors)

This overall genetic profile has been associated with reduced response of individuals to Anti-Depressants, in particular the group of SSRIs: Selective Serotonin Re-uptake Inhibitors.

NUTRIGENOMICS - LIPID METABOLISM

This overall genetic profile has been associated with higher risk for disruptions in lipids metabolism, which can result to elevated lipids in blood circulation.
Medical guidelines

Regular check up of total cholesterol, HDL cholesterol, LDL-cholesterol, triglycerides, HDL-C, and total cholesterol/HDL cholesterol ratio, glucose levels.

Reduction of body weight if overweight.

Maintain normal body weight or BMI < 24.9.

If you are smoking it is strongly recommended to quit.

*Increase aerobic activity (40-60min, or 2 sessions of 20-30min daily for 3-7 days/week), using large muscle activities, at 40-70% of VO2max, minimum 1000-1200kcal/week as an initial goal, optimal goal 2000-3500kcal/week.

Emphasize duration rather than intensity.

* ACSM Exercise Management for Person with Chronic Disease and Disabilities

Nutritional guidelines

Fat intake should not account for more than 20-25% of total calories. Prefer ω-3 fatty acids (foods like salmon, sardines etc) – and consume fish at least twice every week.

Reduce saturated fat (animal fat) intake must be limited to a maximum of 5-7% of total calories.

Use only olive oil for cooking.

Limit cholesterol intake to 150mg / day or less.

Reduce consumption of sugars or concentrated sweets such as sugar, syrup, jam, crackers, pies, cakes, donuts, sodas, chocolate, fruit punches, pastries, raisin, grapes, pears, apples, watermelon, banana etc.

Use whole grain cereal rather than spaghetti or rice.

Consume seeds and nuts.

Consume garlic.

Moderate alcohol intake (1-2gl of wine/day).

NUTRIGENOMICS - FOLIC ACID METABOLISM

This overall genetic profile has been associated with impaired homocysteine removal, which can have toxic effects in cells. Individuals are more likely to deal with disruptions in Vitamin B complex metabolism that will increase their needs for this Vitamin.
Medical guidelines

Have a regular check up of homocysteine levels and folic acid.

Nutritional guidelines

Increase dietary intake of foods high in folic acid such as liver, green leafy vegetables (e.g. spinach, broccoli, asparagus, whole wheat products, avocado, legumes, and citrus fruits).

Also increase dietary intake of foods high in Vit B6 and B12 such as yeast extracts, long grain rice, seeds, egg yolk, beef, and seafood and dairy products.

NUTRIGENOMICS - ALCOHOL METABOLISM

This overall genetic profile has been associated with slow metabolism of alcohol. Individuals, is more likely to find alcohol pleasant and be prone to increased alcohol consumption.

NUTRIGENOMICS - LACTOSE TOLERANCE

This type of the gene is associated with the condition of lactose intolerance. It is more likely that individuals with this gene variant are incapable of metabolizing lactose properly in the small intestine, due to the inactivation of lactase. After consumption of milk and dairy products in general, lactose will pass to colon, where it will be fermented by enteric bacteria. Possible abdominal symptoms include cramps, bloating and flatulence.Medical guidelines

Bring the results of this DNA profiling to your Doctor's attention, especially if you experience unpleasant symptoms after consuming milk and other dairy products, like abdominal cramps, bloating and diarrhea.
Consult a Gastroenterologist.

Recommended clinical evaluations

Blood test-Lactose intolerance test
Hydrogen Breath test
Stool acidity test

Nutritional guidelines

Consume lactose-reduced or lactose-free products.
Restrict or avoid drinking milk. Drink less milk more often. Sip small servings of milk — 2 to 4 ounces (59 to 118 milliliters) at a time.
Save milk for mealtimes. Drink milk with other foods.
Experiment with other dairy products. For example you may be able to tolerate cultured milk products, such as yogurt.

Be careful when consuming foods with 'hidden' lactose like some prepared foods, such as cereal, instant soups, salad dressings, milk chocolate and baking mixes.
Also many medicines contain very small amounts of lactose, affecting only people with severe lactose intolerance.
In case you restrict dairy products, increased consumption of other foods rich in Calcium is recommended, like broccoli, leafy greens, canned salmon, almonds, oranges, certain kinds of tofu, soya milk, calcium-fortified breads juices.

Executive Summary

CARDIOVASCULAR HEALTH - LIPID LEVELS

Bring the results of this DNA profiling to your Doctor's attention.
Consult a Cardiologist.
Reduce your body weight in case you are overweight.
Maintain normal body weight or BMI < 24.9.
If you are smoking it is strongly recommended to quit.
Regular exercise is strongly recommended. Emphasize duration rather than intensity.
Increase intake of ω-3 fatty acids.
Increase intake of dietary fiber.
Limit intake of saturated fat.
Limit intake of sugar.
If you are drinking, limit alcohol consumption.

The following nutritional supplement from the genecouture nutraceutical series is recommended:

POLYUNSATURATED FATTY ACIDS (N2)

CARDIOVASCULAR HEALTH - HOMOCYSTEINE LEVELS

Bring the results of this DNA profiling to your Doctor's attention.
Consult a Cardiologist.
Have a regular check up of homocysteine levels and folic acid.
Increase intake of folic acid.
Increase intake of Vitamins B6 and B12.

The following nutritional supplement from the genecouture nutraceutical series is recommended:

OPTIMUM FRUIT & VEGETABLE MIX (N3)

CARDIOVASCULAR HEALTH - CORONARY ARTERY DISEASE

Bring the results of this DNA profiling to your Doctor's attention.
Consult a Cardiologist.
Reduce your body weight in case you are overweight.
Maintain normal body weight or BMI < 24.9.
If you are smoking it is strongly recommended to quit.
Maintain normal blood pressure.
Stress management is strongly recommended.
Regular exercise is strongly recommended. Emphasize duration rather than intensity.
Increase intake of ω-3 fatty acids.
Increase intake of dietary fiber.
Limit intake of saturated fat.
Limit intake of sugar.
If you are drinking, limit alcohol consumption.

TYPE 2 DIABETES

Bring the results of this DNA profiling to your Doctor's attention.
Reduce your body weight in case you are overweight.
Maintain normal body weight or BMI < 24.9.
If you are smoking it is strongly recommended to quit.
Regular exercise is strongly recommended. Emphasize duration rather than intensity.
Increase intake of ω-3 fatty acids.
Increase intake of dietary fiber.
Limit intake of saturated fat.
Limit intake of sugar.
If you are drinking, limit alcohol consumption.

BONE HEALTH - OSTEOPOROSIS

Bring the results of this DNA profiling to your Doctor's attention.
Cautious exposure to sunlight (15min, 3-4 times every week) is recommended.
If you are smoking it is strongly recommended to quit.
Reduce your body weight in case you are overweight.
Maintain normal body weight or BMI < 24.9.
Increase intake of Calcium.
Increase intake Vitamin D.
Limit caffeine intake.

The following nutritional supplement from the genecouture nutraceutical series is recommended:

OPTIMUM BONES & JOINTS MIX (N6)

INFLAMMATORY - AUTOIMMUNE CONDITIONS - PSORIASIS

Bring the results of this DNA profiling to your Doctor's attention.
Consult a Dermatologist.
Reduce your body weight in case you are overweight.
Maintain normal body weight or BMI < 24.9.
Cautious exposure to sunlight (15min, 3-4 times every week) is recommended.
Stress management is strongly recommended.
Increase intake Vitamin D.
Increase intake of ω-3 fatty acids.
Fish oil (especially cod liver oil) intake may have importantly protective effects against psoriasis.
Limit intake of saturated fat.
Limit intake of sugar.
Limit caffeine intake.
If you are drinking, limit alcohol consumption.

VENOUS THROMBOEMBOLISM

Bring the results of this DNA profiling to your Doctor's attention.
If you are smoking it is strongly recommended to quit.
Ensure as possible environmental factors that will reduce the risk for accidents.
Regular exercise is strongly recommended. Emphasize duration rather than intensity.
Prophylactic anti-coagulation treatment is recommended in cases of risk factors, such as large periods of immobility, surgical intervention, childbed period, when individuals take the contraceptive pill.
Maintain balanced intake of Vitamin K through diet.
Increase intake of foods high in folic acid.
Increase intake of Vitamins B6 and B12.

The following nutritional supplement from the genecouture nutraceutical series is recommended:

OPTIMUM FRUIT & VEGETABLE MIX (N3)

NEOPLASIA - LUNG CANCER

Bring the results of this DNA profiling to your Doctor’s attention.
If you are smoking it is strongly recommended to quit.
Avoid passive smoking.
Reduce your body weight in case you are overweight.
Maintain normal body weight or BMI < 24.9.
Increase intake of antioxidant substances like Vitamins A, C, and E.
Limit intake of saturated fat.
Regular exercise is strongly recommended.

EXFOLIATION GLAUCOMA

Bring the results of this DNA profiling to your Doctor's attention.
Consult an Eye care professional (Ophthalmologist).
Have a comprehensive eye exam at least once every two years.
Increase consumption of fresh fruits and vegetables.

NUTRIGENOMICS - LIPID METABOLISM

Regular check up of total cholesterol, HDL cholesterol, LDL-cholesterol, triglycerides, HDL-C, and total cholesterol/HDL cholesterol ratio, glucose levels is strongly recommended.
Reduce your body weight in case you are overweight.
Maintain normal body weight or BMI < 24.9.
If you are smoking it is strongly recommended to quit.
Regular exercise is strongly recommended. Emphasize duration rather than intensity.
Increase intake of ω-3 fatty acids.

Increase intake of dietary fiber.
Limit intake of saturated fat.
Limit intake of sugar.
If you are drinking, limit alcohol consumption.

The following nutritional supplement from the genecouture nutraceutical series is recommended:

POLYUNSATURATED FATTY ACIDS (N2)

NUTRIGENOMICS - FOLIC ACID METABOLISM

Have a regular check up of homocysteine levels and folic acid.
Increase intake of folic acid.
Increase intake of Vitamins B6 and B12.

The following nutritional supplement from the genecouture nutraceutical series is recommended:

OPTIMUM FRUIT & VEGETABLE MIX (N3)

NUTRIGENOMICS - LACTOSE TOLERANCE

In case your Doctor diagnoses you suffer from lactose intolerance, then the physician can provide you with further instructions regarding certain foods you should avoid.

Due to the heritability of the polymorphisms in the genes analyzed, molecular analyses and genetic counseling for all first degree relatives of individuals with increased risk is recommended for pre-symptomatic diagnosis.