MAGISNAT®

DNA Wellness Report:

Nutrition and Absorption Insights

For:

Alex Morgan

KIT ID: SAMPLE-DNA-0001

Report type: Wellness

Genetic variations: 34 SNPs

Date: 2026-09-24

Dear Alex Morgan

Thank you for choosing our genetic analysis service.

We are pleased to provide you with personalized information based on your genetic data. This report is designed to offer educational insights into selected genetic variants and their associations described in scientific literature.

Our goal is to present your results in a clear and informative format to support a better understanding of certain genetic characteristics related to general wellness. This information is intended for educational purposes only and is not intended to diagnose, treat, cure, or prevent any disease.

We hope your experience with our service has been clear, informative, and valuable. If you have any questions or need additional assistance, our team is available to help.

Thank you again for placing your trust in us.

Sincerely,

MAGISNAT OMICS LLC Team

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Introduction

GENETICS is important

DNA Wellness Report: Nutrition and Absorption Insights

Nutrition- and absorption-related pathways include biological processes involved in the metabolism, absorption, transport, and use of nutrients in the body. This DNA report analyzes **34 selected genetic variants (SNPs)** that have been studied in relation to biological pathways associated with the metabolism of vitamins, minerals, carbohydrates, and lipids, as well as certain food preference traits. Scientific literature suggests that genetic variation may be associated with differences in certain nutrient-related processes among individuals. The information in this report is provided for educational and general wellness purposes and is intended to offer context about genetic variation and nutrition-related biological pathways. **This report is not intended to diagnose, treat, cure, or prevent any disease.**

Traits

- **Vitamin Metabolism**
- **Mineral Metabolism**
- **Carbohydrate Metabolism**
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Understanding the report

How to read your genetic results

This report presents information about selected genetic variants identified through the analysis of specific genes and their variations, known as single nucleotide polymorphisms (SNPs).

Each result is displayed in a dedicated section that includes the gene name, a description of its biological role, the specific SNP analyzed, and the genotype identified (alleles).

The information provided in this report is based on findings from published scientific research describing associations between certain genetic variants and biological processes.

The content of this report is provided for educational and informational purposes only and is not intended to diagnose, treat, cure, or prevent any disease.

Report summary

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Mineral Metabolism

Carbohydrate Metabolism

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Genetic Data Results

Vitamin Metabolism

Vitamin metabolism includes the biological processes involved in the absorption, transport, activation, storage, and breakdown of vitamins in the body. This section presents information about selected genetic variants that have been studied in relation to biological pathways associated with vitamin metabolism. Scientific literature suggests that genetic variation may be associated with differences in certain vitamin-related processes among individuals. The information in this section is provided for educational and general wellness purposes and is intended to offer context about genetic variation and vitamin-related biological pathways.

Reference:

"Vitamin Metabolism." ScienceDirect Topics, Elsevier, n.d.,
https://www.sciencedirect.com/topics/medicine-and-dentistry/vitamin-metabolism

Vitamin A

Vitamin A is a fat-soluble vitamin that supports normal vision, normal immune function, and normal growth and development. Animal foods provide retinol, while plant foods provide beta-carotene, which the body can convert into retinol. Genetic differences may influence how the body converts and uses vitamin A.

Reference:

"Vitamin and Mineral Supplement Fact Sheets", National Institutes of Health, Office of Dietary Supplements.
https://ods.od.nih.gov/factsheets/VitaminA-Consumer/

Your results

Gene:	SNP:	Alleles:
BCO1	**rs6564851**	**G/G**

Beta-Carotene Oxygenase 1.

Key enzyme in the conversion of beta-carotene to vitamin A.

Relatively lower beta-carotene conversion efficiency. [1]

The BCO1 gene encodes beta-carotene oxygenase 1, an enzyme involved in converting beta-carotene into retinal, a biologically active form of vitamin A. An observational study explored whether rs6564851 is associated with differences in beta-carotene conversion. Having two copies (homozygosity) of the rs6564851 G allele, corresponding to the G/G genotype, was associated with relatively lower beta-carotene conversion efficiency compared with the T/T genotype.[1] This genetic result does not determine individual vitamin A status or dietary requirements. A qualified healthcare professional can help assess whether your overall diet and lifestyle are appropriate for your individual needs.

Gene:	SNP:	Alleles:
BCO1	**rs12934922**	**A/A**

Beta-Carotene Oxygenase 1.

Key enzyme in the conversion of beta-carotene to vitamin A.

No specific reduction in beta-carotene conversion established for this genotype. [2]

The BCO1 gene encodes beta-carotene oxygenase 1, an enzyme involved in converting beta-carotene into retinal, a vitamin A-related compound. A human study explored whether rs12934922 is associated with differences in beta-carotene conversion, particularly in combination with other BCO1 variants. Having two copies (homozygosity) of the rs12934922 A allele, corresponding to the A/A genotype, does not carry the T allele, and available evidence does not establish a specific reduction in beta-carotene conversion for this genotype.[2] This genetic result does not determine individual vitamin A status or dietary requirements. A qualified healthcare professional can help assess whether your overall diet and lifestyle are appropriate for your individual needs.

Gene:	SNP:	Alleles:
BCO1	**rs7501331**	**C/T**

Beta-Carotene Oxygenase 1.

Key enzyme in the conversion of beta-carotene to vitamin A.

Possible reduced beta-carotene conversion efficiency. [2]

The BCO1 gene encodes beta-carotene oxygenase 1, an enzyme involved in converting beta-carotene into retinal, a vitamin A-related compound. A human study explored whether rs7501331 is associated with differences in beta-carotene conversion. Having one copy (heterozygosity) of the rs7501331 T allele, corresponding to the C/T genotype, has been associated with possible reduced beta-carotene conversion efficiency.[2] This genetic result does not determine individual vitamin A status or dietary requirements. A qualified healthcare professional can help assess whether your overall diet and lifestyle are appropriate for your individual needs.

Your notes

Vitamin B9

Vitamin B9, also known as folate, is a B vitamin that contributes to normal cell division and normal growth and development. It is found naturally in foods such as leafy greens, legumes, and citrus fruits, and it is also added to certain fortified foods as folic acid. Genetic differences may influence how the body processes and uses folate.

Reference:

"Vitamin and Mineral Supplement Fact Sheets", National Institutes of Health, Office of Dietary Supplements. https://ods.od.nih.gov/factsheets/Folate-Consumer/

Your results

Gene:	SNP:	Alleles:
MTHFR	**rs1801133**	**G/A**

Methylenetetrahydrofolate reductase.

Enzyme involved in folate metabolism that converts 5,10-methylenetetrahydrofolate to 5-methyltetrahydrofolate and contributes to homocysteine remethylation.

Possible modest tendency toward higher homocysteine levels, depending on folate status. [3][4]

The MTHFR gene encodes methylenetetrahydrofolate reductase, an enzyme involved in folate and homocysteine metabolism. Some studies have explored whether rs1801133 is associated with differences in MTHFR activity and homocysteine-related measures. Having one copy (heterozygosity) of the rs1801133 A allele, corresponding to the G/A genotype, may be associated with a more modest reduction in MTHFR activity and differences in homocysteine levels, depending on folate status.[3][4] This genetic result does not determine individual folate or homocysteine levels or dietary requirements. A qualified healthcare professional can help assess whether your overall diet and lifestyle are appropriate for your individual needs.

Your notes

Vitamin B12

Vitamin B12 is a water-soluble vitamin in the B-complex group that contributes to normal red blood cell formation and plays a role in DNA synthesis and normal nervous system function. It is found in foods of animal origin, including meat, fish, eggs, milk, and dairy products. Genetic differences may influence how the body absorbs and uses vitamin B12.

Reference:

"Vitamin and Mineral Supplement Fact Sheets", National Institutes of Health, Office of Dietary Supplements. https://ods.od.nih.gov/factsheets/VitaminB12-Consumer/

Your results

Gene:	SNP:	Alleles:
FUT2	**rs602662**	**G/G**

Fucosyltransferase 2.

Enzyme involved in the fucosylation of glycoproteins and glycolipids, contributing to secretor status and the composition of glycans on mucosal surfaces.

Possible lower circulating vitamin B12 levels. [5]

The FUT2 gene encodes fucosyltransferase 2, an enzyme involved in glycan fucosylation and secretor status. Some observational studies have explored whether rs602662 is associated with differences in circulating vitamin B12 levels. Having two copies (homozygosity) of the rs602662 G allele, corresponding to the G/G genotype, may be associated with lower circulating vitamin B12 levels compared with the A/A genotype.[5] This genetic result does not determine individual vitamin B12 levels or dietary requirements. A qualified healthcare professional can help assess whether your overall diet and lifestyle are appropriate for your individual needs.

Your notes

Vitamin C

Vitamin C, also known as ascorbic acid, is a water-soluble vitamin involved in normal metabolic processes. It plays a role as an antioxidant in the body and supports the regeneration of other antioxidants and normal iron absorption. Genetic differences may influence how the body absorbs, transports, and uses vitamin C.

Reference:

"Vitamin and Mineral Supplement Fact Sheets", National Institutes of Health, Office of Dietary Supplements. https://ods.od.nih.gov/factsheets/VitaminC-Consumer/

Your results

Gene:	SNP:	Alleles:
SLC23A1	**rs33972313**	**T/T**

Sodium-dependent vitamin C transporter 1.

Sodium/ascorbate cotransporter. Mediates electrogenic uptake of vitamin C.

Possible lower circulating vitamin C levels. [6]

The SLC23A1 gene encodes sodium-dependent vitamin C transporter 1 (SVCT1), a transport protein involved in vitamin C uptake and homeostasis. Some observational studies have explored whether rs33972313 is associated with differences in circulating vitamin C levels. Having two copies (homozygosity) of the rs33972313 T allele, corresponding to the T/T genotype, may be associated with lower circulating vitamin C levels.[6] This genetic result does not determine individual vitamin C levels or dietary requirements. A qualified healthcare professional can help assess whether your overall diet and lifestyle are appropriate for your individual needs.

Your notes

Vitamin D

Vitamin D is a fat-soluble vitamin that supports normal bone health, normal immune function, normal muscle function, and normal cell growth and differentiation. It also supports normal calcium absorption. Vitamin D can be produced through sunlight exposure and is found in certain foods, including fortified foods and fatty fish. Genetic differences may influence how the body stores and uses vitamin D.

Reference:

"Vitamin and Mineral Supplement Fact Sheets", National Institutes of Health, Office of Dietary Supplements. https://ods.od.nih.gov/factsheets/VitaminD-Consumer/

Your results

Gene:	SNP:	Alleles:
GC	**rs4588**	**T/T**

Vitamin D-binding protein.

Protein that binds vitamin D and its metabolites in plasma and transports them to target tissues.

Possible lower 25-hydroxyvitamin D levels. [7][8]

The GC gene encodes vitamin D-binding protein, which binds and transports vitamin D and its metabolites in the bloodstream. Some observational studies have explored whether rs4588 is associated with differences in vitamin D-related measures. Having two copies (homozygosity) of the rs4588 T allele, corresponding to the T/T genotype, is associated with lower 25-hydroxyvitamin D levels and lower vitamin D-binding protein levels.[7][8] This genetic result does not determine individual vitamin D levels or dietary requirements. A qualified healthcare professional can help assess whether your overall diet and lifestyle are appropriate for your individual needs.

Gene:	SNP:	Alleles:
GC	**rs2282679**	**G/G**

Vitamin D-binding protein.

Protein that binds vitamin D and its metabolites in plasma and transports them to target tissues.

Possible lower circulating 25-hydroxyvitamin D levels. [9]

The GC gene encodes vitamin D-binding protein, which binds and transports vitamin D and its metabolites in the bloodstream. Some observational studies have explored whether rs2282679 is associated with differences in circulating 25-hydroxyvitamin D levels. Having two copies (homozygosity) of the rs2282679 G allele, corresponding to the G/G genotype, is associated with possible lower circulating 25-hydroxyvitamin D levels.[9] This genetic result does not determine individual vitamin D levels or dietary requirements. A qualified healthcare professional can help assess whether your overall diet and lifestyle are appropriate for your individual needs.

Gene:	SNP:	Alleles:
CYP2R1	**rs10741657**	**A/G**

Cytochrome P450 2R1.

Vitamin D 25-hydroxylase that converts vitamin D to 25-hydroxyvitamin D, the main circulating form.

Possible somewhat lower circulating 25-hydroxyvitamin D levels. [9][10]

The CYP2R1 gene encodes vitamin D 25-hydroxylase, an enzyme involved in the conversion of vitamin D to 25-hydroxyvitamin D, the main circulating form of vitamin D. Some studies have explored whether rs10741657 is associated with differences in circulating 25-hydroxyvitamin D levels. Having one copy (heterozygosity) of the rs10741657 G allele, corresponding to the A/G genotype, may be associated with somewhat lower circulating 25-hydroxyvitamin D levels, although associations may vary across populations.[9][10] This genetic result does not determine individual vitamin D levels or dietary requirements. A qualified healthcare professional can help assess whether your overall diet and lifestyle are appropriate for your individual needs.

Your notes

Vitamin E

Vitamin E is a fat-soluble vitamin that acts as an antioxidant and helps protect cells from oxidative stress. It supports normal growth and development and plays a role in normal nervous system and immune function. It is found in nuts, seeds, and vegetable oils. Genetic differences may influence how the body absorbs and uses vitamin E.

Reference:

"Vitamin and Mineral Supplement Fact Sheets", National Institutes of Health, Office of Dietary Supplements. https://ods.od.nih.gov/factsheets/VitaminE-Consumer/

Your results

Gene:	SNP:	Alleles:
CD36	**rs1527479**	**C/C**

Platelet glycoprotein 4.

Membrane transporter of fatty acids.

No specific association with lower plasma vitamin E concentrations established for this genotype. [11]

The CD36 gene encodes a membrane protein involved in fatty-acid transport and nutrient-related uptake processes. Studies have explored whether rs1527479 is associated with differences in plasma vitamin E-related measures. Having two copies (homozygosity) of the rs1527479 C allele, corresponding to the C/C genotype, does not carry the T allele, and available evidence does not establish the same association with lower plasma vitamin E concentrations reported for T-allele carriers.[11] This genetic result does not determine individual vitamin E status or dietary requirements. A qualified healthcare professional can help assess whether your overall diet and lifestyle are appropriate for your individual needs.

Your notes

Choline

Choline is a nutrient involved in cell membrane structure and in the production of acetylcholine, a compound that plays a role in normal muscle movement, nervous system function, learning, memory, and attention. It also supports normal liver and muscle function. Choline is found in foods such as eggs, meat, and legumes, and the body can produce some choline on its own. Genetic differences may influence how the body uses choline.

Reference:

"Vitamin and Mineral Supplement Fact Sheets", National Institutes of Health, Office of Dietary Supplements. https://ods.od.nih.gov/factsheets/Choline-Consumer/

Your results

Gene:	SNP:	Alleles:
PEMT	**rs7946**	**T/T**

Phosphatidylethanolamine N-methyltransferase.

Enzyme playing a crucial role in the biosynthesis of phosphatidylcholine, a critical component for membrane structure.

Possible reduced PEMT enzyme activity. [12][13]

The PEMT gene encodes phosphatidylethanolamine N-methyltransferase, an enzyme involved in the synthesis of phosphatidylcholine, an important component of cell membranes. Some studies have explored whether rs7946 is associated with differences in PEMT activity and choline-related metabolism. Having two copies (homozygosity) of the rs7946 T allele, corresponding to the T/T genotype, is associated with reduced PEMT enzyme activity and differences in choline and phosphatidylcholine metabolism.[12][13] This genetic result does not determine individual choline status or dietary requirements. A qualified healthcare professional can help assess whether your overall diet and lifestyle are appropriate for your individual needs.

Your notes

Mineral Metabolism

Mineral metabolism includes the biological processes involved in the absorption, transport, utilization, and storage of essential minerals in the body. This section presents information about selected genetic variants that have been studied in relation to biological pathways associated with mineral metabolism. Scientific literature suggests that genetic variation may be associated with differences in certain mineral-related processes among individuals. The information in this section is provided for educational and general wellness purposes and is intended to offer context about genetic variation and mineral-related biological pathways.

**Reference: **

"Mineral Metabolism." ScienceDirect Topics, Elsevier, n.d.,
https://www.sciencedirect.com/topics/agricultural-and-biological-sciences/mineral-metabolism

Iron

Iron is a mineral that supports normal oxygen transport and plays a role in normal enzyme function and normal production of certain hormones and connective tissue. It is found in foods such as meat, legumes, and fortified grains. Genetic differences may influence how the body regulates and uses iron.

Reference:

"Vitamin and Mineral Supplement Fact Sheets", National Institutes of Health, Office of Dietary Supplements.
https://ods.od.nih.gov/factsheets/Iron-Consumer/

Your results

Gene:	SNP:	Alleles:
TMPRSS6	**rs855791**	**A/A**

Transmembrane protease serine 6 or Matriptase-2.

Protein playing a critical role in the regulation of iron homeostasis in the body.

Associated with lower iron-related measures, particularly hemoglobin, serum iron and transferrin saturation. [14][15]

The TMPRSS6 gene encodes matriptase-2, a protein involved in the regulation of iron homeostasis through pathways related to hepcidin. Some observational studies have explored whether rs855791 is associated with differences in iron-related measures. Having two copies (homozygosity) of the rs855791 A allele, corresponding to the A/A genotype, has been associated with lower hemoglobin, serum iron and transferrin saturation; lower ferritin concentrations have also been reported.[14][15] This genetic result does not determine individual iron status or dietary requirements. A qualified healthcare professional can help assess whether your overall diet and lifestyle are appropriate for your individual needs.

Gene:	SNP:	Alleles:
TF	**rs3811647**	**G/A**

Transferrin.

Transferrin, the main iron transport protein in the blood.

Possible somewhat higher transferrin levels and lower transferrin saturation. [16][17]

The TF gene encodes transferrin, the main iron transport protein in the blood. Some observational and functional studies have explored whether rs3811647 is associated with differences in transferrin expression and iron-related measures. Having one copy (heterozygosity) of the rs3811647 A allele, corresponding to the G/A genotype, has been associated with higher transferrin levels and lower transferrin saturation compared with the G/G genotype.[16][17] This genetic result does not determine individual iron status or dietary requirements. A qualified healthcare professional can help assess whether your overall diet and lifestyle are appropriate for your individual needs.

Your notes

Zinc

Zinc is a mineral that plays a role in normal immune function, normal wound healing, and normal hormone-related processes. It is found in foods such as meat, legumes, and seeds. Genetic differences may influence how the body absorbs and uses zinc.

Reference:

"Vitamin and Mineral Supplement Fact Sheets", National Institutes of Health, Office of Dietary Supplements. https://ods.od.nih.gov/factsheets/Zinc-Consumer/

Your notes

Carbohydrate Metabolism

Carbohydrate metabolism includes the biological processes involved in the breakdown, storage, and use of sugars in the body. This section presents information about selected genetic variants that have been studied in relation to biological pathways associated with carbohydrate metabolism. Scientific literature suggests that genetic variation may be associated with differences in certain carbohydrate-related processes among individuals. The information in this section is provided for educational and general wellness purposes and is intended to offer context about genetic variation and carbohydrate-related biological pathways.

Reference:

"Carbohydrate Metabolism." ScienceDirect Topics, Elsevier, n.d.,
https://www.sciencedirect.com/topics/medicine-and-dentistry/carbohydrate-metabolism

Your results

Gene:	SNP:	Alleles:
SLC30A8	**rs13266634**	**T/T**

Zinc transporter 8.

Protein playing a crucial role in the regulation of zinc homeostasis within insulin-secreting pancreatic cells.

Possible association with relatively lower fasting glucose levels. [18][19]

The SLC30A8 gene encodes zinc transporter 8, a protein expressed in pancreatic beta cells and involved in physiological processes related to insulin storage and secretion. Genetic association studies have explored whether rs13266634 is associated with fasting glucose levels. Having two copies (homozygosity) of the rs13266634 T allele, corresponding to the T/T genotype, may be associated with a relatively lower fasting-glucose-related profile compared with genotypes carrying the C allele, with an additive effect reported across genotypes.[18][19] This genetic result does not determine an individual's glucose level or metabolic health. A qualified healthcare professional can help assess whether your overall diet and lifestyle are appropriate for your individual needs.

Gene:	SNP:	Alleles:
ADIPOQ	**rs266729**	**C/C**

Adiponectin.

Hormone produced mainly by adipose tissue that contributes to the regulation of glucose and lipid metabolism, insulin sensitivity, and energy balance.

No specific association with lower adiponectin levels established for this genotype. [20]

The ADIPOQ gene encodes adiponectin, a hormone involved in metabolic processes related to insulin sensitivity and glucose and lipid metabolism. Studies have explored whether rs266729 is associated with differences in circulating adiponectin levels. Having two copies (homozygosity) of the rs266729 C allele, corresponding to the C/C genotype, does not carry the G allele, and available evidence does not establish the same association with lower adiponectin levels reported for G-allele carriers.[20] This genetic result does not determine individual metabolic health or body weight. A qualified healthcare professional can help assess whether your overall diet and lifestyle are appropriate for your individual needs.

Your notes

Diet Response

Your results

Gene:	SNP:	Alleles:
PPARG	**rs1801282**	**C/G**

Peroxisome proliferator-activated receptor gamma.

Nuclear receptor and transcription factor involved in adipocyte differentiation, lipid storage and glucose metabolism.

Possible differences in metabolic response to dietary fat composition. [21-24]

The PPARG gene encodes peroxisome proliferator-activated receptor gamma, a nuclear receptor involved in lipid and glucose metabolism and insulin sensitivity. Some studies have explored whether rs1801282 is associated with differences in metabolic response to the amount and type of dietary fat consumed. Having one copy (heterozygosity) of the rs1801282 G allele, corresponding to the C/G genotype, has been associated with differences in insulin-, body-composition- and triglyceride-related responses depending on the amount and type of dietary fat consumed, including polyunsaturated, saturated, monounsaturated and n-3 fatty acids.[21-24] This genetic result does not determine individual metabolic response to dietary fat, body weight, or specific dietary requirements. A qualified healthcare professional can help assess whether your overall diet and lifestyle are appropriate for your individual needs.

Gene:	SNP:	Alleles:
FTO	**rs8050136**	**C/C**

FTO alpha-ketoglutarate dependent dioxygenase.

Enzyme involved in RNA modification and cellular processes related to energy balance and metabolism.

No specific association with dietary intake established for this genotype. [25-27]

The FTO gene encodes a protein involved in RNA modification and processes related to energy balance and metabolism. Studies have explored whether rs8050136 is associated with differences in food and macronutrient intake. Having two copies (homozygosity) of the rs8050136 C allele, corresponding to the C/C genotype, does not carry the A allele associated with differences in energy intake and dietary macronutrient patterns in some studies.[25-27] This genetic result does not determine individual energy intake, food choices or body weight. A qualified healthcare professional can help assess whether your overall diet and lifestyle are appropriate for your individual needs.

Lipid Metabolism

Lipid metabolism includes the biological processes involved in the absorption, transport, synthesis, storage, and breakdown of dietary fats and other lipid compounds in the body. This section presents information about selected genetic variants that have been studied in relation to biological pathways associated with lipid metabolism. Scientific literature suggests that genetic variation may be associated with differences in certain lipid-related processes among individuals. The information in this section is provided for educational and general wellness purposes and is intended to offer context about genetic variation and lipid-related biological pathways.

Reference:

Chandel, Navdeep S. "Lipid Metabolism." Cold Spring Harbor Perspectives in Biology vol. 13,9 a040576. 2021. doi:10.1101/cshperspect.a040576

Your results

Gene:	SNP:	Alleles:
FADS1	**rs174547**	**T/T**

Fatty acid desaturase 1.

Enzyme involved in the desaturation of polyunsaturated fats.

Relatively higher long-chain polyunsaturated fatty acid biosynthetic capacity compared with C-allele carriers. [28-30]

The FADS1 gene encodes fatty acid desaturase 1, an enzyme involved in the conversion of essential fatty acids into long-chain polyunsaturated fatty acids. Some clinical studies have explored whether rs174547 is associated with differences in fatty acid conversion. Having two copies (homozygosity) of the rs174547 T allele, corresponding to the T/T genotype, has been associated with relatively higher long-chain PUFA biosynthetic capacity compared with T/C and C/C genotypes.[28-30] This genetic result does not determine individual fatty-acid status or dietary requirements. A qualified healthcare professional can help assess whether your overall diet and lifestyle are appropriate for your individual needs.

Gene:	SNP:	Alleles:
APOA5	**rs662799**	**A/G**

Apolipoprotein A-V.

A component of circulating lipoproteins that plays a crucial role in lipid transport.

Possible moderately higher triglyceride levels and possible differences in triglyceride response to dietary interventions. [31-35]

The APOA5 gene encodes apolipoprotein A-V, a protein involved in the regulation of triglyceride metabolism. Some genetic and observational studies have explored whether rs662799 is associated with differences in triglyceride levels and dietary response. Having one copy (heterozygosity) of the rs662799 G allele, corresponding to the A/G genotype, has been associated with moderately higher triglyceride levels compared with A/A, with levels generally lower than those observed in G/G individuals.[31][32] G-allele carriers have also shown differences in triglyceride response to dietary composition and hypocaloric Mediterranean dietary interventions.[33-35] This genetic result does not determine individual triglyceride levels or dietary requirements. A qualified healthcare professional can help assess whether your overall diet and lifestyle are appropriate for your individual needs.

Gene:	SNP:	Alleles:
LIPC	**rs2070895**	**A/A**

Hepatic lipase.

Enzyme breaking down triglycerides and phospholipids present in high-density lipoproteins (HDL).

Associated with higher HDL-C levels. [36]

The LIPC gene encodes hepatic lipase, an enzyme involved in the metabolism and remodeling of circulating lipoproteins. Some observational studies have explored whether rs2070895 is associated with differences in HDL-C levels. Having two copies (homozygosity) of the rs2070895 A allele, corresponding to the A/A genotype, has been associated with higher fasting HDL-C levels, with a more pronounced association observed among vigorously physically active individuals in the population studied.[36] This genetic result does not determine individual lipid levels or dietary requirements. A qualified healthcare professional can help assess whether your overall diet and lifestyle are appropriate for your individual needs.

Gene:	SNP:	Alleles:
LPL	**rs328**	**C/C**

Lipoprotein lipase.

Enzyme playing a crucial role in the breakdown of triglycerides present in circulating lipoproteins.

No specific association with lower triglyceride or higher HDL-C levels established for this genotype. [37]

The LPL gene encodes lipoprotein lipase, an enzyme involved in the breakdown of circulating triglycerides. Some observational studies have explored whether rs328 is associated with differences in triglyceride and HDL-C levels. Having two copies (homozygosity) of the rs328 C allele, corresponding to the C/C genotype, does not carry the G allele, and available evidence does not establish the same association with lower triglyceride levels and higher HDL-C levels reported for G-allele carriers.[37] This genetic result does not determine individual lipid levels or dietary requirements. A qualified healthcare professional can help assess whether your overall diet and lifestyle are appropriate for your individual needs.

Your notes

Food Preferences

Food preferences are influenced by a combination of genetic, sensory, and environmental factors. This section presents information about selected genetic variants that have been studied in relation to biological pathways associated with taste perception and food preference patterns. Scientific literature suggests that genetic variation may be associated with differences in certain taste-related and food-related processes among individuals. The information in this section is provided for educational and general wellness purposes and is intended to offer context about genetic variation and food-related biological pathways.

Reference:

Drewnowski, A. "Taste preferences and food intake." Annual Review of Nutrition vol. 17 (1997): 237-53. doi:10.1146/annurev.nutr.17.1.237

Your results

Gene:	SNP:	Alleles:
MCM6/LCT regulatory region	**rs4988235**	**A/G**

MCM6/LCT regulatory region.

Regulatory region within MCM6 that influences expression of the LCT gene and persistence of lactase activity into adulthood.

Lactase persistence; possible intermediate physiological response to a lactose load. [38]

The rs4988235 variant is located in a regulatory region within MCM6 that influences expression of LCT, the gene encoding lactase. Genetic and lactose-load studies have explored whether rs4988235 is associated with lactase persistence and physiological response to lactose. Having one copy (heterozygosity) of the rs4988235 A allele, corresponding to the A/G genotype, is associated with lactase persistence. In one lactose-load study, heterozygous individuals showed higher breath hydrogen levels than homozygous lactase-persistent individuals, while differences in blood glucose and gastrointestinal symptoms were less clear.[38] This genetic result does not determine individual tolerance to lactose-containing foods. A qualified healthcare professional can help assess whether your overall diet and lifestyle are appropriate for your individual needs.

Gene:	SNP:	Alleles:
ALDH2	**rs671**	**A/G**

Aldehyde dehydrogenase 2.

Mitochondrial enzyme involved in the breakdown of acetaldehyde produced during alcohol metabolism and other reactive aldehydes.

Reduced ALDH2 activity and acetaldehyde metabolism; increased susceptibility to alcohol flushing. [39][40]

The ALDH2 gene encodes aldehyde dehydrogenase 2, an enzyme involved in the metabolism of acetaldehyde produced during alcohol metabolism. Some studies have explored whether rs671 is associated with differences in ALDH2 activity and acetaldehyde metabolism. Having one copy (heterozygosity) of the rs671 A allele, corresponding to the A/G genotype, has been associated with reduced ALDH2 activity and impaired acetaldehyde metabolism, as well as increased susceptibility to an alcohol flushing response.[39][40] This genetic result does not determine an individual's response to alcohol. A qualified healthcare professional can help assess whether your overall diet and lifestyle are appropriate for your individual needs.

Gene:	SNP:	Alleles:
TAS2R38	**rs10246939**	**C/C**

Taste receptor type 2 member 38.

Receptor involved in the perception of a wide range of bitter compounds.

Possible higher sensitivity to some bitter compounds. [41]

The TAS2R38 gene encodes a taste receptor involved in the detection of certain bitter compounds. Some studies have explored whether rs10246939 is associated with differences in bitter taste sensitivity. Having two copies (homozygosity) of the rs10246939 C allele, corresponding to the C/C genotype, has been associated with relatively higher sensitivity to some bitter compounds.[41] This genetic result does not determine individual food preferences or dietary requirements. A qualified healthcare professional can help assess whether your overall diet and lifestyle are appropriate for your individual needs.

Gene:	SNP:	Alleles:
TAS1R2	**rs35874116**	**T/C**

Taste receptor type 1 member 2.

Receptor involved in sweet taste perception and nutrient sensing.

Possible intermediate sweet taste intensity and liking. [42]

The TAS1R2 gene encodes a receptor involved in sweet taste perception. Some observational studies have explored whether rs35874116 is associated with differences in sweet taste intensity and liking. Having one copy (heterozygosity) of the rs35874116 T allele, corresponding to the T/C genotype, has been associated with intermediate sweet taste intensity and liking compared with the two homozygous genotypes, although associations with rs35874116 have varied across studies and may be influenced by BMI.[42] This genetic result does not determine individual food preferences or dietary requirements. A qualified healthcare professional can help assess whether your overall diet and lifestyle are appropriate for your individual needs.

Your notes

Scientific Glossary

When discussing genetics, it's often necessary to use many technical terms, and there's no way to avoid it if we want to maintain accuracy in explanations. That's why we have compiled a scientific glossary - to enable everyone to understand without getting overwhelmed.

Anyway, it is important to emphasize that our scientific glossary does not aim to be exhaustive and is not intended to replace the advice provided by your healthcare provider. Professional medical support is essential for a proper interpretation of genetic data and for developing a personalized health and wellness plan.

Allele

An allele is one of the different forms of a specific gene. The differences among alleles arise from small changes in the DNA sequence and can lead to changes in the characteristic controlled by the gene itself.

Chromosome

An allele is one of the different forms of a specific gene. The differences among alleles arise from small changes in the DNA sequence and can lead to changes in the characteristic controlled by the gene itself.

Dietary supplement

A dietary supplement is a product that contains one or more dietary ingredients, such as vitamins, minerals, herbs, amino acids, enzymes, or other substances, intended to supplement the diet. These supplements are available in various forms, including pills, capsules, tablets, powders, or liquids.

DNA

DNA stands for Deoxyribonucleic Acid. It is the macromolecule containing the information to build the organism. It is made up of 4 different nucleotides (Adenine, Cytosine, Guanine and Thymine). The human DNA have 3 billion nucleotide basepairs.

Gene

A gene is a segment of a chromosome that occupies a given locus on it and codes for a protein, each one with a specific function: some build the structure of our cells, some respond to signaling molecules, some catalyze reactions (these are called enzymes), and so on.

Genetic Variant

A genetic variant is a change or alteration in the DNA sequence of a gene. The main genetic variant types include base substitutions, deletions, or insertions.

Genomics

Genomics is a field of biology that focuses on the study of an organism's entire genome, which is the complete set of its genetic material. It involves the comprehensive analysis of genes, their functions, interactions, and variations within and between populations.

Genotype

The genotype is the genetic makeup of an organism, then the combination of alleles presents in an individual's DNA at a particular locus on a chromosome. The genotype represents the specific genetic information that an organism inherits from its parents.

Heterozygosity

Heterozygosity refers to having two different alleles at a specific genetic locus. If an individual has one copy of the "A" allele and one copy of the "B" allele for a certain gene (AB genotype), they are said to be heterozygous for that gene.

Homozygosity

Homozygosity refers to having two identical alleles at a specific genetic locus. If an individual has two copies of the "A" allele for a certain gene (AA genotype), they are said to be homozygous for that gene.

Macronutrient

Macronutrients are essential nutrients that are required by the body in large quantities to maintain proper functioning, growth, and overall health. These nutrients provide the necessary energy and building blocks needed for various physiological processes. The three primary macronutrients are: carbohydrates, lipids (fat), and proteins.

Micronutrient

Micronutrients are essential nutrients required by the body in smaller quantities but are equally important for maintaining overall health and supporting various physiological functions. Micronutrients include two main groups: vitamins and minerals.

Nutritional deficiency

Nutritional deficiency, also known as malnutrition, refers to a condition in which the body does not receive enough macronutrients or micronutrients, which are needed to support proper growth, development, and overall wellness.

Phenotype

The phenotype is any observable trait arising from a complex interplay between a given genotype and environmental factors. Examples of phenotypes are height, eye color and blood type.

rsID number

rsID numbers are identifiers used by researchers to name different SNPs.

SNPs (Single Nucleotide Polymorphism)

A SNP, or single nucleotide polymorphism, is a genetic variant in one of the nucleotide bases composing DNA and found in more than 1% of the population.

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Disclaimers

This DNA Wellness Report is intended only for general wellness, educational, and informational purposes. It provides information about
selected genetic variants that may be associated with non-diagnostic wellness traits, such as general nutrition, fitness, lifestyle, and other
wellness-related characteristics, based on scientific literature and internal interpretation methods available at the time the report is prepared.

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Do not use this report to start, stop, or change any medication, medical treatment, supplement program, diet, or exercise program without
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The test analyzes selected genetic variants only. It does not analyze all variants in any gene, does not evaluate the entire genome, and may
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