FullDNA

HEALTH

PANEL

DIABETES

ENGLISH VERSION

FullDNA

Patient data

Name	Sample
Age	
Gender	M
Test date	
Report date	07/12/2021
Prescriber	
Health insurance	

What does testing make possible?

Based on personalized and comparative gene studies, FullDNA looks for genetic alterations among the billions of information a patient's DNA carries, and in-depth information on each individual's predispositions to developing disease, as well as recommendations and specific information for their correction and prevention. , whenever such information is available.

WARNING

The values of the results of genetic tests are not diagnostic, but show trends that are influenced by physiological, pathological conditions, use of medications and other personal conditions of the examinee.
Only your clinician is able to correctly interpret these results and to prescribe the most appropriate treatment for you, and the laboratory is not responsible for any treatment based on the results.
If necessary, this laboratory has scientific advice to discuss these results with your attending clinician.

The genetic test

The genetic examination is the most current and advanced technological leap in the health area, mainly for the clinical area because DNA is the true **Instruction Manual** of the individual.

In DNA, all individual needs, susceptibilities and psycho-behavioral, structural, functional and reaction characteristics that an individual has and will have throughout his life are determined with high precision.

The genetic examination is within the modern disruptive concept of Genetic Identity where the individual is able to have all the precise and personalized information necessary to, from them, know what to do to achieve more Health, Vitality, Beauty and Longevity.

The current level of our technology, developed in Israel, allows the high level of precision and reliability of our tests in the fundamental aspects for a genetic test.

In the WGS (total genome sequencing) extraction that provides 40 million SNPs (polymorphisms) - in the market in general we have up to 800 SNPs - and in the reading and analysis of the extraction done by our own AI system (Artificial Intelligence) , through a complex algorithm, which considers, among other factors, the number, presence and magnitude of the SNPs related to the analyzed condition.

How to interpret the exam:

We adopted a color bar divided into 5 levels of magnitude.

Each genetic condition (whether characteristic, need, benefit or susceptibility) ranges from a low to a very high magnitude resulting from the exam.

These result levels are calculated using a complex algorithm, developed internally, which considers, among other factors, the quantity, presence and magnitude of the SNPs related to the condition.

The result will then appear as follows:

FIRST PART

The first part interprets the magnitudes of each condition, using an algorithm that considers the following aspects:

- Presence or Absence of Polymorphism
- Amount of Polymorphisms present for the condition
- Magnitude of each Polymorphism
- Validation of the Scientific Base

Due to the decimal places of the magnitudes of the results that must be strictly taken into account in the results, we present 5 divisions, which should be interpreted as follows:

 indicates that the displayed result is LOW

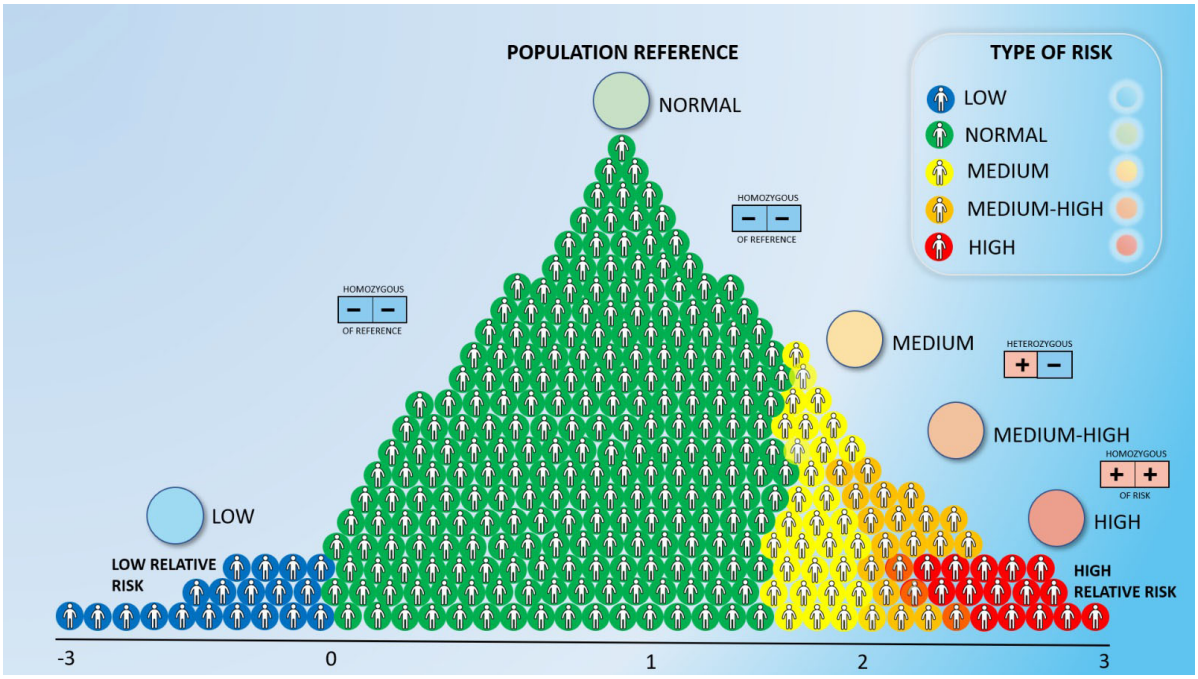
 indicates that the result shown is NORMAL

 indicates that the result shown is MEDIUM-NORMAL

 indicates that the result shown is MEDIUM-HIGH

 indicates that the displayed result is HIGH

 indicates that it was not possible to calculate a result

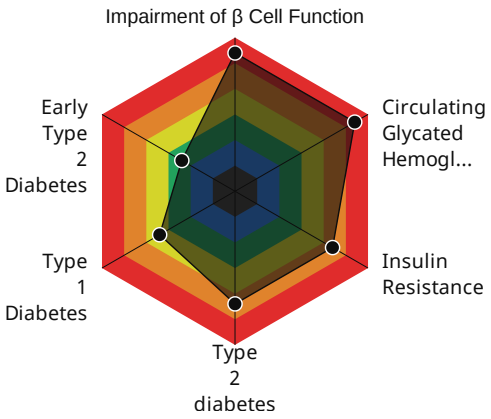


Important notes about the results:

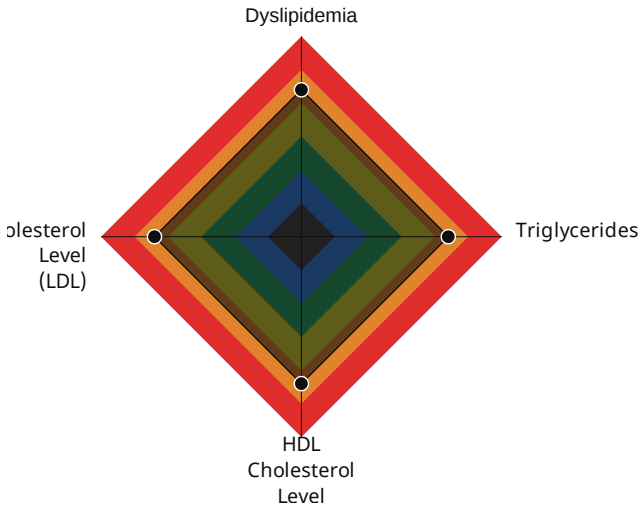
- LOW refers to a predisposition to lack or low susceptibility.
- NORMAL often refers to the majority of the population, in which the incidence of Needs or Susceptibilities is considered normal.
- MEDIUM-NORMAL refers to medium susceptibility. Usually heterozygous at-risk individuals.
- MEDIUM-HIGH refers to high susceptibility. Usually individuals with homozygous or heterozygous alleles at risk.
- HIGH refers to high susceptibility. Usually individuals with homozygous risk alleles.
- If there is no filled sphere in the result, it indicates that the polymorphism (or polymorphisms) related to the specific condition were not detected, or that, as of the date of the report, there are no solid scientific evidences that justify a result.

MOST RELEVANT CONDITIONS BY CATEGORY

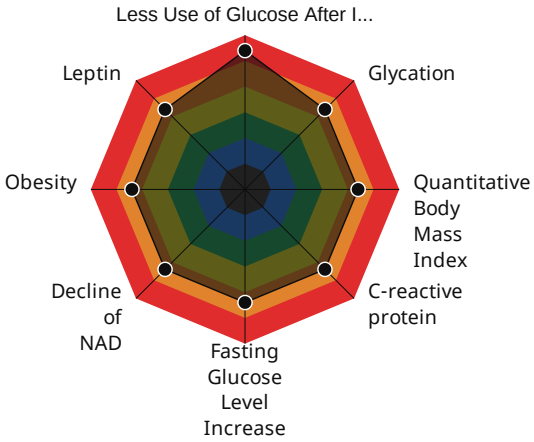
DIABETES



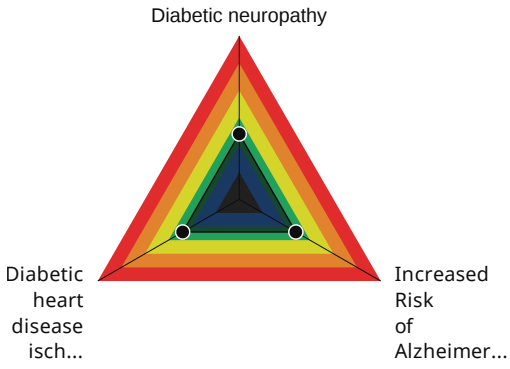
LIPID PROFILE



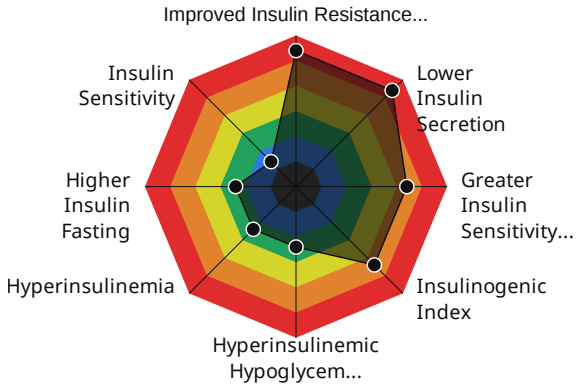
OTHER FACTORS



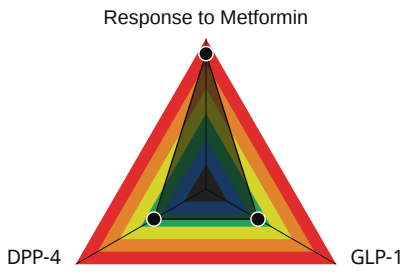
CONSEQUENCES OF DIABETES



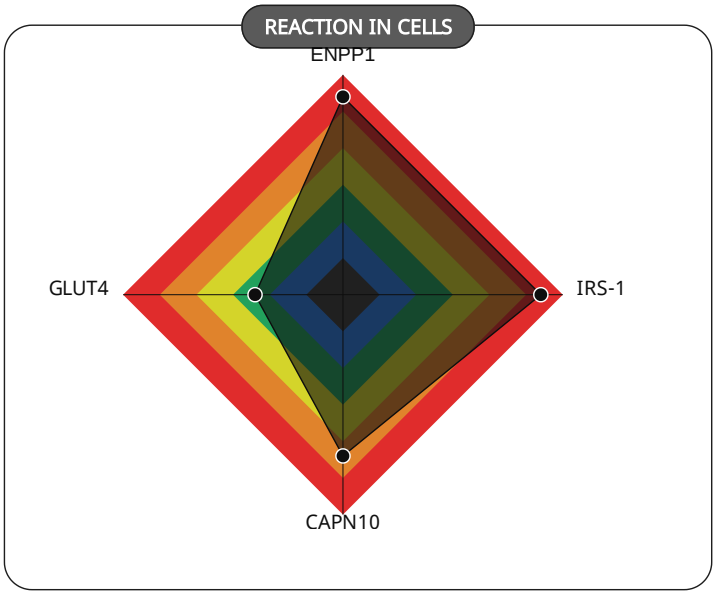
INSULIN



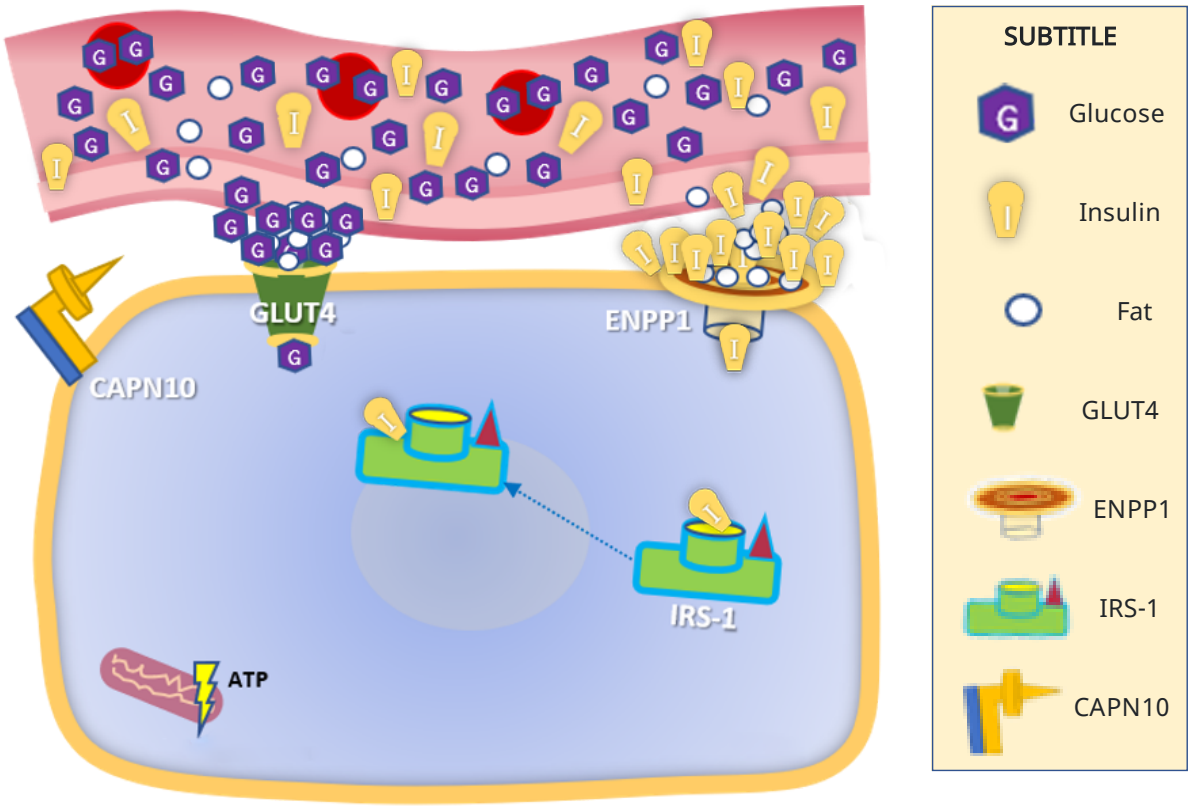
PHARMACOGENETICS



MOST RELEVANT CONDITIONS BY CATEGORY



CELL



RESULTS

CAPN10	ENPP1	GLUT4	IRS-1
MEDIUM	HIGH	NORMAL	HIGH

FullDNA

SUMMARY OF RESULTS

1. Diabetes

Type 1 Diabetes	15	-	-	2	+	-	2	+	+	MEDIUM
Type 2 diabetes	17	-	-	16	+	-	16	+	+	MEDIUM-HIGH
Early Type 2 Diabetes	3	-	-	1	+	-	0	+	+	NORMAL
Insulin Resistance	1	-	-	3	+	-	5	+	+	MEDIUM-HIGH
Circulating Glycated Hemoglobin (HbA1c)	0	-	-	2	+	-	1	+	+	HIGH
Impairment of β Cell Function	0	-	-	0	+	-	3	+	+	HIGH

2. Lipid Profile

HDL Cholesterol Level	14	-	-	12	+	-	2	+	+	MEDIUM-HIGH
Cholesterol Level (LDL)	15	-	-	6	+	-	2	+	+	MEDIUM-HIGH
Triglycerides	16	-	-	6	+	-	6	+	+	MEDIUM-HIGH
Dyslipidemia	2	-	-	2	+	-	3	+	+	MEDIUM-HIGH

3. Other Factors

Waist Measure	13	-	-	6	+	-	6	+	+	MEDIUM-HIGH
Obesity in Adolescents	1	-	-	0	+	-	0	+	+	NORMAL
Obesity	54	-	-	10	+	-	20	+	+	MEDIUM-HIGH
Glycation	2	-	-	1	+	-	0	+	+	MEDIUM-HIGH
Uric Acid (Concentration)	3	-	-	0	+	-	1	+	+	MEDIUM-HIGH
Hypertension (High Blood Pressure)	18	-	-	13	+	-	7	+	+	MEDIUM-HIGH
Adiponectin Levels	5	-	-	0	+	-	1	+	+	MEDIUM
C-reactive protein	1	-	-	2	+	-	2	+	+	MEDIUM-HIGH
Fasting Glucose Level Increase	0	-	-	0	+	-	4	+	+	MEDIUM-HIGH
Less Use of Glucose After Intake of Carbohydrates	0	-	-	0	+	-	1	+	+	HIGH
Quantitative Body Mass Index	10	-	-	3	+	-	7	+	+	MEDIUM-HIGH

Decline of NAD	0	-	-	1	+	-	0	+	+	MEDIUM-HIGH
Noradrenaline	0	-	-	1	+	-	0	+	+	MEDIUM-HIGH
Leptin	1	-	-	1	+	-	1	+	+	MEDIUM-HIGH
Resist	0	-	-	1	+	-	0	+	+	MEDIUM
PI3K	1	-	-	2	+	-	0	+	+	NORMAL
AKT	3	-	-	1	+	-	1	+	+	MEDIUM-HIGH
PTEN	0	-	-	0	+	-	0	+	+	UNDEFINED
P70S6K	0	-	-	0	+	-	0	+	+	UNDEFINED
GSK3	0	-	-	1	+	-	0	+	+	NORMAL
INSR	1	-	-	0	+	-	0	+	+	NORMAL
Wolfram Syndrome 1	8	-	-	0	+	-	0	+	+	NORMAL

4. Consequences of Diabetes

Diabetic neuropathy	2	-	-	0	+	-	0	+	+	NORMAL
Risk of amputation in case of diabetic foot ulcer	0	-	-	0	+	-	0	+	+	UNDEFINED
Diabetic retinopathy	0	-	-	0	+	-	0	+	+	UNDEFINED
Increased Risk of Alzheimer's in Diabetics (T2)	1	-	-	0	+	-	0	+	+	NORMAL
Diabetic heart disease ischemic	1	-	-	1	+	-	0	+	+	NORMAL

5. Insulin

Hyperinsulinemia	2	-	-	0	+	-	0	+	+	NORMAL
Higher Insulin Fasting	0	-	-	1	+	-	0	+	+	NORMAL
Hyperinsulinemic Hypoglycemia of Childhood (HHI)	58	-	-	1	+	-	0	+	+	NORMAL
Greater Insulin Sensitivity with Physical Exercise	0	-	-	0	+	-	1	+	+	MEDIUM-HIGH
Improved Insulin Resistance in Diets with More Protein	0	-	-	1	+	-	0	+	+	HIGH
Insulinogenic Index	2	-	-	0	+	-	1	+	+	MEDIUM-HIGH
Insulin Sensitivity	3	-	-	0	+	-	0	+	+	LOW
Lower Insulin Secretion	1	-	-	2	+	-	1	+	+	HIGH

6. Pharmacogenetics

Response to Metformin	1	-	-	0	+	-	2	+	+	HIGH
Weight Reduction in Liraglutide Treatment	0	-	-	0	+	-	0	+	+	UNDEFINED

GLP-1	1 - - 0 + - 0 + +	NORMAL
DPP-4	1 - - 0 + - 0 + +	NORMAL

7. Reaction in Cells

ENPP1	0 - - 0 + - 1 + +	HIGH
IRS-1	1 - - 0 + - 1 + +	HIGH
GLUT4	1 - - 0 + - 0 + +	NORMAL
CAPN10	1 - - 1 + - 0 + +	MEDIUM-HIGH

FullDNA

1. Diabetes

Type 1 Diabetes

MEDIUM

Genetic risk of developing autoimmune type I diabetes.

Genes

CBLB, CLEC16A, CTLA4, ERBB3, HCG17, HLA-DQA1, HLA-DQB1, IFIH1, IGF2, IL-2RA, IL-7R, INS, INTERGENIC, NAA25, PHTF1, PTPN2, PTPN22, SH2B3, TLR2, UBQLN1P

Type 2 diabetes

MEDIUM-HIGH

Type 2 diabetes is a chronic disease that affects the way the body metabolizes glucose, the body's main source of energy. A person with type 2 diabetes may be resistant to the effects of insulin - a hormone that regulates the entry of sugar into cells - or not produce enough insulin to maintain a normal glucose level. Result and orange or red indicate increased risk of type 2 diabetes.

Genes

ACHE, ACP7, ADCY5, ADIPOQ, ADRA2A, ADRB2, AKT1, ARL15, CAPN10, CDKAL1, CDKN2A, CDKN2A/B, CDKN2B-AS1, DNER, EDN1, ENPP1, ESR1, FAM58A, FTO, GAD1, GCK, GCKR, GLP1R, GPX1, GPX4, GRK5, HHEX, HNF1B, IGF2BP2, IL-6, INSIG2, INSR, INTERGENIC, IRS1, JAZF1, KCNJ11, KCNQ1, LEPR, MTNR1B, MTTP, MYRF, NAF1, NOS3, NOTCH2, OASL, PAX4, PEX5L, PPARD, PPARG, PPM1K, PTPRD, PTPRS, RASGRP1, RBMS1, RHOU, RPSAP52, SDHAF4, SLC11A2, SLC2A14, SLC2A4, SLC30A8, SOD2, TCF2, TCF7L2, TGFBR3, THADA, TRIB3, UBE2E2, VPS26A, VPS33B, WFS1

Early Type 2 Diabetes

NORMAL

Genetic predisposition to non-autoimmune diabetes, but starting in younger individuals. Result in orange or red indicates a greater tendency to early type 2 diabetes.

Genes

GCK, HNF1A, IL-6, KCNJ11, PAX4

FullDNA

1. Diabetes

Insulin Resistance

MEDIUM-HIGH

Resistance to the hormone insulin, resulting in increased blood sugar.

Recommendations

Make sure you are sleeping well. Reduce stress. Diet to adjust your body to normal levels of BMI (Body Mass Index). Consume more soluble fiber in your diet (vegetables, oats, flaxseed, kale and oranges). Add colorful vegetables to your diet. Add turmeric, ginger and garlic and cinnamon to your diet. Consume green tea and avoid trans fats. Recommended Supplementation: Chromium (Chromium Picolinate 200-1000 mcg), Magnesium, Berberine, Resveratrol

Genes

ADIPOQ, ADRB2, APOA1, APOC3, C5ORF67, ENPP1, GRB14, IL-6, IRS1, PLIN1

Circulating Glycated Hemoglobin (HbA1c)

HIGH

Glycated hemoglobin (HbA1c) is a stable index of chronic glycemic status and hyperglycemia associated with the progressive development of insulin resistance and diabetes. It is also associated with premature aging and increased mortality. To discover new loci for HbA1c that are associated with healthy aging, genome-wide association studies (GWAS) were conducted using non-diabetic participants. Two known loci in GCK rs730497 (or rs2908282) and HK1 rs17476364 have been confirmed.

Recommendations

Perform moderate physical activities. It is recommended that they are not aerobic exercises such as running, as they increase cortisol and lactate in the body, which increases insulin resistance. Instead, do aerobic exercise (exercises that allow you to talk as you go), such as walking 30 to 45 minutes a day / 5 days a week. Take HIIT (High Intensity Interval Training) once or twice a week only, as it increases growth hormone which lowers insulin. Monitor your blood glucose level. Diet for weight reduction, especially in people with BMI (Body Mass Index) above normal levels. Add Vegetables and Nuts to the diet. You can include 2 eggs a day in your diet. Other beneficial foods: Turmeric, Garlic, Cinnamon, Chia, Linseed, Brown Rice, Cabbage, Low Fat Yogurt. Yacon Potatoes are a good option to eat at night, at least 2 hours before bedtime, as it helps to reduce blood glucose levels. Eat regularly every 3-5 hours. Avoid consuming carbohydrates after 18:00hs. Avoid processed foods. Sleep well and avoid stress to reduce cortisol. Recommended Supplementation: Berberine.

Genes

FN3KRP, FNDC5, GCK, HK1, INTERGENIC, MYO9B, SLC30A8

1. Diabetes

Impairment of β Cell Function

HIGH

Impaired pancreatic beta cell function, typically preceded by insulin resistance in muscle and liver cells, is a key factor in type 2 diabetes. In Type 1 Diabetes, beta cell mass decreases by approximately 90% and in Type 2 diabetes it decreases about 50%.

Recommendations

Reduce your consumption of fats and carbohydrates. Perform physical activities.

Genes

ANK1, INTERGENIC, SLC30A8

2. Lipid Profile

HDL Cholesterol Level

MEDIUM-HIGH

Tendency to have higher or lower levels of HDL cholesterol. Currently, it is recognized that very high HDL levels, greater than 73mg/dl for men and above 93mg/dl for women, increase cardiovascular risk, as HDL and cardiovascular risk have a U-shaped behavior.

Genes

ABCA1, ABCG8, APOA4, BUD13, CETP, EDN1, FADS2, FTO, HNF4A, IL-6, INTERGENIC, LIPC, LIPG, LPL, LTA, NUTF2, PCIF1, PLTP, PPARD, SCARB1, TTC39B, VWF, ZPR1

Cholesterol Level (LDL)

MEDIUM-HIGH

Tendency to lower or higher LDL cholesterol levels in general.

Recommendations

Regular aerobic physical activity, such as running and walking, is an auxiliary measure for controlling high cholesterol. The practice of physical exercise leads to a reduction in triglycerides and increases HDL-c, the “good cholesterol”.

Genes

ABCA1, ABCG8, APOB, APOC1, APOC3, APOE, AR, BRCA2, CELSR2, CPS1, CR1L, DNAH11, FABP2, GPX1, HMGCR, HNF1A, LDLR, MAFB, MMAB, MTHFR, MYRF, NAF1, NOS3, PCSK9, SCARB1, SHBG

Triglycerides

MEDIUM-HIGH

Tendency to higher serum triglyceride levels.

Recommendations

Recommended Supplementation: Niacin (Vitamin B3, 15 to 20mg per day in adults, during or after meals), Omega-3, Turmeric, Garlic Extract. Eat Eggplant, Nuts, Beans, Oats, Barley, Apples and citrus fruits. Limit your fructose intake to no more than 50 to 100 grams per day. Decrease sugar consumption, increase fiber consumption, decrease carbohydrates. Eat every 3-5 hours. Perform at least 30 minutes of consecutive exercise each day.

Genes

ABCG8, APOA5, APOB, APOE, BUD13, CILP2, DOCK7, FADS1, FADS2, FTO, GCKR, HMGCR, INTERGENIC, JMJD1C, LDLR, LEPR, LIPC, LPL, LYPLAL1, MLXIPL, OR4A46P, PCIF1, PCSK9, PHYHIP, PPARG, RAB11B, SHBG, SUGP1, TBL2, TMEM241, TRIB1, XKR6, ZPR1

2. Lipid Profile

Dyslipidemia

MEDIUM-HIGH

Dyslipidemia is an elevation of plasma cholesterol and/or triglycerides or a low concentration of HDL that contributes to the development of atherosclerosis. Causes can be primary (genetic) or secondary.

Genes

APOA5, APOC3, GCKR, LPL, PHYHIP, TBL2

3. Other Factors

Waist Measure

MEDIUM-HIGH

Extremely important measure to verify the risk that a person has of suffering from cardiovascular disease and stroke. Result in orange or red indicates a tendency to a larger waist measurement.

Genes

ADIPOQ, APOA1, APOE, C5ORF67, CCDC40, CDH12, CLOCK, ELP4, ESR1, FTO, GCH1, GCKR, GDAP1, HMGCR, IL-15, IL-1A, IL-1B, INTERGENIC, KLF7, MC4R, MYO1B, OVCH2, PCSK1, PER2, PLIN1, PPM1L, SH2B1, SLC6A2, SSTR2, TXN, UCP2, UCP3

Obesity in Adolescents

NORMAL

According to research, the frequency of rs8179183, a SNP in LEPR , was significantly different between obese and healthy participants, with 5.3% more obese adolescents possessing a specific gene copy (the C allele) of rs8179183 compared to controls. It is important to note that this SNP causes a so-called missense mutation and, as a result, the role of leptin in regulating food intake and body temperature is impaired. Further analysis revealed that rs8179183 was associated with serum triglyceride levels after adjustment for age and BMI. Adolescents with the GC or CC rs8179183 genotypes had more triglycerides than those with GG.

Genes

LEPR, MTNR1B

Obesity

MEDIUM-HIGH

Here, we evaluated a set of genes whose polymorphisms were associated with a higher risk of developing obesity. Result in orange or red indicates a greater tendency to obesity.

Genes

AATK, ACMSD, ADCYAP1, ADIPOQ, ADRA2A, ADRB2, ADRB3, ADSS, AGRP, AK8, AKT1, ALLC, ANKAR, ANKK1, APOA1, APOA2, APOA4, APOA5, APOB, APOE, ARHGAP11A, ARHGAP24, ARMC4, ASIC2, ASTN2, AUTS2, BDNF, BICC1, BICD1, C2CD4C, C8ORF34, CA8, CADM1, CAMK2A, CCDC33, CCDC77, CCK, CD46, CDCA3, CDHR3, CELF2, CLOCK, COL4A1, COLEC12, CSMD1, CTNNBL1, CYP2E1, DAPL1, DDX60L, DLC1, DLG2, DMRT1, DOCK8, ECT2, EEPD1, EHF, EVA1A, FABP2, FAM129A, FAM19A2, FAM209B, FAM71F1, FARP1, FLJ33534, FSIP1, FTO, GABPB1, GCH1, GHRL, GHSR, GMDS, GPC5, GSG1L, GSTM1, HDAC9, IFI16, IFNGR2, IL-1A, IL-1B, IL-1RN, IL-6, INSIG2, INTERGENIC, JDP2, KCNB1, KCNMA1, KIF6, KIRREL, KLF7, LEP, LEPR, LGALS17A, LHPP, LINC00704, LINC01299, LINC01500, LIPC, LPP, MC4R, MDFIC, MSRA, NAT2, NDUFA8, NFE2L2, NIPSNAP3B, NLRP8, NMNAT2, NPM2, NXPH1, PCDH9, PCSK1, PFKP, PIP4K2A, PKNOX2, PLEKHG1, PLIN1, POC5, POMC, PPARG, PPARGC1A, PPARGC1B, PPM1H, PTPRD, PTPRN2, PVALB, PYY, RAB17, RASEF, RBBP6, RBFOX1, RIC3, RLN3, RPTOR, RSU1, RYR2, S100P, SCG3, SDC3, SERPINA12, SLC22A2, SLC22A23, SLC29A3, SMYD3, SNRPN, SOCS3, SORBS1, SPAG16, SPOCK3, STON2, SYT1, TBC1D1, TCF4, TCF7L2, TM9SF2, TMEM18, TMEM229B, TMEM45B, TMOD1, TNFRSF1B, TPTE2P1, TRABD2B, TRAPPC9, TRIM66, TUB, UCP1, UCP2, UGT2B7, UNC13A, UNC5C, VSIG10, WDPCP, WDR11-AS1, ZBTB46, ZNF536

3. Other Factors

Glycation

MEDIUM-HIGH

Glycation is a process that joins a glucose molecule with a protein molecule, such as collagen and elastin - the same ones responsible for keeping the skin younger and firmer. This union destabilizes the protein and causes it to break down. It is an action as harmful as that of free radicals, promoting the formation of wrinkles and causing loss of elasticity and tone.

Recommendations

Reduce your carbohydrate intake. Avoid high-fat foods such as butter and margarine, meats and cheeses (especially Parmesan cheese), processed products such as breakfast cereals, cookies, and chips or fast food potatoes. The meats that produce the most AGEs in descending order are beef, followed by chicken, pork, fish and eggs. Lamb meat produces the least AGEs. A simple technique, which consists of marinating the meat, reduces the formation of AGEs, due to the presence of acidic ingredients (such as vinegar, lemon and pineapple). Meats that marinate for an hour form half the amount of AGEs. Some foods and seasonings can also be used in the preparation to reduce the production of AGEs, such as garlic (because it has allylcysteine), substances rich in phenolic compounds such as wine and teas (green and matte) and foods rich in vitamin C (lemon, orange, acerola).

Genes

AGER, GLO1

Uric Acid (Concentration)

MEDIUM-HIGH

Uric acid is a substance present in our body that comes from our metabolism, that is, we produce uric acid and this production is responsible for 90% of all uric acid in the body.

Genes

ABCG2, SLC2A9

Hypertension (High Blood Pressure)

MEDIUM-HIGH

Also called High Blood Pressure, it is a condition in which the force of the blood against the wall of the arteries is too great.

Genes

ACE, ADD1, ADD2, AGT, AGTR1, APOE4, ATP2B1, ATP6V1B1, BAG6, BCAT1, BDNF, BMPR1B, BMPR2, CALCA, CASZ1, CBS, CDCA3, CLCN6, CNNM2, CYP11B2, CYP17A1, CYP1A1, CYP4A11, DAPK1, EDN1, EDNRA, FGF21, GPX1, GRK4, GUCY1A3, HIVEP2, IL-6, INTERGENIC, ITGA11, M6PR, MACROD2, MAOA, MOV10, MTHFR, MTRR, MYBPC1, MYO16, NEDD4L, NFE2L2, NGF, NOS3, NOV, NPPA, NR2F2-AS1, NR3C1, OPRM1, PPARG, PPARGC1A, SHMT1, STK39, TAP2, TRPM6, WSCD2

3. Other Factors

Adiponectin Levels

MEDIUM

Adiponectin is a protein hormone that modulates several metabolic processes, including blood glucose regulation and fatty acid catabolism. Adiponectin is exclusively secreted from adipose tissue into the bloodstream and its levels in blood plasma. Higher level on the right indicates more beneficial.

Recommendations

To increase adiponectin levels, just move more during the day. It is also important to maintain a diet with monounsaturated fats such as fish, nuts, avocados and olive oil. Eating low GI carbohydrates with dinner also increases adiponectin production.

Genes

ADIPOQ, FTO

C-reactive protein

MEDIUM-HIGH

C-reactive protein, also known as CRP, is a protein produced by the liver, whose blood concentration rises radically when there is an indication of inflammatory or infectious processes. Protein level is measured using a common blood test to assess the possibility of infection, inflammation, risk of cardiovascular disease, cancer, rheumatic disease, trauma and other serious conditions. Genetic susceptibility indicates higher or lower levels of C-Reactive Protein.

Genes

CRP, FTO

Fasting Glucose Level Increase

MEDIUM-HIGH

More positive people, more determined and susceptible to being open to new experiences. Usually they always widen the circle of alternatives and carry creativity and the search for solutions for a more complete life.

Genes

AKT1, FTO, GCG, GLP1R, PROX1, QPCTL

3. Other Factors

Less Use of Glucose After Intake of Carbohydrates

Analysis of allelic variants (high-risk CC genotype carriers and low-risk T allele carriers) of the SNP rs340874 showed that carriers of the PROX1 CC genotype had lower glucose utilization after high carbohydrate intake in the meal compared to individuals with other PROX1 genotypes.

Genes
PROX1

Quantitative Body Mass Index

The body mass index is an international measure used to calculate whether a person is at ideal weight.

Genes
AGRP, AGT, APOA1, APOA2, APOA5, CLOCK, CTNNBL1, FTO, FUT2, HIF1A, HSD11B1, INTERGENIC, IRS2, MC4R, MTIF3, MYO9B, PCSK1, QPCTL, RIC3, TCF7L2, TNF, UCP1

Decline of NAD

Nicotinamide adenine dinucleotide (NAD) levels decrease during aging and are involved in age-related metabolic decline. Research has identified that CD38 is the major enzyme involved in the degradation of the precursor to NAD, nicotinamide mononucleotide (NMN) in vivo, indicating that CD38 has a key role in modulating NAD replacement therapy for aging and metabolic diseases.

Genes
CD38, TNF

3. Other Factors

Noradrenaline

MEDIUM-HIGH

Noradrenaline, also called Norepinephrine, is one of the monoamines (also known as catecholamines) that most influences mood, anxiety, sleep and diet along with Serotonin, Dopamine and Adrenaline. Its main actions in the cardiovascular system are related to increasing cellular calcium influx and maintaining blood pressure at normal levels. Namely, peripheral vasoconstriction is mediated by alpha adrenergic receptors, whereas tachycardia is mediated by stimulation of b1 adrenergic receptors. Used in medical practice as a powerful reversing agent of arterial hypotension (therefore it is a hypertensive agent) in cases of severe hypotension as a consequence of disseminated infections (sepsis). It has an alpha 2 adrenergic agonist effect which antagonizes the alpha 1 adrenergic receptor, developing vasoconstriction and increased systemic vascular resistance, which leads to a consequent increase in blood pressure.

Genes
CYB561, PNMT

Leptin

MEDIUM-HIGH

Leptin Levels. Leptin is a hormone produced predominantly by fat cells and enterocytes in the small intestine that helps regulate energy balance by inhibiting hunger, which in turn decreases fat storage in adipocytes. Leptin acts on cell receptors in the arcuate and ventromedial nuclei, as well as in other parts of the hypothalamus and dopaminergic neurons in the ventral tegmental area, mediating feeding accordingly. Although the regulation of fat stores is considered the primary function of leptin, it also plays a role in other physiological processes, as evidenced by its many sites of synthesis other than fat cells, and the many cell types other than hypothalamic cells that have leptin receptors. In obesity, there is a decrease in sensitivity to leptin (similar to insulin resistance in type 2 diabetes), resulting in an inability to detect satiety despite high energy stores and high levels of leptin.

Genes
IL-1B, LEP, LEPR

3. Other Factors

Resist

MEDIUM

Resistin, produced in adipose tissue, is involved in insulin resistance factor. It is more present in obese individuals and therefore links obesity to diabetes. It also causes increased production of LDL in liver cells and degrades receptors, making it less able to lower LDL. High levels of resistin can lead to the inefficiency of statins (a drug used to lower cholesterol).

Genes
RETN

PI3K

NORMAL

Phosphoinositide 3-kinase (PI3K) is a central enzyme in a signaling pathway that mediates cellular responses to insulin and other growth factors. This enzyme phosphorylates position 3 of phosphatidylinositol-4,5-biphosphate to produce phosphatidyl-inositol-3,4,5-trisphosphate (PIP 3) in the plasma membrane.

Genes
PIK3R1

AKT

MEDIUM-HIGH

AKT regulates glucose and lipid metabolism. Activated AKT2, which is primarily expressed in insulin-responsive tissues, promotes the translation of glucose transporter 4 (GLUT4).

Genes
AKT1, EGFR

3. Other Factors

PTEN

UNDEFINED

PTEN is a multifunctional tumor suppressor that is very commonly lost in human cancer. Seen in prostate, glioblastoma, endometrial, lung and breast cancer to varying degrees. It has been observed that up to 70% of patients with prostate cancer have loss of gene expression.

Genes

P70S6K

UNDEFINED

Ribosomal protein S6 kinase beta-1, also known as p70S6 kinase, is an enzyme that in humans is encoded by the RPS6KB1 gene. It is a serine/threonine kinase that acts downstream of PIP3 and phosphoinositide-dependent kinase-1 in the PI3 kinase pathway.

Genes
RPS6KB1

GSK3

NORMAL

Login Description

Genes
GSK3B

3. Other Factors

INSR

NORMAL

The INSR gene provides instructions for making a protein called the insulin receptor, which is found on many types of cells. Insulin receptors are embedded in the outer membrane surrounding the cell, where they bind to the hormone insulin that circulates in the bloodstream.

Genes
INSR

Wolfram Syndrome 1

NORMAL

Wolfram-1 syndrome is a rare and severe autosomal recessive neurodegenerative disorder characterized by diabetes mellitus, optic atrophy, diabetes insipidus, and deafness (DIDMOAD). Additional clinical features may include renal abnormalities, ataxia, dementia or mental retardation, and various psychiatric illnesses. Minimum diagnostic criteria for Wolfram syndrome are optic atrophy and juvenile-onset diabetes mellitus. Hearing loss in Wolfram syndrome is typically progressive and primarily affects the higher frequencies, but a small fraction of affected individuals have congenital deafness.

Genes
WFS1

4. Consequences of Diabetes

Diabetic neuropathy

NORMAL

In the case of diabetes, there is a decrease in oxygen reaching the nerves through small blood vessels, and an inflammatory process also forms, both leading to malfunction of the nerves and causing diabetic neuropathy.

Genes
ADIPOQ

Risk of amputation in case of diabetic foot ulcer

UNDEFINED

Two to ten percent of diabetics have foot ulcers. The risk of developing a diabetic foot ulcer increases over time. Unfortunately, most foot and lower leg amputations are performed on patients with diabetes mellitus. The main priority in the treatment of diabetic foot syndrome is to avoid a major amputation.

Genes
CXCL12

Diabetic retinopathy

UNDEFINED

Diabetic retinopathy (DR) is a disease that affects the small vessels of the retina, the region of the eye responsible for forming the images sent to the brain.

Genes
PON1

4. Consequences of Diabetes

Increased Risk of Alzheimer's in Diabetics (T2)

NORMAL

Studies have indicated that patients with Type 2 Diabetes and the CC allele of the rs2498786 polymorphism of the AKT1 gene are more susceptible to developing Alzheimer's.

Genes
AKT1

Diabetic heart disease ischemic

NORMAL

Individuals with DM2 are at increased risk of CVD, which cannot be fully explained by elevated glucose. Genetic risk factors contribute greatly to the pathogenesis of diabetic macrovascular complications, but their role has not yet been fully illustrated. In a case-control study, rs4845625 in the IL-6R gene and the interaction of rs184003 in the AGER gene and rs4845625 in the IL-6R gene were significantly associated with diabetic ischemic heart disease. Polygenic risk scores calculated by summing the number of SNP risk alleles located in the above two genes were also associated with increased risk of diabetic ischemic heart disease.

Genes
AGER, IL-6R

5. Insulin

Hyperinsulinemia

NORMAL

Hyperinsulinemia (increased insulin resistance) means an excess of the hormone insulin circulating in the human body. Hyperinsulinemia can be caused by obesity, overweight, physical inactivity and high consumption of refined carbohydrates (white flour), which cause an increase in blood glucose and, consequently, an increased production of insulin by pancreatic cells.

Genes
HNF4A, KCNJ11

Higher Insulin Fasting

NORMAL

Higher Insulin Levels on Fast

Genes
ARL15, PCSK1

Hyperinsulinemic Hypoglycemia of Childhood (HHI)

NORMAL

Childhood hyperinsulinemic hypoglycemia (HHI) is an emergency in the neonatal period. After short periods of fasting, the glucose-hungry brain runs the risk of running out of its main energy substrate.

Genes
ABCC8, GCK, GLUD1, INSR, KCNJ11

5. Insulin

Greater Insulin Sensitivity with Physical Exercise

Result in orange or red indicates having greater sensitivity to insulin when playing physical sports.

Genes
LIPC

Improved Insulin Resistance in Diets with More Protein

Research indicates that individuals with the T allele of the rs12785878 polymorphism benefit from weight-loss diets with higher amounts of protein to improve insulin resistance.

Genes
NADSYN1

Insulinogenic Index

The insulinogenic index (IGI) is a frequently used index of β-cell function. It is an index of insulin secretion.

Genes
ANK1, GCG, GRB14, PROX1

FullDNA

5. Insulin

Insulin Sensitivity

LOW

Insulin sensitivity is how responsive your cells are to insulin. Improving this can help reduce insulin resistance and the risk of many diseases, including diabetes. Lack of sleep can damage your health and increase insulin resistance. The result in red indicates less insulin sensitivity. Blue indicates increased insulin sensitivity.

Recommendations

Eating fewer carbohydrates, spreading carbohydrate intake throughout the day, and choosing lower glycemic index carbohydrates are ways to increase insulin sensitivity. Chromium, berberine and magnesium supplements are associated with increased sensitivity.

Genes

C5ORF67, GCG, GRB14

Lower Insulin Secretion

HIGH

Type 2 diabetes arises when the compensatory insulin secretion induced by insulin resistance is depleted. Insulin resistance and/or β-cell dysfunction results from the interaction of environmental factors (hypercaloric diet and reduced physical activity) with a predisposing polygenic background. During the pathogenesis of DM2, insulin resistance of peripheral tissues (liver, skeletal muscle and adipose tissue) causes compensatory increases in insulin secretion by pancreatic β cells. When insulin resistance is no longer compensated and the β-cells are depleted, hyperglycemia arises.

Genes

EXT2, GLP1R, INTERGENIC, SLC30A8

6. Pharmacogenetics

Response to Metformin

HIGH

The therapeutic response to metformin is determined by the action of protein products from several genes and, due to this, pharmacogenetics has brought a lot of relevant information. result in orange or red indicates better response.

Genes
SLC22A1, SLC2A2, SLC47A1, SRR

Weight Reduction in Liraglutide Treatment

UNDEFINED

The SNP rs6923761 (non-coding), allele A (GA / AA vs GG), was associated with a greater weight reduction of 2.9 kg after treatment with liraglutide in the multivariate analysis

Genes
GLP1R

GLP-1

NORMAL

Glucagon-like peptide 1 (GLP-1 or GLP1R) helps regulate appetite, especially after eating. It also helps to increase insulin production. GLP-1 is produced in the intestine. Small intestinal cells are the main source of GLP-1. Orange or red result indicates less responsiveness to GLP-1.

Genes
GLP1R, INTERGENIC

6. Pharmacogenetics

DPP-4

NORMAL

Dipeptidyl peptidase-4 (DPP4) can influence lipid homeostasis and the progression of atherosclerosis. Researches have evaluated the association of DPP4 gene polymorphisms with hypoalphalipoproteinemia and serum levels of DPP4. DPP-4 is an enzyme expressed on the surface of most cell types that inactivates a variety of other bioactive peptides, including insulinotropic gastrointestinal polypeptide (GIP) and GLP-1. Therefore, its inhibition could potentially affect glucose regulation through multiple effects. However, DPP-4 inhibitors have a modest effect on GLP-1 levels compared to GLP-1 agonists. Dipeptidyl peptidase (DPP-4) inhibitors are not considered initial therapy for most patients with type 2 diabetes mellitus. Initial therapy in most patients starts with diet, weight reduction, exercise and metformin in the absence of contraindications. DPP-4 inhibitors are often considered as monotherapy in patients who are intolerant of or contraindicated to metformin, sulphonylureas, or thiazolidinediones, such as patients with chronic kidney disease or who are at particularly high risk of hypoglycaemia. Blue result indicates lower levels of DPP4, which is a positive feature, as it is related to protection against: Insulin Resistance, Hypoalphalipoproteinemia and Hyperinsulinemia.

Genes
DPP4

7. Reaction in Cells

ENPP1

HIGH

ENPP1 - Insulin Receptor. It lets insulin pass into the cell. In case of mutation, the receptor "does not open", accumulating extracellular glucose and insulin.

Recommendations

Start the Diabetes Prevention Program (DPP).

Genes

ENPP1

IRS-1

HIGH

Insulin Receptor Substrate. Receives Insulin inside the cell and phosphorylates it. Mutation in this receptor prevents insulin from being phosphorylated. Thus, the GLUT-4 receptor cannot receive glucose into the cell, causing an accumulation of extracellular glucose.

Genes

IRS1

GLUT4

NORMAL

GLUT4 receiver receives Glucose. Allows the entry of glucose into the cell. It combines glucose into glycogen or receives electrons and turns into pyruvates that are metabolized by the mitochondria to generate energy. With defective GLUT4 (mutation/polymorphism) Glucose does not enter, accumulating extracellular glucose. GLUT4 is expressed in muscle and adipose tissue that are insulin-dependent tissues, including the heart.

Recommendations

Perform physical activities for at least 30 minutes a day. Walking for more than 30 consecutive minutes a day is a good start. The consumption of Potato Yacon is a good option to eat at night, at least 2 hours before bed, as it helps to reduce blood glucose levels.

Genes

SLC2A4

7. Reaction in Cells

CAPN10

MEDIUM-HIGH

CAPN-10 breaks down fat. Fat accumulation obstructs the ENPP1 and GLUT4 channels. Too much fat in the bloodstream makes the CAPN-10 unable to work properly.

Recommendations

Adjust your diet: Reduce fat intake, just keep healthy fats. Reduce alcohol and carbohydrate consumption. Keep the BMI (Body Mass Index) within the proper standards. Perform Physical Activities: At least 30 consecutive minutes daily of walking and weight loss program. Assess Triglyceride levels and keep within normal range.

Genes

CAPN10

AKT

Gene	Genotype	Rare Allele	Result
AKT1	GG-	C	
AKT1	CC-	G	
AKT1	GG+	G	
AKT1	GG-	G	
EGFR	AG+	A	

Fasting Glucose Level Increase

Gene	Genotype	Rare Allele	Result
AKT1	GG-	C	
FTO	GG+	A,G	
GCG	AA-	C	
GLP1R	GG+	A	
PROX1	GG-	C	
QPCTL	CC+	T	

CAPN10

Gene	Genotype	Rare Allele	Result
CAPN10	AG+	A	
CAPN10	CC+	T	
CAPN10	Variant not found	A	

Impairment of β Cell Function

Gene	Genotype	Rare Allele	Result
ANK1	GG-	C	
INTERGENIC	TT+	T	
SLC30A8	CC+	A,T	

DPP-4

Gene	Genotype	Rare Allele	Result
DPP4	TT-	G	

Decline of NAD

Gene	Genotype	Rare Allele	Result
CD38	Variant not found	G	
TNF	AG+	A	

Type 1 Diabetes

Gene	Genotype	Rare Allele	Result
CBLB	Variant not found	T	
CLEC16A	Variant not found	G	
CTLA4	TT-	A,C	
CTLA4	AA+	G	
CTLA4	AA+	G	
ERBB3	CC-	G	
HCG17	GG+	A	
HLA-DQA1	Variant not found	A,C,T	
HLA-DQB1	TT+	C	
IFIH1	CC+	T	
IGF2	Variant not found	G,T	
IL-2RA	AG-	C	
IL-7R	AG+	G	
INS	Variant not found	G	
INS	Variant not found	A	
INS	Variant not found	G	
INS	Variant not found	G	
INS	Variant not found	T	
INS	Variant not found	A	
INS	Variant not found	G	
INS	Variant not found	C	
INS	Variant not found	A	
INS	AA-	A	
INS	CC-	A	
INS	GG-	A	
INS	Variant not found	G	
INS	Variant not found	C	
INS	CC-	T	
INS	Variant not found	T	

Gene	Genotype	Rare Allele	Result
INS	Variant not found	A	
INS	Variant not found	G	
INS	Variant not found	A	
INTERGENIC	Variant not found	A,C,T	
INTERGENIC	TT+	T	
NAA25	GG+	G	
PHTF1	CC+	A	
PTPN2	TT-	G	
PTPN2	TT+	T	
PTPN2	Variant not found	C	
PTPN22	GG+	G	
SH2B3	TT+	A,C,G	
TLR2	Variant not found	C	
UBQLN1P	CC+	T	

Type 2 diabetes

Gene	Genotype	Rare Allele	Result
ACHE	CC-	T	
ACHE	Variant not found	G,T	
ACP7	AA+	G	
ADCY5	AG+	G	
ADIPOQ	TT+	C	
ADRA2A	Variant not found	G,T	
ADRB2	CC+	C,T	
AKT1	GG-	C	
ARL15	Variant not found	C	
ARL15	Variant not found	T	
CAPN10	AG+	A	
CDKAL1	AG+	G	
CDKAL1	AG+	G,T	
CDKAL1	CG+	C	
CDKAL1	AG+	G	
CDKN2A	TT+	T	
CDKN2A	CC+	C	
CDKN2A/B	AA+	G,T	
CDKN2B-AS1	Variant not found	G	
DNER	AG+	A,C	
EDN1	GT+	T	
ENPP1	Variant not found	T	
ENPP1	CC+	C	
ESR1	Variant not found	T	
FAM58A	Variant not found	A	
FTO	Variant not found	T	
FTO	TT-	A,C	
FTO	AA+	A	
FTO	AA+	A	
FTO	AA+	A	
FTO	GG+	G	
GAD1	Variant not found	A	
GAD1	Variant not found	A	
GAD1	Variant not found	C	
GAD1	AA-	T	
GAD1	Variant not found	A,G	
GAD1	Variant not found	A,C	
GAD1	Variant not found	C	
GAD1	Variant not found	T	
GAD1	Variant not found	T	
GAD1	CT+	T	
GAD1	Variant not found	C	
GCK	AG+	A,C	
GCKR	AA-	C	
GLP1R	GG+	A	
GPX1	Variant not found	A	
GPX4	Variant not found	A,C	
GRK5	Variant not found	T	
HHEX	Variant not found	T	
HHEX	CC+	T	
HNF1B	AG-	G,T	

Gene	Genotype	Rare Allele	Result
IGF2BP2	GG+	T	
IL-6	CG+	G	
INSIG2	CC+	C	
INSR	CC-	A	
INTERGENIC	AG+	G	
INTERGENIC	AG+	A,T	
INTERGENIC	TT+	T	
IRS1	CC+	C	
JAZF1	CT+	C	
KCNJ11	TT+	T	
KCNJ11	CC+	T	
KCNQ1	Variant not found	A,C	
KCNQ1	AA+	C	
KCNQ1	CC+	T	
LEPR	AG+	G	
MTNR1B	CC+	G	
MTTP	Variant not found	C	
MYRF	GT+	T	
NAF1	GG+	G,T	
NOS3	Variant not found	C,G,T	
NOS3	Variant not found	A,T	
NOTCH2	Variant not found	T	
NOTCH2	Variant not found	C	
OASL	TT+	T	
PAX4	Variant not found	A,T	
PAX4	GG-	T	
PEX5L	AG+	A,C	
PPARD	CT+	T	
PPARG	Variant not found	A,G,T	
PPARG	CC+	C	
PPARG	Variant not found	A	
PPARG	CC+	T	
PPARG	Variant not found	T	
PPM1K	GG-	A,C	
PTPRD	Variant not found	A	
PTPRD	Variant not found	A,C,G	
PTPRS	Variant not found	A	
RASGRP1	CC+	C,G	
RBMS1	Variant not found	C	
RHOU	GG+	A	
RPSAP52	CG+	C,T	
SDHAF4	GG+	G	
SLC11A2	AA+	G	
SLC2A14	Variant not found	G,T	
SLC2A4	Variant not found	A,C	
SLC30A8	CC+	A,T	
SOD2	Variant not found	A	
SOD2	CC-	G	
TCF2	AG+	G	
TCF7L2	GG+	T	
TCF7L2	TT+	C	
TCF7L2	CC+	G,T	
TGFBR3	CC-	A	
THADA	CT+	C	
TRIB3	AG+	G,T	
UBE2E2	CC+	A,G	
VPS26A	AA+	A	
VPS33B	Variant not found	A	
WFS1	Variant not found	G	
WFS1	Variant not found	C	

Early Type 2 Diabetes

Gene	Genotype	Rare Allele	Result
GCK	GG-	A,G,T	
GCK	GG-	G,T	
GCK	Variant not found	G	
GCK	Variant not found	A,T	
GCK	Variant not found	G,T	

Gene	Genotype	Rare Allele	Result
HNF1A	Variant not found	A	
IL-6	CG+	G	
KCNJ11	Variant not found	C,T	
PAX4	Variant not found	A,T	
PAX4	GG-	T	

Dyslipidemia

Gene	Genotype	Rare Allele	Result
APOA5	GG+	A,C	
APOC3	GG-	G	
GCKR	AA-	C	
LPL	CC+	G	
LPL	TT+	G	
PHYHIP	AG+	G	
TBL2	CT+	T	

Diabetic heart disease ischemic

Gene	Genotype	Rare Allele	Result
AGER	GG-	A	
IL-6R	CT+	T	

ENPP1

Gene	Genotype	Rare Allele	Result
ENPP1	Variant not found	T	
ENPP1	CC+	C	

GLP-1

Gene	Genotype	Rare Allele	Result
GLP1R	Variant not found	A	
INTERGENIC	TT+	T	

GLUT4

Gene	Genotype	Rare Allele	Result
SLC2A4	Variant not found	T	
SLC2A4	Variant not found	A	
SLC2A4	CC+	T	
SLC2A4	Variant not found	A,C	

GSK3

Gene	Genotype	Rare Allele	Result
GSK3B	AG+	A	

Glycation

Gene	Genotype	Rare Allele	Result
AGER	AT-	T	
AGER	Variant not found	G	
AGER	GG-	A	
AGER	Variant not found	T	
AGER	Variant not found	C	
GLO1	AA-	A,G	

Circulating Glycated Hemoglobin (HbA1c)

Gene	Genotype	Rare Allele	Result
FN3KRP	CT+	T	
FNDC5	Variant not found	G	
GCK	Variant not found	A	
GCK	AG-		
HK1	Variant not found	C	
INTERGENIC	Variant not found	G	
MYO9B	CC+	C	
SLC30A8	CC+	A,T	

Hyperinsulinemia

Gene	Genotype	Rare Allele	Result
HNF4A	CC+	T	
HNF4A	CC+	T	
KCNJ11	Variant not found	C,T	
KCNJ11	Variant not found	G	

Hypertension (High Blood Pressure)

Gene	Genotype	Rare Allele	Result
ACE	GG+	A	
ADD1	GT+	A,T	
ADD1	CG+	G,T	
ADD2	Variant not found	T	
AGT	Variant not found	A,T	
AGT	Variant not found	A	
AGT	CT-	G	
AGT	CT+	T	
AGTR1	Variant not found	T	
AGTR1	Variant not found	A,C	
AGTR1	AC+	C	
APOE4	TT+	C	
ATP2B1	AG+	G	
ATP6V1B1	Variant not found	T	
BAG6	TT-	G	
BCAT1	Variant not found	C	
BDNF	Variant not found	T	
BMPR1B	Variant not found	G	
BMPR1B	Variant not found	A	
BMPR1B	Variant not found	T	
BMPR2	Variant not found	A,T	
CALCA	Variant not found	G	
CASZ1	AA-	C	
CBS	Variant not found	A	
CBS	TT+	C	
CBS	GG-	T	
CBS	TT-	G	
CDCA3	CC+	T	
CLCN6	Variant not found	T	
CLCN6	Variant not found	A	
CLCN6	Variant not found	A,C,G	
CNNM2	TT+		
CYP11B2	CC-	G	
CYP17A1	Variant not found		
CYP1A1	AG-	T	
CYP4A11	Variant not found	G	
DAPK1	AC+	C	
EDN1	GT+	T	
EDNRA	Variant not found	G	
FGF21	CT-	A	
GPX1	Variant not found	A	
GRK4	AG-	T	
GRK4	GT+	T	
GUCY1A3	Variant not found	A,T	
GUCY1A3	Variant not found	T	
GUCY1A3	Variant not found		
HIVEP2	Variant not found	A,G,T	
HIVEP2	Variant not found		
IL-6	CG+	G	
INTERGENIC	Variant not found	A	
INTERGENIC	Variant not found	C	
INTERGENIC	Variant not found	T	
INTERGENIC	Variant not found	G	
INTERGENIC	Variant not found	A,T	
INTERGENIC	CC-	T	
ITGA11	CT+	C,G	
M6PR	Variant not found	G,T	
MACROD2	Variant not found	C	
MAOA	CC+	C	
MAOA	GG+	C	
MAOA	TT+	T	
MAOA	Variant not found	T	
MOV10	CC-	C,G	
MTHFR	GG-	G,T	
MTHFR	Variant not found	A	
MTHFR	AA-	G	

Gene	Genotype	Rare Allele	Result
MTHFR	TT-	A	
MTHFR	Variant not found	A,C	
MTHFR	Variant not found	A,G	
MTHFR	AA+	G	
MTRR	AA+	G	
MYBPC1	Variant not found	G	
MYO16	Variant not found	T	
NEDD4L	TT+	A,C	
NEDD4L	CT+	C	
NEDD4L	GG+	A	
NFE2L2	Variant not found	C	
NFE2L2	Variant not found	C,G	
NGF	CC-	A	
NGF	CT-	A	
NOS3	Variant not found	T	
NOS3	AG+	A,C	
NOS3	Variant not found	C,G,T	
NOS3	Variant not found	A,T	
NOV	CT+	T	
NPPA	Variant not found	G,T	
NR2F2-AS1	Variant not found	G	
NR3C1	Variant not found	C	
OPRM1	Variant not found	G	
OPRM1	CC+	G,T	
OPRM1	AA+	G	
PPARG	Variant not found	T	
PPARGC1A	AA-	T	
SHMT1	GG+	A	
STK39	Variant not found	T	
STK39	GT+	G	
TAP2	GG-	T	
TAP2	AA-	A,C,G	
TAP2	Variant not found	G	
TRPM6	Variant not found	C	
WSCD2	Variant not found	A	
WSCD2	CC+	C,G	

Hyperinsulinemic Hypoglycemia of Childhood (HHI)

Gene	Genotype	Rare Allele	Result
ABCC8	Variant not found	T	
ABCC8	Variant not found		
ABCC8	Variant not found	A	
ABCC8	Variant not found	G	
ABCC8	Variant not found	C	
ABCC8	Variant not found		
ABCC8	Variant not found	A	
ABCC8	Variant not found	C	
ABCC8	Variant not found		
ABCC8	Variant not found	G	
ABCC8	Variant not found		
ABCC8	Variant not found	A	
ABCC8	Variant not found	T	
ABCC8	Variant not found		
ABCC8	Variant not found	T	
ABCC8	Variant not found	C	
ABCC8	Variant not found	G	
ABCC8	Variant not found	C	
ABCC8	Variant not found		
ABCC8	Variant not found	C	
ABCC8	Variant not found	A	
ABCC8	Variant not found	A	
ABCC8	Variant not found	A	
ABCC8	Variant not found	T	
ABCC8	Variant not found	C	
ABCC8	GG-	A	
ABCC8	TT-	A	
ABCC8	CC-	A	
ABCC8	Variant not found	G	

Gene	Genotype	Rare Allele	Result
ABCC8	Variant not found	A	○
ABCC8	GG-	A	●
ABCC8	Variant not found	A	○
ABCC8	CC+	T	●
ABCC8	CC+	T	●
ABCC8	GG-	A	●
ABCC8	Variant not found		○
ABCC8	TT-	A	○
ABCC8	Variant not found	C	○
ABCC8	AA-	G	●
ABCC8	TT-	G	●
ABCC8	GG-	A	●
ABCC8	GG-	T	●
ABCC8	CC-	T	●
ABCC8	CC-	G	●
ABCC8	GG-	A	●
ABCC8	TT-	G	●
ABCC8	GG-	A	●
ABCC8	GG-	A	●
GCK	GG-	A,G,T	●
GCK	Variant not found	A	○
GCK	GG-	G,T	●
GCK	Variant not found	G	○
GCK	Variant not found	C	○
GCK	Variant not found	A,T	○
GCK	Variant not found	A	○
GCK	Variant not found	T	○
GCK	Variant not found	G	○
GCK	Variant not found	G,T	○
GCK	Variant not found	A	○
GCK	Variant not found	A	○
GCK	Variant not found	G	○
GCK	Variant not found	A	○
GCK	Variant not found	A	○
GCK	Variant not found		○
GCK	Variant not found	A	○
GCK	Variant not found	G	○
GCK	Variant not found	T	○
GCK	Variant not found	A	○
GCK	Variant not found	C	○
GCK	Variant not found	A	○
GCK	Variant not found	A	○
GCK	Variant not found	C	○
GCK	Variant not found		○
GCK	Variant not found		○
GCK	Variant not found	T	○
GCK	GG+	A	●
GCK	CC+	T	●
GCK	AG-		◐
GCK	CC-	A	●
GCK	TT-	A	●
GCK	Variant not found	C	○
GCK	Variant not found	A	○
GCK	---	A	○
GCK	---		○
GCK	Variant not found	G	○
GCK	Variant not found	C	○
GCK	AA-	T	●
GCK	AA-	T	●
GCK	Variant not found	C	○
GCK	GG-	T	●
GCK	CC-	T	●
GCK	Variant not found	A	○
GCK	CC-	A	●
GCK	Variant not found	G	○
GCK	GG-	A	●
GCK	TT-	C	●
GCK	GG-	T	●

Gene	Genotype	Rare Allele	Result
GCK	CC-	A	●
GLUD1	Variant not found	T	○
GLUD1	CC-	G	●
GLUD1	Variant not found	C	○
GLUD1	Variant not found	A	○
GLUD1	GG-	A	●
GLUD1	Variant not found	C	○
GLUD1	Variant not found	A	○
GLUD1	Variant not found	A	○
GLUD1	Variant not found	T	○
GLUD1	GG-	A	●
INSR	CC-		○
INSR	CC+		○
INSR	Variant not found		○
INSR	Variant not found	C	○
INSR	Variant not found	T	○
INSR	Variant not found	G	○
INSR	Variant not found	G	○
INSR	Variant not found	T	○
INSR	Variant not found	A	○
INSR	Variant not found	C	○
INSR	Variant not found	C	○
INSR	Variant not found	G	○
INSR	Variant not found	A	○
INSR	Variant not found	T	○
INSR	AA-	G	●
INSR	Variant not found	A	○
INSR	Variant not found	G	○
INSR	GG-	A	●
INSR	Variant not found		○
INSR	Variant not found	A	○
INSR	Variant not found	T	○
INSR	Variant not found	C	○
INSR	Variant not found	C	○
INSR	Variant not found	A	○
INSR	Variant not found	T	○
INSR	GG-	A	●
INSR	Variant not found	A	○
INSR	Variant not found	C	○
INSR	Variant not found	G	○
INSR	Variant not found	G	○
INSR	Variant not found		○
INSR	Variant not found		○
INSR	GG-	A	●
INSR	CC-	A	●
INSR	Variant not found	G,T	○
INSR	Variant not found	A	○
INSR	CT-		○
INSR	Variant not found		○
INSR	CT-		○
INSR	Variant not found		○
INSR	Variant not found	A	○
INSR	Variant not found		○
INSR	Variant not found		○
INSR	Variant not found		○
INSR	Variant not found		○
INSR	Variant not found		○
INSR	Variant not found	G	○
INSR	Variant not found	G	○
INSR	Variant not found	C	○
KCNJ11	Variant not found	A,T	○
KCNJ11	Variant not found	T	○
KCNJ11	AA-	G	●
KCNJ11	Variant not found	G	○
KCNJ11	Variant not found		○
KCNJ11	Variant not found	C,T	○
KCNJ11	TT-	C	●

Gene	Genotype	Rare Allele	Result
KCNJ11	Variant not found	C	○
KCNJ11	Variant not found	C	○
KCNJ11	Variant not found	G	○
KCNJ11	Variant not found	C	○
KCNJ11	Variant not found	A	○
KCNJ11	Variant not found	T	○
KCNJ11	Variant not found	G	○
KCNJ11	Variant not found	A	○
KCNJ11	Variant not found	C	○
KCNJ11	Variant not found	C	○
KCNJ11	GG-	A	●
KCNJ11	AA-	G	●
KCNJ11	Variant not found	A	○
KCNJ11	Variant not found	A	○
KCNJ11	GG-	A	●
KCNJ11	TT-	C	●
KCNJ11	Variant not found	T	○
KCNJ11	Variant not found	A	○
KCNJ11	GG+	A	●
KCNJ11	Variant not found	A	○
KCNJ11	TT+	T	○
KCNJ11	CC+	T	●
KCNJ11	CC-	G	●
KCNJ11	Variant not found	G	○
KCNJ11	AA-	C	●
KCNJ11	GG-	A	●
KCNJ11	Variant not found	A	○
KCNJ11	CC-	G	●
KCNJ11	TT-	C	●
KCNJ11	GG-	A	●
KCNJ11	GG+	A	●
KCNJ11	GG+	A	●
KCNJ11	Variant not found	C	○
KCNJ11	Variant not found	C	○
KCNJ11	GG-	A	●
KCNJ11	Variant not found	A	○
KCNJ11	Variant not found	A	○
KCNJ11	GG-	A	●
KCNJ11	Variant not found	G	○
KCNJ11	Variant not found	A	○
KCNJ11	Variant not found	C	○
KCNJ11	Variant not found	G	○
KCNJ11	Variant not found	C	○

INSR

Gene	Genotype	Rare Allele	Result
INSR	CC-	A	●

IRS-1

Gene	Genotype	Rare Allele	Result
IRS1	AA-	C	●
IRS1	Variant not found	G,T	○
IRS1	CC+	C	●

Leptin

Gene	Genotype	Rare Allele	Result
IL-1B	TT-	A	●
LEP	Variant not found	A	○
LEP	AA+	A	○
LEPR	AG+	G	●
LEPR	Variant not found	G	○
LEPR	TT-	A	●

Higher Insulin Fasting

Gene	Genotype	Rare Allele	Result
ARL15	Variant not found	A	○
PCSK1	CG-	G	●

Increased Risk of Alzheimer's in Diabetics (T2)

Gene	Genotype	Rare Allele	Result
AKT1	CC-	G	

Greater Insulin Sensitivity with Physical Exercise

Gene	Genotype	Rare Allele	Result
LIPC	CC+	T	

Waist Measure

Gene	Genotype	Rare Allele	Result
ADIPOQ	CC+	A,G,T	
APOA1	AA-	T	
APOE	CC+	T	
C5ORF67	Variant not found	T	
CCDC40	Variant not found	A	
CDH12	Variant not found	C	
CLOCK	TT-	G	
ELP4	Variant not found	A,T	
ESR1	CT+	C	
FTO	AA+	A	
FTO	GG+	A,G	
FTO	AA+	A	
GCH1	Variant not found	A	
GCKR	TT+	C	
GDAP1	Variant not found		
HMGCR	GG+	T	
IL-15	Variant not found	A,C	
IL-1A	CC-	A,C	
IL-1B	CC-	A	
INTERGENIC	Variant not found	A	
INTERGENIC	Variant not found	T	
INTERGENIC	Variant not found	A	
INTERGENIC	Variant not found	A	
INTERGENIC	TT-	G	
INTERGENIC	CC-	A	
INTERGENIC	Variant not found	C	
INTERGENIC	Variant not found	A	
INTERGENIC	Variant not found	T	
INTERGENIC	CC+	A,T	
INTERGENIC	CT-	A	
INTERGENIC	TT+	G	
KLF7	Variant not found	T	
MC4R	GG+	A	
MC4R	GG-	C	
MYO1B	Variant not found	C,G	
OVCH2	AA+	G	
PCSK1	AA-	C	
PCSK1	Variant not found	C	
PCSK1	CG-	G	
PER2	Variant not found	C	
PER2	Variant not found	C	
PLIN1	AG-	T	
PPM1L	CT+	T	
SH2B1	GG+	G,T	
SLC6A2	CG-	A,C	
SSTR2	Variant not found	G,T	
TXN	CT-	C	
UCP2	CC+	T	
UCP2	CC-	T	
UCP3	Variant not found	A,T	

Improved Insulin Resistance in Diets with More Protein

Gene	Genotype	Rare Allele	Result
NADSYN1	GT+	G	

Lower Insulin Secretion

Gene	Genotype	Rare Allele	Result
EXT2	Variant not found	T	

Gene	Genotype	Rare Allele	Result
GLP1R	GG+	A	
INTERGENIC	AG+	G	
INTERGENIC	AG+	A,T	
SLC30A8	CC+	A,T	

Less Use of Glucose After Intake of Carbohydrates

Gene	Genotype	Rare Allele	Result
PROX1	GG-	C	

Diabetic neuropathy

Gene	Genotype	Rare Allele	Result
ADIPOQ	TT+	C	
ADIPOQ	AA+	G	

Noradrenaline

Gene	Genotype	Rare Allele	Result
CYB561	Variant not found	G	
PNMT	AG+	A	

Adiponectin Levels

Gene	Genotype	Rare Allele	Result
ADIPOQ	GG+	A	
ADIPOQ	GG+	A	
ADIPOQ	Variant not found	C	
ADIPOQ	AA-	A	
ADIPOQ	GG+	A	
ADIPOQ	TT+	G	
FTO	GG+	A,G	

HDL Cholesterol Level

Gene	Genotype	Rare Allele	Result
ABCA1	Variant not found	A	
ABCA1	Variant not found	A	
ABCA1	AG-	A,C	
ABCA1	Variant not found	A	
ABCG8	GG+	T	
APOA4	TT+	A,C	
BUD13	GG-	G	
CETP	CT+	T	
CETP	AG+	A	
CETP	AG-	T	
CETP	AA+	A	
CETP	AA+	A,C	
CETP	CT-	A	
EDN1	GT+	T	
FADS2	CT+	T	
FTO	AA+	A	
HNF4A	CC+	T	
IL-6	CG+	G	
INTERGENIC	CC+	T	
INTERGENIC	AA+	G	
INTERGENIC	Variant not found	G,T	
INTERGENIC	GT-	A	
LIPC	CC+	T	
LIPC	GG+	G	
LIPG	CC+	C	
LPL	CT+	T	
LPL	TT+	G	
LPL	CC+	G	
LTA	CC+	T	
NUTF2	GG+	A	
PCIF1	Variant not found	C	
PLTP	Variant not found	T	
PPARD	AG-	T	
PPARD	CT+	T	
SCARB1	CT-	C	
TTC39B	GG-	C	
VWF	Variant not found	T	

Gene	Genotype	Rare Allele	Result
ZPR1	CC+	C	

Cholesterol Level (LDL)

Gene	Genotype	Rare Allele	Result
ABCA1	GG-	T	
ABCG8	TT+	G	
ABCG8	CC+	C	
ABCG8	GG+	T	
APOB	AG-	C	
APOB	CC-	A	
APOC1	AA+	G	
APOC3	GG-	G	
APOE	CC+	T	
AR	GG+	A	
BRCA2	CT+	C	
CELSR2	GT+	T	
CELSR2	AG-	T	
CELSR2	AC-	G	
CPS1	CC+	A	
CR1L	TT+	T	
DNAH11	TT+	C	
FABP2	Variant not found	A,C,G	
GPX1	Variant not found	A	
HMGCR	AA+	T	
HNF1A	TT-	A	
LDLR	GG+	T	
LDLR	CC+	T	
MAFB	CC+	T	
MMAB	Variant not found	G	
MTHFR	Variant not found	A,C	
MYRF	GT+	T	
NAF1	GG+	G,T	
NOS3	Variant not found	T	
PCSK9	TT+	A,C,G	
SCARB1	Variant not found	T	
SHBG	Variant not found	A	
SHBG	GG-	T	

Obesity

Gene	Genotype	Rare Allele	Result
AATK	CT+	C	
ACMSD	Variant not found	T	
ADCYAP1	CC-	G	
ADIPOQ	GG+	A	
ADIPOQ	Variant not found	A	
ADIPOQ	AA-	A	
ADRA2A	Variant not found	G,T	
ADRB2	CC+	C,T	
ADRB3	TT-	G	
ADSS	TT+	T	
AGRP	GG-	T	
AK8	Variant not found	A	
AKT1	GG-	C	
ALLC	Variant not found	C	
ANKAR	TT+	C	
ANKK1	CT-	A	
APOA1	Variant not found	T	
APOA2	CT-	A	
APOA4	TT+	A,C	
APOA5	AA+	T	
APOB	GG-	A,T	
APOE	CC+	T	
ARHGAP11A	Variant not found		
ARHGAP24	Variant not found	C,T	
ARMC4	Variant not found	C	
ARMC4	Variant not found	T	
ASIC2	Variant not found	C	
ASTN2	Variant not found	A	

Gene	Genotype	Rare Allele	Result
AUTS2	Variant not found	T	
AUTS2	Variant not found		
BDNF	AA+	C,G	
BDNF	TT+	G	
BDNF	GG-	T	
BDNF	TT+	C	
BDNF	GG+	G	
BICC1	AA+	G	
BICD1	Variant not found	C	
C2CD4C	AA+	A	
C8ORF34	CG+	A,G,T	
CA8	Variant not found	C,G	
CADM1	Variant not found	T	
CAMK2A	Variant not found	A,C	
CCDC33	Variant not found	A,C	
CCDC77	AG+	A,C	
CCK	CT-	G	
CD46	CC+	T	
CD46	Variant not found	C	
CDCA3	CC+	T	
CDHR3	AG+	A	
CELF2	Variant not found	C	
CLOCK	TT-	G	
CLOCK	Variant not found	G	
CLOCK	Variant not found	A	
CLOCK	Variant not found	T	
COL4A1	Variant not found	A,T	
COL4A1	CC-	A,G	
COLEC12	Variant not found	T	
CSMD1	Variant not found	C,G	
CTNNBL1	Variant not found	T	
CYP2E1	CC+	T	
CYP2E1	AA+	G	
CYP2E1	Variant not found	A,C,T	
DAPL1	CC+	C	
DDX60L	Variant not found	A,G	
DLC1	Variant not found	C	
DLG2	Variant not found	C	
DMRT1	Variant not found	T	
DOCK8	Variant not found	G	
DOCK8	GG+	C,T	
DOCK8	AA+	G	
ECT2	AG+	A	
EEPD1	GG+	A	
EHF	CC-	G,T	
EVA1A	TT+	C	
FABP2	Variant not found	A,C,G	
FAM129A	Variant not found	A,C	
FAM19A2	Variant not found	T	
FAM209B	TT+	T	
FAM71F1	AG+	A	
FARP1	CT-	G	
FLJ33534	GG+	A	
FSIP1	AA+	G	
FTO	Variant not found	G,T	
FTO	TT-	A,C	
FTO	AA+	A	
FTO	GG+	A	
FTO	CC+	C	
FTO	GG+	A,G	
FTO	TT+	T	
FTO	AA+	A	
FTO	GG+	G	
FTO	AA+	A	
FTO	AA+	A	
GABPB1	Variant not found	A	
GABPB1	Variant not found	T	
GCH1	Variant not found	C	

Gene	Genotype	Rare Allele	Result
GCH1	Variant not found	A,C,T	
GCH1	Variant not found	G	
GHRL	Variant not found	G	
GHRL	Variant not found	C	
GHRL	CC+		
GHRL	AA-	C	
GHRL	Variant not found		
GHRL	Variant not found	T	
GHRL	AT+	T	
GHRL	Variant not found	A,C	
GHRL	Variant not found	T	
GHSR	CC-	A	
GHSR	Variant not found	A	
GHSR	AA+	G	
GHSR	Variant not found	A	
GHSR	GG+	A	
GHSR	GG-	T	
GMDS	Variant not found	A	
GPC5	CT+	G,T	
GSG1L	CT+	C,G	
GSTM1	Variant not found	C	
HDAC9	CC+	T	
IFI16	Variant not found	T	
IFNGR2	Variant not found	A	
IL-1A	CC-	A,C	
IL-1B	CC-	A	
IL-1RN	Variant not found	C	
IL-6	Variant not found	A,G	
IL-6	CG+	G	
IL-6	AG+	G	
INSIG2	CC+	C	
INTERGENIC	GG+	A,G	
INTERGENIC	TT+	C	
INTERGENIC	CC+	T	
INTERGENIC	Variant not found	A,C	
INTERGENIC	CC+	G,T	
INTERGENIC	AA+	G	
INTERGENIC	Variant not found	T	
INTERGENIC	AA-	C	
INTERGENIC	CC+	C	
INTERGENIC	CC+	C	
INTERGENIC	TT+	T	
INTERGENIC	Variant not found	G	
INTERGENIC	CC+	C	
JDP2	Variant not found	A,T	
KCNB1	Variant not found	T	
KCNB1	Variant not found	C	
KCNMA1	CC-	C	
KIF6	CT-	G	
KIF6	GG+	A	
KIRREL	CC+	A	
KLF7	Variant not found	T	
LEP	Variant not found	A	
LEPR	Variant not found	C	
LEPR	Variant not found	G	
LEPR	AG+	G	
LEPR	CG+	C	
LEPR	Variant not found	G	
LEPR	TT+	C	
LGALS17A	GG+	A	
LHPP	GG+	A,C	
LINC00704	Variant not found	G	
LINC01299	TT+	A,T	
LINC01500	Variant not found	A,T	
LIPC	Variant not found	T	
LIPC	CC+	T	
LIPC	GG+	G	
LPP	GG-	C	

Gene	Genotype	Rare Allele	Result
LPP	Variant not found	A	
MC4R	Variant not found	G	
MC4R	AA+	G	
MC4R	GG+	A	
MC4R	TT+	C	
MC4R	TT+	G	
MDFIC	GG+	A	
MSRA	GG-	G	
NAT2	CC+	T	
NAT2	GG+	G	
NAT2	TT+	T	
NAT2	GG+	A	
NAT2	CC+	C	
NAT2	CC+	A,T	
NDUFA8	GG-	C	
NFE2L2	Variant not found	C,G	
NIPSNAP3B	AG-	T	
NLRP8	Variant not found	G	
NMNAT2	TT+	T	
NPM2	AG+	G	
NXPH1	AA+	G	
PCDH9	AA+	G	
PCSK1	AA-	C	
PFKP	GG+	A	
PIP4K2A	Variant not found	T	
PKNOX2	CC+	T	
PLEKHG1	Variant not found	A,T	
PLIN1	AG-	T	
POC5	TT+	G	
POC5	AA-	T	
POMC	Variant not found	A	
PPARG	Variant not found	A,G,T	
PPARG	CC+	C	
PPARG	CC+	T	
PPARGC1A	AA-	T	
PPARGC1B	Variant not found	C	
PPM1H	Variant not found	A	
PTPRD	Variant not found	A	
PTPRD	CC-	A	
PTPRN2	TT+	C	
PVALB	AG+	G	
PYY	Variant not found	C	
RAB17	GG-	T	
RASEF	AG+	A	
RBBP6	Variant not found	G	
RBFOX1	Variant not found	A	
RBFOX1	Variant not found	G	
RIC3	Variant not found	C,G	
RLN3	Variant not found		
RPTOR	Variant not found	G	
RSU1	GG+	A	
RYR2	Variant not found	G	
S100P	AA-	G	
SCG3	Variant not found	G	
SCG3	Variant not found	G,T	
SDC3	Variant not found	A,C	
SERPINA12	Variant not found	A	
SLC22A2	GG-	C	
SLC22A2	CC-	A,T	
SLC22A2	Variant not found	G,T	
SLC22A2	CC-	A,T	
SLC22A2	AA-	C,G	
SLC22A23	Variant not found	C	
SLC29A3	CT+	C,G	
SLC29A3	GG+	A	
SLC29A3	Variant not found	C	
SMYD3	CT+	A,T	
SNRPN	Variant not found	A,C	

Gene	Genotype	Rare Allele	Result
SOCS3	Variant not found	A	○
SORBS1	Variant not found	G	○
SPAG16	AA+	G	○
SPOCK3	AG+	G	○
STON2	AG+	A	○
SYT1	Variant not found	A	○
TBC1D1	CC+	A,T	○
TCF4	TT+	T	●
TCF4	AA+	C,G	●
TCF7L2	CC+	G,T	●
TM9SF2	AA+	A	○
TMEM18	TT+	C	○
TMEM229B	CC+	C	○
TMEM45B	CC+	T	○
TMOD1	AA-	T	○
TNFRSF1B	Variant not found	G	○
TPTE2P1	AC+	C,T	○
TRABD2B	Variant not found	G,T	○
TRAPPC9	CC-	A	●
TRIM66	TT+	C	○
TUB	Variant not found	C	○
UCP1	Variant not found	C	○
UCP2	CC+	T	●
UGT2B7	GG+	A,C,T	●
UGT2B7	Variant not found	C	○
UNC13A	AC+	C	●
UNC5C	Variant not found	G	○
VSIG10	AA+	G	○
WDPCP	Variant not found	G,T	○
WDPCP	Variant not found	T	○
WDR11-AS1	Variant not found	A	○
WDR11-AS1	Variant not found	A,C	○
WDR11-AS1	GT+	T	●
ZBTB46	Variant not found	G,T	○
ZNF536	AA-	C	○

Obesity in Adolescents

Gene	Genotype	Rare Allele	Result
LEPR	Variant not found	G	○
MTNR1B	CC+	G	●

PI3K

Gene	Genotype	Rare Allele	Result
PIK3R1	AG+	G	●
PIK3R1	Variant not found	T	○
PIK3R1	GG+	A	●
PIK3R1	CT+	C	●
PIK3R1	Variant not found	C	○
PIK3R1	Variant not found	T	○

C-reactive protein

Gene	Genotype	Rare Allele	Result
CRP	CT-	A	●
CRP	CT+	C	●
CRP	TT-	G	●
CRP	CC+	T	●
FTO	AA+	A	●

Weight Reduction in Liraglutide Treatment

Gene	Genotype	Rare Allele	Result
GLP1R	Variant not found	A	○

Resist

Gene	Genotype	Rare Allele	Result
RETN	Variant not found	G	○
RETN	AG+	A	●
RETN	Variant not found	A	○
RETN	Variant not found	C	○

Insulin Resistance

Gene	Genotype	Rare Allele	Result
ADIPOQ	GG+	A	
ADRB2	AA+	A	
APOA1	AA-	T	
APOC3	AG-	T	
APOC3	Variant not found	T	
C5ORF67	CC-	G	
ENPP1	CC+	C	
GRB14	CC+	C	
IL-6	CG+	G	
IRS1	Variant not found	G,T	
IRS1	CC+	C	
PLIN1	AG-	T	

Response to Metformin

Gene	Genotype	Rare Allele	Result
SLC22A1	GG+	C,G	
SLC22A1	AA+	A	
SLC2A2	AG-		
SLC47A1	AA+	A	
SRR	GG-	T	

Diabetic retinopathy

Gene	Genotype	Rare Allele	Result
PON1	Variant not found	C,G,T	

Risk of amputation in case of diabetic foot ulcer

Gene	Genotype	Rare Allele	Result
CXCL12	Variant not found	T	

Insulin Sensitivity

Gene	Genotype	Rare Allele	Result
C5ORF67	CC-	G	
GCG	AA-	C	
GRB14	CC+	C	

Wolfram Syndrome 1

Gene	Genotype	Rare Allele	Result
WFS1	GG+	T	
WFS1	GG+	A	
WFS1	CC+	T	
WFS1	CC+	G	
WFS1	II+	D	
WFS1	CC+	T	
WFS1	CC+	T	
WFS1	GG+	A	

Triglycerides

Gene	Genotype	Rare Allele	Result
ABCG8	GG+	T	
APOA5	Variant not found	A,T	
APOA5	TT-	A	
APOA5	GG+	A,C	
APOA5	AA+	T	
APOB	CC-	A	
APOE	CC+	T	
BUD13	GG-	G	
CILP2	GG+	T	
DOCK7	AC+	C,T	
FADS1	CT+	C	
FADS2	CT+	T	
FTO	GG+	A,G	
GCKR	TT+	C	
GCKR	AA-	C	
HMGCR	CC+	T	
INTERGENIC	Variant not found	C	
JMJD1C	Variant not found	T	
LDLR	GG+	T	

Gene	Genotype	Rare Allele	Result
LEPR	TT+	C	
LIPC	CC+	T	
LPL	AA-	A,C	
LPL	CT+	T	
LPL	TT+	G	
LPL	CC+	G	
LYPLAL1	AG+	G	
MLXIPL	Variant not found	A	
OR4A46P	AG+	A	
PCIF1	Variant not found	C	
PCSK9	Variant not found	G	
PHYHIP	Variant not found	A	
PPARG	CC+	C	
RAB11B	GG-	T	
SHBG	Variant not found	A	
SUGP1	TT+	C	
TBL2	CT+	T	
TMEM241	CT+	T	
TRIB1	AA+	T	
XKR6	GG+	A,T	
ZPR1	CC+	C	

P70S6K

Gene	Genotype	Rare Allele	Result
RPS6KB1	Variant not found	A	

Uric Acid (Concentration)

Gene	Genotype	Rare Allele	Result
ABCG2	GG-	T	
ABCG2	CC-	C,T	
ABCG2	GG+	A	
SLC2A9	TT+	T	

Insulinogenic Index

Gene	Genotype	Rare Allele	Result
ANK1	GG-	C	
GCG	AA-	C	
GRB14	CC+	C	
PROX1	GG-	C	

Quantitative Body Mass Index

Gene	Genotype	Rare Allele	Result
AGRP	GG-	T	
AGT	CT-	G	
APOA1	AA-	T	
APOA2	CT-	A	
APOA5	GG+	A,C	
CLOCK	Variant not found	T	
CTNNBL1	Variant not found	T	
FTO	Variant not found	G,T	
FTO	CC+	C	
FTO	AA+	A	
FTO	AA+	A	
FTO	CC+	C	
FUT2	Variant not found	A	
HIF1A	Variant not found	C	
HSD11B1	GG+	A	
INTERGENIC	Variant not found	C	
IRS2	Variant not found	T	
MC4R	Variant not found	C	
MC4R	GG+	A	
MC4R	TT+	C	
MC4R	GG-	C	
MC4R	TT+	G	
MC4R	GG+	A	
MTIF3	AA+	G	
MYO9B	CC+	C	
PCSK1	AA-	C	

Gene	Genotype	Rare Allele	Result
PCSK1	Variant not found	C	⚪
PCSK1	CG-	G	🟢
QPCTL	CC+	T	🔴
RIC3	Variant not found	C,G	⚪
TCF7L2	CC+	G,T	⚪
TNF	GG+	A	🔴
UCP1	TT+	C	🟡

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