UNLOCK YOUR GENETIC POTENTIAL

GENOMAX

GENE BASED WELLNESS PROGRAM

LET FOOD BE THY MEDICINE

KNOW YOUR BODY - TRANSFORM YOUR HEALTH

SHPL

www.myshpl.com

YOUR GENOMAX GENE BASED WELLNESS PROGRAM REPORT

SIMPLIFIED

WE MAKE READING, UNDERSTANDING AND INTERPRETING YOUR SHPL GENOMAX REPORT SIMPLE

CLIENT PROFILE

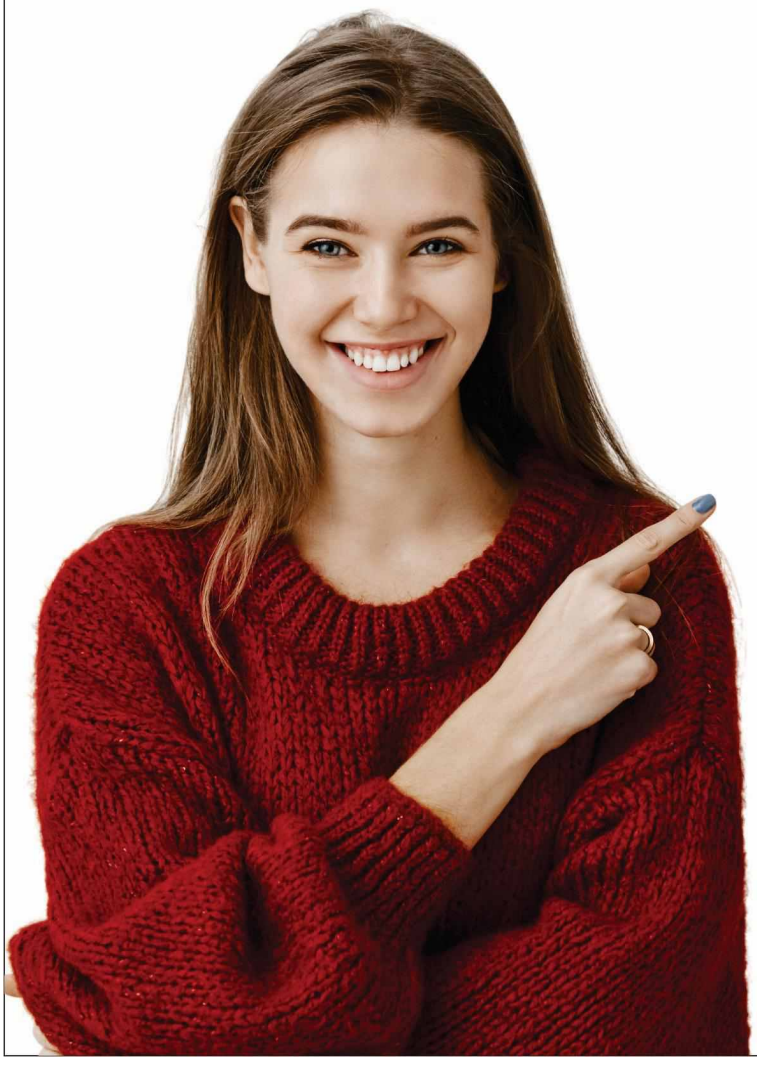
GENOMAX
GENE BASED WELLNESS PROGRAM

Sample Barcode Number	75101520
Clients Name	Sample Report
Gender	Female
Date of Birth	22-Feb-1974
Height(cm)	161.00
Weight(kg)	49.00
Sample Type	Saliva
Report Date	30-Jul-2022

SHPL GENOMAX SOP

GENOMAX
GENE BASED WELLNESS PROGRAM

PROVIDING COMPREHENSIVE GENE-BASED WELLNESS SOLUTIONS



01 **Buy SHPL Genomax DNA Testing Program**
(Simply Order Online & Get Your DNA Kit Home delivered within 4-7 working days)

02 **Give Your DNA Saliva Sample**
(Watch Multilingual DNA Saliva Sample Collection Process Video & follow all instructions)

03 **Send your Saliva Sample to SHPL Corporate Office in Mumbai**
(Use Self-Addressed Envelope in the DNA Kit)

04 **Get Your SHPL Genomax Report PDF**
(Within Min 21 Working Days from the Batch Date)

05 **Set Smart Health Goals for You**
(Fill-Up and Submit Your Health Form)

06 **Complete Your Genetic Counselling with our experienced Genetic Counselors**
(Choose between Voice Call or Video Call)

07 **Get Your Personalized Gene-Based Action Plan including Diet Plan**
(Make Necessary Dietary & Lifestyle Changes)

08 **Avail Wellness Help Desk Facility**
(Get Tele-Consultation for 12 Months)

WELCOME LETTER

GENOMAX
GENE BASED WELLNESS PROGRAM

Dear Sample Report,

Greetings of Genomic Wellness from Saarvasri Herbs Pvt Ltd.

On the onset, I would like to heartily congratulate you for embarking on a thrilling journey of genomic wellness. By opting for your genetic testing, you have given yourself an incredible opportunity to understand how your body works, what makes you different and what your genetic health risks are. With some truly incredible scientific insights, this genetic report of yours will be an eye opener for you, inspiring you to make smarter and healthier choices.

You may have noticed that our body constantly speaks to us through various symptoms. However, we usually tend to ignore them until something seriously goes wrong. And when the situation becomes serious, we rush to the nearest medical doctor seeking instant relief and are willing to spend any amount of money. What we do not realize is that such situations are a manifestation of lack of sustained attention to our food habits, physical activities, sleeping patterns and erratic lifestyle, which we probably could have avoided.

You are unique. One-size-fits-all is a thing of the past. Saarvasri Herbs Pvt Ltd. has bought to you by SHPL Genomax that not only predicts the root cause of many of your existing ailments but also predicts genetic risks for various probable health conditions. What's more, we offer you scientifically backed personalized wellness solutions to experience good health and happiness, making it a truly value-for-money wellness program.

Over 10,000 health-conscious individuals & families including political leaders, bureaucrats, corporate executives, Bollywood & television celebrities, businesspersons, healthcare professionals, medical doctors, alternative therapists, nutritionists, dieticians, home makers, students and children across India have already opted for Welocity Genetics DNA Testing Program.

Our highly qualified and experienced team or genetic officers, bioinformaticians and genetic counsellors-cum-nutritionists from Sanger Genomics, Welocity Genetics and Saarvasri Herbs Pvt Ltd. have put in their best efforts to explore the latest scientific research and curate some of the world's best genetic insights in your DNA report.

Read through and understand your genetic report as much as you can and leave the rest to our Nutrigenomics Counsellors-cum-Nutritionists to interpret it for you. All that you need to do is simply follow their valuable advice meticulously to discover a newer you.

We wish you a healthy and happy life.

Mr. Gopal Kundu
Chairman & Managing Director
Saarvasri Herbs Pvt Ltd

Mr. Stan Serrao
Chairman & Managing Director
Welocity Life Sciences Pvt Ltd

Mr. Milind Doshi
Chief Product Officer
Welocity Life Sciences Pvt Ltd

HOW TO READ THIS REPORT?

GENOMAX
GENE BASED WELLNESS PROGRAM

A quick guide to help you read, understand and interpret this report correctly.

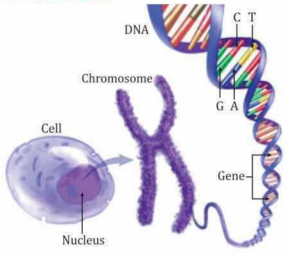
Genetic sequencing of an individual can generate up to 1 TB (Terabyte)of raw genetic data. To assess an individual's genetic risk, we take into account multiple factors such as relationship of genetics and genomics towards health, prevention, screening, treatment and monitoring. Saarvasri Herbs Pvt Ltd, in collaboration with Welocity Genetics focuses on specific and unique genetic codes using an indigenously developed complex algorithm based on the Indian genetic database of diverse ethnic population. These genetic codes are essentially linked to key phenotypes that are of significant concern of the modern society. We carefully analyze your genetic data to help you not only understand your genetic build-up but also to help you make necessary and possible modifications towards a healthier tomorrow.

So, before we get to know how to read this report, here's a quick introduction to genetics. Once you'vegot an understanding of the basics of genetics, you'll be all set to make the best use of your resultsand apply them to make the lifestyle changes that are right for you.

Genetics

The scientific study of biological mechanisms that switches genes on and off.

Genes



A gene is a small and a specific segment of your DNA. Each gene containsinstructions for your body to make the thousands of different types of proteins it needs, to function.Each gene has a specific role. As mentioned earlier, at Saarvasri Herbs Pvt Ltd, we are focusing on specific genes that affect multiple factors around your well-being and day-to-day health.

HOW TO READ THIS REPORT?

GENOMAX
GENE BASED WELLNESS PROGRAM

Genotype

Genotype is a set of genes an organism carries. Since every gene has a unique version, you may have a different genetic response or a particular trait based on the genotype you carry.

Full color: CC, Cc^{ch}, Cc^{h}, or Cc

Chinchilla: $c^{ch}c^{h}$, $c^{ch}c^{ch}$, or $c^{ch}c$

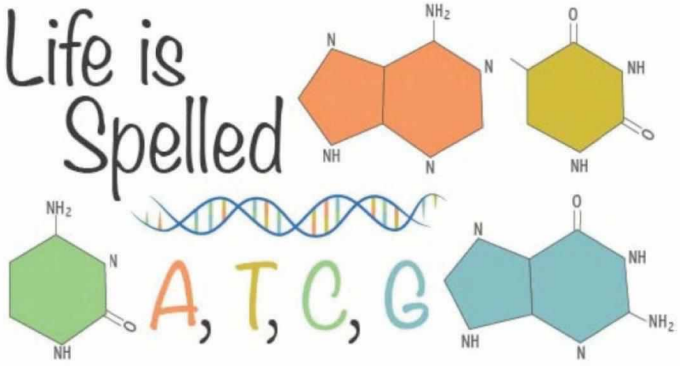
Himalayan: $c^{h}c$ or $c^{h}c^{h}$

Albino: cc

Phenotype

Phenotype is the physical expression or observable characteristics of a particular genotype. Phenotypes are influenced by genotype and also by the environment.

Alleles



Each gene is comprised of a specificvariant and these are represented by a combination of 4 letters namely A, T, C & G. These letters are called alleles. They are tiny specific variants of a gene.

Understanding Genetic Codes and Variants

The genetic code is the set of rules by which information encoded in the genetic material (DNA) is translated into functional proteins by living cells. The complete length of an individual's DNA within a cell is called the genome. Genetic codes are primarily responsible for the wellness of our genome. Variations in genetic code make us unique from others. These alterations are often healthy but may predispose us towards risk of varied health conditions.

Your Risk Indicators

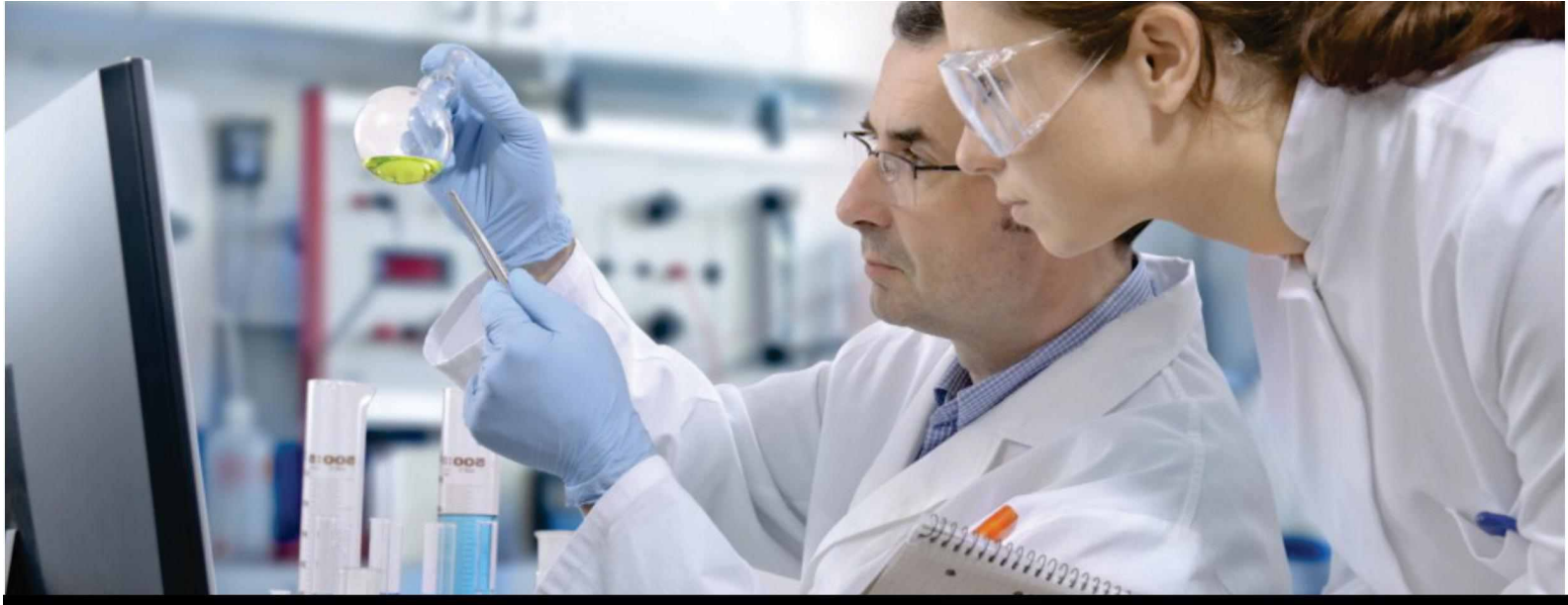
Risk indicators are critical predictors for your various health conditions. In this report, we determine your genetics risk or predisposition to various condition and/or disease ashaving low risk, normal risk and high risk as follows:

Normal Risk

Low Risk

Moderate Risk

High Risk



AUTHENTICITY CERTIFICATE

GENOMAX
GENE BASED WELLNESS PROGRAM

GENOMAX
GENE BASED WELLNESS PROGRAM

LAB CERTIFICATIONS

ALL SAMPLES ARE TESTED IN AN
NABL ACCREDITED LABORATORY

AUTHENTICITY CERTIFICATE

GENOTYPING
TECHNOLOGY FROM
USA

BIOINFORMATICS &
GENETICS ANALYSIS FROM
INDIA

WE ARE FIERCELY DEDICATED TO DELIVERING CUTTING EDGE GENETIC RESEARCH AND BREAKTHROUGHS IN AN AUTHENTIC REPORT.

M.D

MILIND DOSHI
CHIEF EXECUTIVE OFFICER
SANGER GENOMICS PVT. LTD.

P.D

DR. POOJA DOSHI (MBBS)
CHIEF MEDICAL OFFICER
SANGER GENOMICS PVT. LTD.

GENOMAX
GENE BASED WELLNESS PROGRAM

YOUR RESULTS SUMMARY

SR. NO.	PHENOTYPE	YOUR RESULT		PAGE NO.
YOUR HEART HEALTH				
1	Cholesterol and Lipid Profile		Typical Risk	24
2	Hypertriglyceridemia risk		Increased	25
3	Triglyceride Response to PUFA (EPA)		Normal Response	26
4	Hypertension Risk		Moderate Risk	27
5	Impact of Tobacco and Nicotine Containing Products		Low Risk	28
6	Blood Pressure Response to a Non Drug Approach (Hypertention Reversal)		Neutral response to non drug targeted therapy	29
7	Hyperlipoproteinemia Type III		Neutral risk	30
8	Hyperhomocysteinemia		Moderate	31
9	Atherosclerosis Risk		Neutral	32
10	Myocardial Infarction		Increased Risk (OR:1.275)	33
11	Left Ventricular Hypertrophy		Low Risk	34
12	Atrial Fibrillation		Low Risk	35
13	Coronary Artery Disease Risk		Incresed Risk (OR:1.22)	36

GENOMAX
GENE BASED WELLNESS PROGRAM

YOUR RESULTS SUMMARY

SR. NO.	PHENOTYPE	YOUR RESULT		PAGE NO.
28	Impact of Stress on Diabetic Nephropathy		Low Risk	51
29	Risk of Diabetic Neuropathy		Low Risk	52
30	Impact of Tobacco and Alcohol		Low Risk	53
31	Risk of Foot Ulcers		Low Risk	54
ORGAN HEALTH MANAGEMENT				
32	Gall Stone Predisposition		Increased Risk (OR:1.96)	55
33	Inflammatory Bowel Disease (Ulcerative Colitis)		Typical Risk	56
34	Alcoholic Liver Disease		Increased Risk (ALD-Cirrhosis, OR: 2.09)	57
35	Non-Alcoholic Fatty Liver Disease (NAFLD)		Neutral	58
36	NAFLD Mitigation and - Choline Deficiency		Neutral	59
37	Tendency of Developing Liver Cirrhosis		Moderate Risk	60
38	Requirement of Fat in Liver Cirrhosis		Moderate Risk	61
39	Impact of Alcohol On Liver Cirrhosis		High Risk	62
40	Risk of Hyperuricemia		Typical Risk	63
41	Glaucoma Risk		Typical Risk	64
42	Risk of Cataract		Moderate Risk	65

GENOMAX
GENE BASED WELLNESS PROGRAM

YOUR RESULTS SUMMARY

SR. NO.	PHENOTYPE	YOUR RESULT		PAGE NO.
DIABETES MANAGEMENT				
14	Type 2 Diabetes risk (Insulin Sensitivity		Moderate Risk	37
15	HbA1c Response to Fiber		Highly Beneficial	38
16	Insulin Resistance Response to Whole Grain		Whole grain beneficial for insulin resistance	39
17	Glucose Tolerance to Dietary Fat		Neutral Risk	40
18	Ketogenic Diet (High Fat Diet) & Type 2 Diabetes risk		Neutral Risk	41
19	Dinner Timing & Type 2 Diabetes Risk		Normal with Late Dinner Time	42
20	Type 1 Diabetes		Low Risk	43
21	Tendency of Insulin Resistance		Low Risk	44
22	Impact of Smoking		Low Risk	45
DIABETES ASSOCIATED COMPLICATIONS				
23	Risk of Diabetic Retinopathy		high risk	46
24	Risk for Diabetic Cataract		Low Risk	47
25	Impact of Tobacco and Smoking on Diabetic Cataract		Low Risk	48
26	Risk of Diabetic Nephropathy		Low Risk	49
27	Impact of Tobacco and Smoking on Diabetic Nephropathy		Low Risk	50

GENOMAX
GENE BASED WELLNESS PROGRAM

YOUR RESULTS SUMMARY

SR. NO.	PHENOTYPE	YOUR RESULT		PAGE NO.
43	Age Related Hearing Loss		Increased Risk (2x)	66
44	Gum Disease (Periodontitis)		Typical Risk	67
THYROID RISK MANAGEMENT				
45	Hypothyroidism		Increased risk	68
46	Requirement of Iodine Intake		Low Risk	69
47	Impact of Alcohol and Smoking On Hypothyroidism		Low Risk	70
48	Hashimoto's Thyroiditis		Neutral Risk	71
49	Grave's Disease		Neutral Risk	72
KIDNEY HEALTH MANAGEMENT				
50	Risk of CKD		High Risk	73
51	Requirement of Sodium and Potassium Intake		High Risk	74
52	Requirement of Fluid Intake		High Risk	75
53	Tendency of Alcohol Sensitivity		Low Risk	76
54	Tendency of Alcohol Flush		Low Risk	77

GENOMAX
GENE BASED WELLNESS PROGRAM

YOUR RESULTS SUMMARY

SR. NO.	PHENOTYPE	YOUR RESULT		PAGE NO.
NEUROLOGICAL HEALTH MANAGEMENT				
55	Risk of Parkinson's Disease (Early Onset)		Neutral	78
56	Alzheimer's Disease		Increased risk	79
57	Vascular Dementia		Neutral	80
58	Requirement of Anti-Inflammatory Food		High Risk	81
59	Requirement of Flavonoids		Moderate Risk	82
60	Impact of Alcohol and Caffeine		Low Risk	83
61	Response to Pesticide Exposure		Elevated Toxicity Risk	84
62	Risk of Migraine (with aura)		Higher risk for migraine with aura	85
63	Impact of Caffeine and Alcohol (On Migraine)		Low Risk	86
64	Impact of Cheese on Migraine		Moderate Risk	87
65	Septic Shock		Neutral Risk	88
66	Pain Sensitivity		Increased Risk	89
MENTAL HEALTH & PERSONALITY DISORDER RISK MANAGEMENT				
67	Autism Risk		Increased Risk (2.79x)	90
68	Schizophrenia Risk		Moderate risk	91

GENOMAX
GENE BASED WELLNESS PROGRAM

YOUR RESULTS SUMMARY

SR. NO.	PHENOTYPE	YOUR RESULT		PAGE NO.
69	ADHD (Attention Deficit Hyperactivity Disorder)		Lower risk for ADHD	92
70	Tendency of Panic Disorder		High Risk	93
71	Requirement of Sleep (Panic Disorder)		High Risk	94
72	Requirement of Exercise (Panic Disorder)		High Risk	95
73	Impact of Medication (Panic Disorder)		High Risk	96
74	Caffeine Intake (Panic Disorder)		High Risk	97
75	Impact of Alcohol (Panic Disorder)		High Risk	98
76	Impact of Smoking (Panic Disorder)		High Risk	99
77	Personality Disorder (Antisocial)		Lower risk	100
REPRODUCTIVE HEALTH MANAGEMENT				
78	Polycystic Ovarian Syndrome (PCOS) Risk		High Risk	101
79	Neural Tube Defect Risk in Offspring		Normal risk of neural tube defect in offspring	102
80	Adverse Pregnancy Outcomes with Prenatal Caffeine Intake		Higher risk for adverse pregnancy outcome with high prenatal caffeine intake	103
81	Risk for Spot Baldness in Females (Alopecia Areata)		Higher risk for Alopecia areata	104

GENOMAX
GENE BASED WELLNESS PROGRAM

YOUR RESULTS SUMMARY

SR. NO.	PHENOTYPE	YOUR RESULT	PAGE NO.
WEIGHT MANAGEMENT			
82	Obesity Risk	High Risk	105
83	Impact of Alcohol on Obesity	Low Risk	106
84	Satiety	Less Likely to Overeat	107
85	Response to Dieting	Low responder to dieting	108
86	Ideal Weight Loss Diet	Sensitive to Fats and Normal Sensitivity to Carbs	109
87	Weight Regain Risk	Normal Risk	110
88	Adiponectin Level	Low Levels	111
89	Appetite Response to Ginger Supplementation	Ginger supplement is not beneficial	112
90	BMI Response to PUFA	More Beneficial	113
91	Tendency of Snacking Between Meals	Increased Tendency for Snacks Containing High Energy Density	114
92	BMI Response to MUFA	Limit Intake	115
93	Desire for Food	Less Likely to Emotional Binge	116

GENOMAX
GENE BASED WELLNESS PROGRAM

YOUR RESULTS SUMMARY

SR. NO.	PHENOTYPE	YOUR RESULT		PAGE NO.
INFLAMMATION MANAGEMENT				
94	Risk of Inflammation		Lower	117
95	Tendency of Skin Allergy		High Risk	118
96	Rheumatoid Arthritis		Moderately High Risk (IL1A, OR: 1.17)	119
97	Tendency of Osteoarthritis		High Risk	120
98	Allergic Rhinitis Risk		Normal	121
99	Risk of Asthma		Typical Risk	122
100	Pancreatitis		Increased	123
101	Chronic Obstructive Pulmonary Disease		Neutral	124
DNA DAMAGE RISK & OXIDATIVE STRESS				
102	DNA Damage & Toxicity Risk from Eating Tandoori Food		Higher risk for DNA Damage & Toxicity	125
103	Lifespan and Longevity		Increased Lifespan	126
104	Tendency of Oxidative Stress		Low Risk	127
105	Requirement of Antioxidants		Low Risk	128
106	Requirement of Sunscreen		Low Risk	129
107	Impact of Alcohol and Smoking on Oxidative Stress		Low Risk	130

GENOMAX
GENE BASED WELLNESS PROGRAM

YOUR RESULTS SUMMARY

SR. NO.	PHENOTYPE	YOUR RESULT		PAGE NO.
108	Impact of Radiation and Pollution on Oxidative Stress		Low Risk	131
109	Tendency of Detoxification		Moderate Risk	132
110	Impact of Smoking and Alcohol on Detoxification Process		Moderate Risk	133
SKIN HEALTH MANAGEMENT				
111	Risk of Developing Acne		High Risk	134
112	Risk of Sunburns		Low Risk	135
113	Risk of Sun Spots		Low Risk	136
114	Tanning Ability		Low Risk	137
115	Tendency of Psoriasis		Low Risk	138
116	Nutritional Requirement for Psoriasis Management		Low Risk	139
117	Risk of Developing Eczema		High Risk	140
118	Risk of Vitiligo		High Risk (2.23x OR)	141
119	Requirement of Vitamin D for Vitiligo		Low Risk	142
120	Impact of Gluten on Vitiligo		Moderate Risk	143
121	Pemphigus Folaceous		Low Risk	144

GENOMAX
GENE BASED WELLNESS PROGRAM

YOUR RESULTS SUMMARY

SR. NO.	PHENOTYPE	YOUR RESULT	PAGE NO.
BIOLOGICAL CLOCK MANAGEMENT			
122	Time of Exercise	Moderate Risk	145
123	Time of Metabolism	Moderate Risk	146
124	Time of Carbohydrate Intake	Moderate Risk	147
125	Tendency of Morning Fatigue	Moderate Risk	148
126	Tendency of Sleep Disorder	Moderate Risk	149
MODERN MEDICINE EFFICACY			
127	Metformin Response	Reduced Methylation	150
128	Response to Pioglitazone Treatment in Type 2 Diabetes	Higher responder to pioglitazone treatment	151
129	Response to Sulfonylureas treatment in Type 2 Diabetes	Typical Efficacy	152
130	Response to Statin Use	Weaker response to Atorvastatin	153
131	Warfarin response	Normal warfarin metabolism	154
132	Response to Antidepression Medication (Paroxetine)	Typical Efficacy	155
133	Therapeutic Response to Rheumatoid Arthritis Medication	Increased response and lower risk of side effects to methotrexate.	156
DEPRESSION AND ADDICTION RISK MANAGEMENT			
134	Dopamine Metabolism	Greater breakdown	157

GENOMAX
GENE BASED WELLNESS PROGRAM

YOUR RESULTS SUMMARY

SR. NO.	PHENOTYPE	YOUR RESULT		PAGE NO.
135	Depression risk		Typical Risk	158
136	Impact of Alcohol on Depression		Low Risk	159
137	Requirement of Sleep (Depression)		Low Risk	160
138	Requirement of Exercise (Depression)		Low Risk	161
139	Anxiety Disorder Risk		Lower risk of increased nervousness / anxiety after caffeine intake	162
140	Alcohol Dependency		Lower risk for alcohol dependence	163
141	Addiction Towards Drugs		Lower risk for cocaine addiction	164
142	Addiction towards smoking		Lower risk	165
VITAMIN DEFICIENCY MANAGEMENT				
143	Vitamin A Deficiency		Elevated Risk	166
144	Vitamin B2 Deficiency		Moderate Risk	167
145	Vitamin B6 Deficiency		Moderate risk	168
146	Vitamin B9 Deficiency		Moderate Risk	169
147	Vitamin B12 Deficiency		High Risk	170
148	Vitamin C Deficiency		Lower Risk	171
149	Vitamin D Deficiency		High Risk	172

GENOMAX
GENE BASED WELLNESS PROGRAM

YOUR RESULTS SUMMARY

SR. NO.	PHENOTYPE	YOUR RESULT	PAGE NO.
150	Response to Vitamin E Deficiency	Increased risk for Abdominal Obesity with low vit.E levels	173
MINERAL DEFICIENCY MANAGEMENT			
151	Calcium Requirement	Higher Risk	174
152	Iron Deficiency	Elevated Risk	175
153	Tendency of Magnesium Metabolism	Moderate Risk	176
154	Requirement of Magnesium Nutrient	Moderate Risk	177
155	Risk of Magnesium Deficiencies	Moderate Risk	178
156	Tendency of Vitamin K Metabolism	High Risk	179
157	Requirement of Vitamin K Nutrient	High Risk	180
158	Risk of Vitamin K Deficiencies	High Risk	181
159	Tendency of Selenium Metabolism	Low Risk	182
160	Requirement of Selenium Nutrient	Low Risk	183
161	Tendency of Antioxidant Metabolism	Low Risk	184
162	Requirement of Antioxidants	Low Risk	185
163	Tendency of Copper Metabolism	High Risk	186

GENOMAX
GENE BASED WELLNESS PROGRAM

YOUR RESULTS SUMMARY

SR. NO.	PHENOTYPE	YOUR RESULT		PAGE NO.
164	Requirement of Copper		High Risk	187
165	Tendency of Zinc Metabolism		Moderate Risk	188
166	Requirement of Zinc		Moderate Risk	189
FOOD INTOLERANCE MANAGEMENT				
167	Gluten Intolerance		High Risk	190
168	Impact of Gluten Products		Moderate Risk	191
169	Risk for Developing Celiac Disease		Moderate Risk	192
170	Lactose Intolerance		Higher risk	193
171	Blood Pressure and Heart Attack Response to Caffeine		Low Risk	194
172	Tendency of Caffeine Induced Obesity		Low Risk	195
173	Tendency of Salt Metabolism		High risk	196
174	Blood Pressure Response to Sodium (Salt Sensitivity)		Increased sensitivity to salt and higher risk for high blood pressure with too much salt intake.	197
EXERCISE REGIMEN				
175	Ideal Exercise Strategy		High Intensity Exercise	198
176	Power / Endurance Athlete		Advantage in endurance oriented sports.	199
177	Requirement of Training Session for Improving Lactate Threshold		High Risk	200

GENOMAX
GENE BASED WELLNESS PROGRAM

YOUR RESULTS SUMMARY

SR. NO.	PHENOTYPE	YOUR RESULT		PAGE NO.
178	Requirement of HIIT (High Intensity Interval Training)		High Risk	201
179	Requirement of Foods to Improve Aerobic Capacity		Low Risk	202
180	Body Odor (Axillary Osmidrosis)		Moderate Risk	203
181	Training Required to Improve Endurance		Low Risk	204
182	Endurance Response to Caffeine and Other Supplements		Low Risk	205
183	Ideal Weight Maintenance Strategy		Low Protein and Low Calorie Diet	206
184	Cold Tolerance		High Tolerance	207
185	Requirement of Training to Improve Power		High Risk	208
186	Requirement of Nutritional Supplements		Moderate Risk	209
187	Avoiding Inflammatory Foods		High Risk	210
188	Motivation to Exercise		Enhanced Motivation	211
189	Exercise Associated Inflammation risk		Low risk	212
190	Exercise Recovery Time		Typical Recovery Time	213
INJURY RISK MANAGEMENT				
191	Acl Injury		Lower Risk	214

GENOMAX
GENE BASED WELLNESS PROGRAM

YOUR RESULTS SUMMARY

SR. NO.	PHENOTYPE	YOUR RESULT		PAGE NO.
192	Risk of Muscle Injury		Low Risk	215
193	Risk for Tennis Elbow		Low Risk	216
194	Achilles Tendinopathy		Normal	217
195	Acute Ankle Sprain		Increased risk	218
196	Requirement of Antioxidants to Prevent Injury		Low Risk	219
197	Prevalence of falls in elderly people		High Risk	220
198	Risk of Intervertebral Disc Degeneration		Increased (OR: 1.31)	221
199	Susceptibility to knee injury		Lower Susceptibility	222
200	Osteoporosis (Bone Mineral Density)		Neutral Risk	223

GENOMAX GENE BASED WELLNESS PROGRAM

1. Cholesterol and Lipid Profile

Your Genetic Result

Your Risk / Response

TYPICAL RISK

Gene(s) Analysed

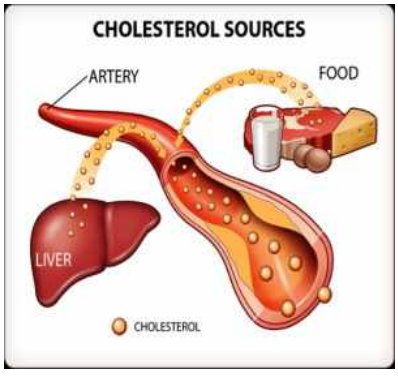
APOB

Risk / Response Variant(s) Presence

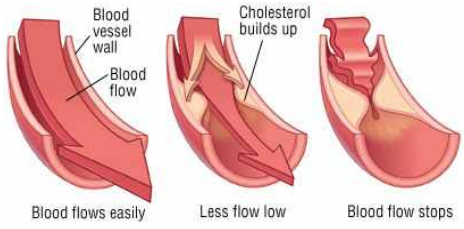
NO

Impact of Genotype(s)

Typical levels of LDL, TG, & APOB



NEUTRAL!



Are you genetically predisposed to bad lipid profile/increased cholesterol? disorder caused or exacerbated by uncontrolled diabetes mellitus, obesity, and sedentary habits. In epidemiologic and interventional studies, hypertriglyceridermia is a risk factor for coronary artery disease(CAD). Hypertriglyceridemia is usually asymptomatic until triglycerides are greater than 1000-2000 mg/dl. Dyslipidlaemia is elevation of plasma cholesterol, triglycerides (TGs), or both, or a low high-density lipoprotein level that contributes to the development of atherosclerosis. Causes can be primary (genetic) or secondary. Diagnosis is by measuring plasma levels of total cholesterol, TGs, and individual lipoproteins. Treatment involves dietary changes, exercise, and lipid-lowering drugs.

Dyslipidaemia is one of the most important risk factors for Coronary heart disease and accounts for at least 50% of the population-attributable risk. Dyslipidaemia is characterized by increased levels of apolipoprotein (APO) B, triglycerides (TG), total cholesterol (TC) and low-density lipoprotein cholesterol (LDL-C), and/or decreased levels of APOAI and high-density lipoprotein cholesterol (HDL-C) in circulation. Apolipoprotein B is one of the main carriers of LDL cholesterol throughout the body and into the cells. Genetic variants in the APOB gene can lead to high LDL levels and an increased risk of heart disease. Your results in this report are based on a meta analysis of sixty-studies and (50,018) subjects.

RESEARCH RECOMMENDATIONS

- Avoid high-saturated fat diets.
- Live an active lifestyle, and avoid excess exercise that can increase cardiovascular morbidity.
- Avoid smoking to stay healthy.

GENOMAX
GENE BASED WELLNESS PROGRAM

2. Hypertriglyceridemia risk

Your Genetic Result

Your Risk / Response

INCREASED

Gene(s) Analysed

APOE(1) - APOE(2)

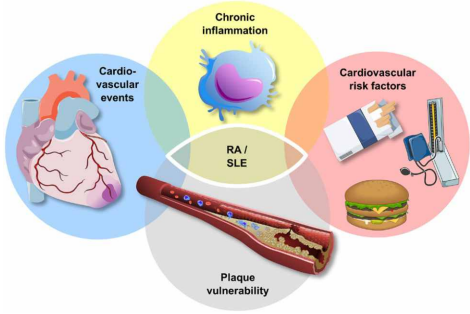
Risk / Response Variant(s) Presence

YES

Impact of Genotype(s)

Have significant association with high triglyceride levels. However the triglyceride levels in APOE risk carriers were lowered on diets after supplementation with 3.45 grams/day DHA fish oil.

PAY ATTENTION!



Hypertriglyceridemia denotes high blood levels of triglycerides, the most abundant fatty molecule in most organisms. The Metabolic Syndrome is a cluster of metabolic abnormalities and cardiovascular risk factors that are highly heritable and polygenic. FABP2 and PPARG polymorphisms have been associated with Hypertriglyceridemia.

Hyperlipidemia (HL) is an umbrella term referring to several acquired or genetic disorders that result in high level of lipids circulating in the blood. One of the disorders categorized under HL is hypertriglyceridemia (HT), which, more specifically, describes elevated levels of triglycerides (TGs), the most abundant lipid in the human body. HT is strongly associated with atherosclerosis, even in the absence of hypercholesterolemia, and diabetes mellitus. Contemporary research also identifies HT as one of the most potent risk factors for coronary artery disease. These findings sparked the interest of many researchers into better understanding the hereditary and environmental factors that contribute to development of HT among patients.

Certain APOE risk variant carriers generally have high triglyceride levels on both a low fat (28% fat, 8% saturated fat) and high fat diet (38% fat, 18% saturated fat) compared to people without the risk variant. This gene has also been widely investigated as a potential modulator of the plasma lipid response to altered dietary fat composition.

Associated Symptoms	Associated Diseases
• Gastrointestinal pain. • Difficulty breathing. • Memory loss. • Dementia. • Xanthelasmas - yellowish deposits of fat on or around the eyelids.	• Cardiovascular disease. • Obesity. • Insulin resistance. • Diabetes. • Hypertension. • Hyperuricemia.

RESEARCH RECOMMENDATIONS

- Strictly reduce the intake of Saturated fats like processed and packaged foods, esp. burger, fries, ready-to-eat foods, bakery items loaded with hydrogenated fat, fatty dressings, mayonnaise etc., to reduce the risk of Hypertriglyceridemia.
- Reduce the intake of sugary foods and beverages.
- Exercise reduces the risk of Hypertriglyceridemia.
- Fish oil has been studied to be really beneficial in helping you lower your triglyceride levels.

GENOMAX GENE BASED WELLNESS PROGRAM

3. Triglyceride Response to PUFA (EPA)

Your Genetic Result

Your Risk / Response

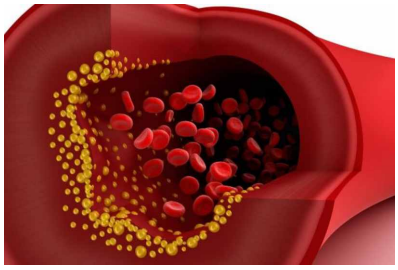
NORMAL RESPONSE

Gene(s) Analysed

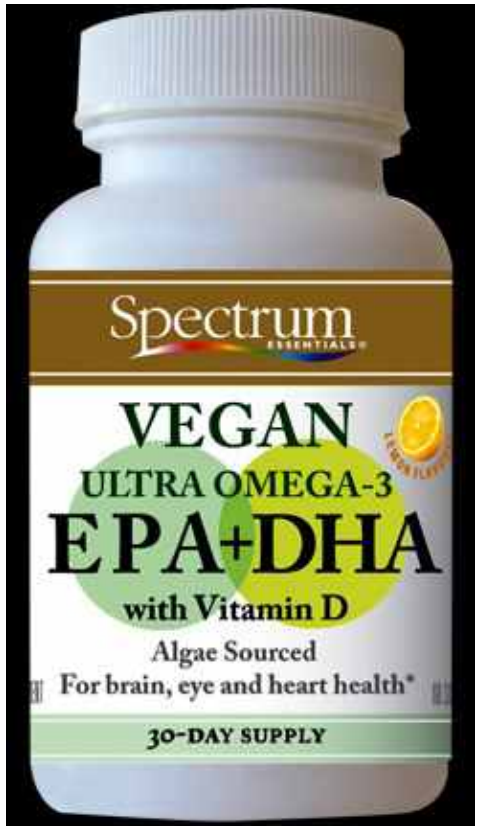
FABP2

Risk / Response Variant(s) Presence

NO



NEUTRAL



Dietary fat comes from both animal and plant foods. Fats supply calories, help you absorb certain vitamins and provide essential nutrients that your body needs to function. All foods that are rich in fat contain a mix of different fats, one of which is polyunsaturated fat. Polyunsaturated fats are usually liquid at room temperature and are referred to as "oils." They're found mostly in fatty fish, plant-based oils, seeds and nuts.| **What Are Polyunsaturated Fats?|** There are two main types of fats, saturated and unsaturated. A saturated fat has no double bonds in its chemical structure, whereas an unsaturated fat has one or more double bonds. If a fat molecule has one double bond, it's called a monounsaturated fat, but if it has more than one, it's called a polyunsaturated fat. Polyunsaturated fats along with monounsaturated fats are considered healthy fats, as they may reduce your risk of heart disease, especially when substituted for saturated fats. The two major classes of polyunsaturated fats are omega-3 and omega-6 fatty acids. Both are essential fatty acids that your body needs for brain function and cell growth. Yet, your body cannot make essential fatty acids, so you must get them from your diet

Eicosapentaenoic acid (EPA) is one of several omega-3 fatty acids. It is found in cold-water fatty fish, such as salmon. It is also found in fish oil supplements, along with docosahexaenoic acid (DHA). Getting more EPA in your diet has positive effects on coronary heart disease, high triglycerides (fats in the blood), high blood pressure, and inflammation. EPA is available in fish oil capsules, along with DHA (docosahexaenoic acid). Some commercial products may also contain vitamin E to maintain freshness.

RESEARCH RECOMMENDATIONS

- Consuming 2g of pure Eicosapentaenoic acid daily for 8 week will show normal improvement in triacylglycerol concentration.
- Consuming 2g of pure Eicosapentaenoic acid daily for 8 week will show normal improvement in triacylglycerol concentration.

GENOMAX GENE BASED WELLNESS PROGRAM

4. Hypertension Risk

Your Genetic Result

Your Risk / Response

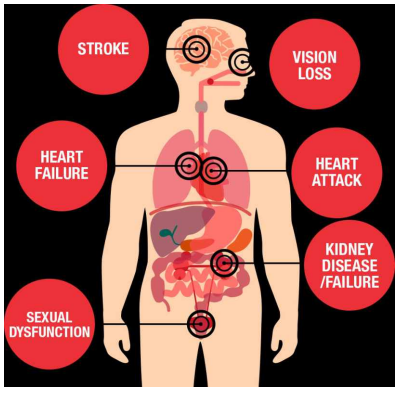
MODERATE RISK

Gene(s) Analysed

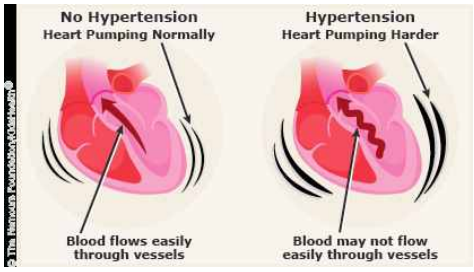
MTHFR

Risk / Response Variant(s) Presence

YES



PAY ATTENTION!



Hypertension affects more than 1 billion individuals globally and is estimated to be responsible for 7.6 million premature deaths. Hypertension is defined as a systolic/diastolic blood pressure of 140/90 mmHg or greater. Did you know that having Hypertension can increase your risk for cardiovascular disease (CVD) by 3 fold. However now there is some hope if you are lucky enough to carry a certain genetic variant. There have been over 4 double blind randomized clinical trials that have been studied since 2004 in different ethnic populations to verify the efficacy for the world's first genotype based therapeutic nutrition treatment for reversing hypertension, and is now proven to work better than antihypertensive drugs, on people carrying a certain variant in the MTHFR gene. Hence finding out if you carry this genotype will enable you to reverse hypertension using a non-drug approach.

Associated Symptoms	Food Sources
• Dull headaches	• Yeast(100g) - 20
• Dizzy spells	• Beef Liver (100g) - 3.5
• Frequent nosebleeds	• Almonds(100g)
• Severe headache	• 1Milk(1cup) - 0.45
• Severe anxiety	• 1 Egg - 0.228
• High Blood Pressure	• Spinach(1/2 cup) - 130
• Brain swelling	• Spirulina(100g) - 3.7
• Heart attack	• Mushrooms(1/2cup)-0.24
• Vision loss	
• Kidney damage	
• Erectile dysfunction	

RESEARCH RECOMMENDATIONS

- Since targeted therapy will not work for your genotype, make lifestyle changes like weight loss, reduced salt intake, limit alcohol, target physical activity for lowering blood pressure in addition to prescribed drugs.

GENOMAX
GENE BASED WELLNESS PROGRAM

5. Impact of Tobacco and Nicotine Containing Products

Your Genetic Result

Your Risk / Response

LOW RISK

Gene(s) Analysed

ACE

Risk / Response Variant(s) Presence

NO

GIFTED!

The nicotine in cigarettes and other tobacco products makes your blood vessels get narrow and your heart beat faster, which makes your blood pressure get higher. The nicotine in cigarette smoke is a big part of the problem. It raises your blood pressure and heart rate, narrows your arteries and hardens their walls, and makes your blood more likely to clot. It stresses your heart and sets you up for a heart attack or stroke. Chewing tobacco cause an immediate and temporary rise in blood pressure. Worse, the chemicals in tobacco can damage the lining of artery walls, causing arteries to narrow and increasing blood pressure. Even secondhand smoke can increase blood pressure.

RESEARCH RECOMMENDATIONS

- As per your genotype, you have low risk for hypertension.
- Hence severe damage because of smoking and tobacco is low.
- However Smoking and tobacco intake should be still avoided as it causes cellular damage.

GENOMAX
GENE BASED WELLNESS PROGRAM

6. Blood Pressure Response to a Non Drug Approach (Hypertention Reversal)

Your Genetic Result

Your Risk / Response

NEUTRAL RESPONSE TO NON DRUG TARGETED THERAPY

Gene(s) Analysed

MTHFR

Risk / Response Variant(s) Presence

NO

Impact of Genotype(s)

Riboflavin supplementation is not significantly associated to lowering your blood pressure

NEUTRAL

BLOOD PRESSURE CATEGORY	SYSTOLIC mm Hg (upper number)		DIASTOLIC mm Hg (lower number)
NORMAL	LESS THAN 120	and	LESS THAN 80
ELEVATED	120 – 129	and	LESS THAN 80
HIGH BLOOD PRESSURE (HYPERTENSION) STAGE 1	130 – 139	or	80 – 89
HIGH BLOOD PRESSURE (HYPERTENSION) STAGE 2	140 OR HIGHER	or	90 OR HIGHER
HYPERTENSIVE CRISIS (consult your doctor immediately)	HIGHER THAN 180	and/or	HIGHER THAN 120

Can hypertension be reversed with a non-drug approach? Hypertension affects more than 1 billion individuals globally and is estimated to be responsible for 7.6 million premature deaths. Hypertension is defined as a systolic/diastolic blood pressure of 140/90 mmHg or greater. Did you know that having Hypertension can increase your risk for cardiovascular disease (CVD) by 3 fold. However now there is some hope if you are lucky enough to carry a certain genetic variant. There have been over 4 double blind randomized clinical trials that have been studied since 2004 in different ethnic populations to verify the efficacy for the world's first genotype based therapeutic nutrition treatment for reversing hypertension, and is now proven to work better than antihypertensive drugs, on people carrying a certain variant in the MTHFR gene. Hence finding out if you carry this genotype will enable you to reverse hypertension using a non-drug approach.

Recent research shows novel role of riboflavin as an important modulator of blood pressure (BP) specifically in individuals with the MTHFR responsive genotype, with results from a number of recent randomised controlled trials demonstrating that riboflavin supplementation can significantly reduce systolic BP by 5 to 13 mmHg in these genetically at risk adults.

Food Sources

- Yeast(100g) - 20
- Beef Liver (100g) - 3.5
- Almonds(100g)
- 1Milk(1cup) - 0.45
- 1 Egg - 0.228
- Spinach(1/2 cup) - 130
- Spirulina(100g) - 3.7
- Mushrooms(1/2cup)-0.24

RESEARCH RECOMMENDATIONS

- Since non drug targeted therapy will not work for your genotype, make lifestyle changes like weight loss, reduced salt intake, limit alcohol, target physical activity for lowering blood pressure in addition to prescribed drugs.

7. Hyperlipoproteinemia Type III

Your Genetic Result

Your Risk / Response

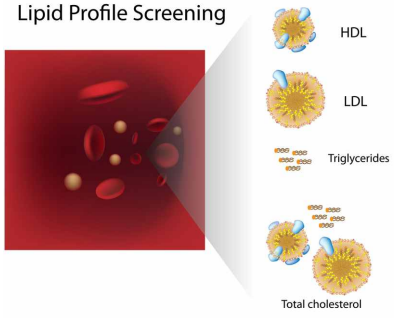
NEUTRAL RISK

Gene(s) Analysed

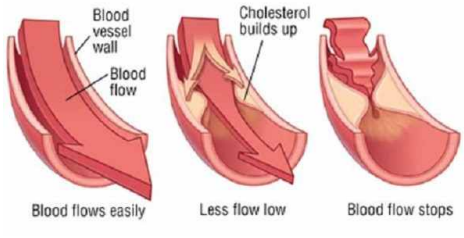
APOE

Risk / Response Variant(s) Presence

NO



NEURTAL



Hyperlipoproteinemia type III is a genetic disorder that causes the body to breakdown (metabolize) fats (lipids) incorrectly. This results in the buildup of lipids in the body (hyperlipidemia) and can lead to the development of multiple small, yellow skin growths (xanthomas). Affected individuals may also develop the buildup of fatty materials in the blood vessels (atherosclerosis) blocking blood flow and potentially leading to heart attack or stroke. Hyperlipoproteinemia type III affects 1-5,000 to 1 in 10,000 people in the general population. Without treatment, affected individuals are 5-10 times more likely to develop cardiovascular disease.

Associated Symptoms

- Pancreatitis (type 1)
- Abdominal pain (types 1 and 5)
- Enlarged liver or spleen (type 1)
- Lipid deposits or xanthomas (type 1)
- Family history of heart disease (types 2 and 4)
- Family history of diabetes (types 4 and 5)
- Heart attack
- Stroke

GENOMAX GENE BASED WELLNESS PROGRAM

8. Hyperhomocysteinemia

Your Genetic Result

Your Risk / Response

MODERATE

Gene(s) Analysed

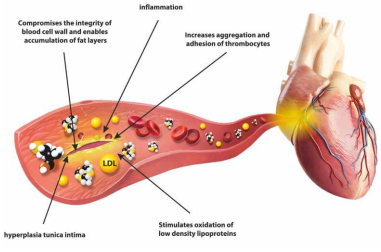
MTHFR(1) - MTHFR(2)

Risk / Response Variant(s) Presence

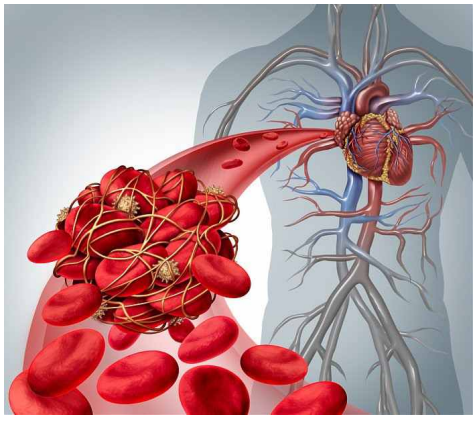
YES

Impact of Genotype(s)

Moderate risk for Hyperhomocysteinemia due to 30 - 40% reduced enzyme activity.



PAY ATTENTION!



A high homocysteine level, also called hyperhomocysteinemia, can contribute to arterial damage and blood clots in your blood vessel. Homocysteine is a sulfur-containing amino acid derived from the metabolism of methionine, an essential amino acid, and is metabolized by one of two pathways: remethylation or transsulfuration. Abnormalities of these pathways lead to hyperhomocysteinemia. Hyperhomocysteinemia is observed in approximately 5% of the general population and is associated with an increased risk for many disorders, including vascular and neurodegenerative diseases, autoimmune disorders, birth defects, diabetes, renal disease, osteoporosis, neuropsychiatric disorders, and cancer. The MTHFR is an important enzyme in the homocysteine metabolism and catalyzes the conversion of 5,10-methylenetetrahydrofolate into 5-methyltetrahydrofolate, the predominant circulating form of folate. Variants in MTHFR gene are associated with reduced enzymatic activity, decreased concentrations of folate in serum, plasma, and red blood cells, and increased plasma total homocysteine (tHcy) concentrations.

Associated Diseases	Food Sources
• Dementia	• spinach
• Mental retardation	• lentils
• Inflammatory Bowel Disease	• romano
• Higher risk for a stroke	• beansblack beans
• Miscarriages	• white beans
• Schizophrenia	• okra
• Glaucoma	• asparagus
• Alzheimer's	• other leafy greens
• Prostate Cancer	
• Heart Attack	
• Asthma	

RESEARCH RECOMMENDATIONS

- Strictly avoid ingestion of folic acid containing fortified foods, supplements and drugs.
- Consume Foods that are naturally high in folate include spinach, lentils, romano beans, black beans, white beans, okra, asparagus, and other leafy greens.
- Enriched ready-to-eat cereals, bread, and bread products are also good sources of folate.

GENOMAX GENE BASED WELLNESS PROGRAM

9. Atherosclerosis Risk

Your Genetic Result

Your Risk / Response

NEUTRAL

Gene(s) Analysed

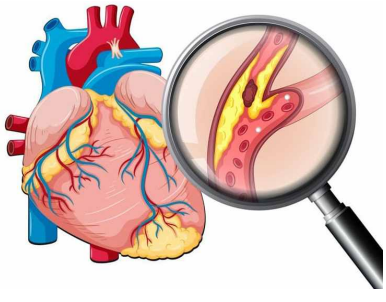
ADBR3

Risk / Response Variant(s) Presence

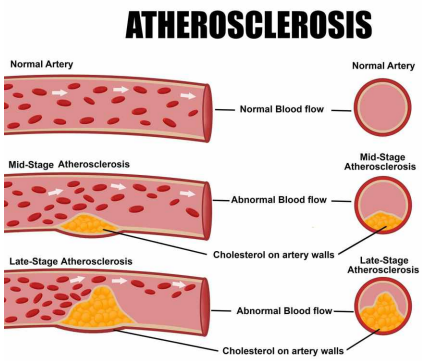
NO

Impact of Genotype(s)

Not chronically predisposed to develop Atherosclerosis



NEUTRAL



Research studies have shown that atherosclerosis represents a chronic inflammatory disorder and that elevated IL-6 levels may predict risk of future CVD events. In addition, polymorphisms of the IL-6 gene may be key regulators of IL-6 and downstream protein levels and therefore may predispose an individual to CVD risk as well.
Atherosclerosis is a narrowing of the arteries caused by a buildup of plaque. Arteries are the blood vessels that carry oxygen and nutrients from your heart to the rest of your body. As you get older, fats, cholesterol, and calcium can collect in your arteries and form plaque. The buildup of plaque makes it difficult for blood to flow through your arteries. This buildup may occur in any artery in your body, including your heart, legs, and kidneys. It can result in a shortage of blood and oxygen in various tissues of your body. Pieces of plaque can also break off, causing a blood clot. If left untreated, atherosclerosis can lead to heart attack, stroke, or heart failure.

Associated Symptoms	Associated Diseases
• Can have no symtoms • Poor wound healing • stroke • heart attack • erectile dysfunction • mini strokes	• heart disease • heart attack, or heart failure • peripheral artery disease • kidney failure • aneurysm • stroke • irregular heart rhythms and palpitations • embolism when a piece of the clot breaks off and travels to another part of the bloodstream

GENOMAX GENE BASED WELLNESS PROGRAM

10. Myocardial Infarction

Your Genetic Result

Your Risk / Response

INCREASED RISK (OR:1.275)

Gene(s) Analysed

MTHFR

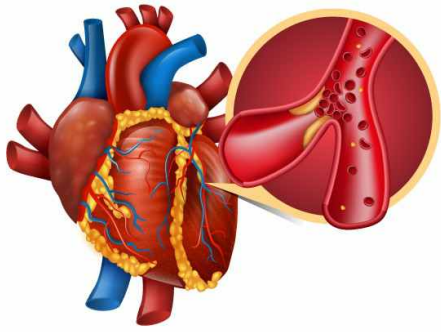
Risk / Response Variant(s) Presence

YES

Impact of Genotype(s)

Significantly associated with Myocardial Infarction risk particularly among young middle-aged Caucasians.

PAY ATTENTION!



Myocardial infarction (MI) is the interruption of blood supply to a part of the heart, which may cause heart cells to die. This is most commonly due to the blockage of a coronary artery following the rupture of a vulnerable atherosclerotic plaque, which is an unstable collection of lipids and white blood cells (especially macrophages) in the wall of an artery The association between the genetic MI is well researched. A total of 30 relevant studies concerning the association between MTHFR gene and risk of Myocardial Infarction were identified. These studies involved 8,140 patients and 10,522 controls, containing the population studies of 21 Caucasian, four East Asian, four Southern Asian, and one African-American.

Associated Symptoms	Associated Diseases
• pressure or tightness in the chest • pain in the chest, back, jaw, and other areas of the upper body that lasts more than a few minutes or that goes away and comes back • shortness of breath • sweating nausea • vomiting • anxiety • cough • dizziness • fast heart rate	• Diabetes • High blood pressure • High cholesterol levels • High triglyceride levels

RESEARCH RECOMMENDATIONS

- Myocardial infarction and strokes can be prevented by refraining from smoking and maintaining appropriate blood pressure levels and a favourable balance of lipids.
- Be physically active every day
- Manage Diabetes
- Reduce Stress.
- One way to lower your risk is to eat a heart-healthy diet. This diet should largely consist of: whole grains vegetables fruits lean protein You should also reduce the amount of the following in your diet: sugar saturated fat trans fat cholesterol
- More likely to get a hear attack at a relatively young age.

11. Left Ventricular Hypertrophy

Your Genetic Result

Your Risk / Response

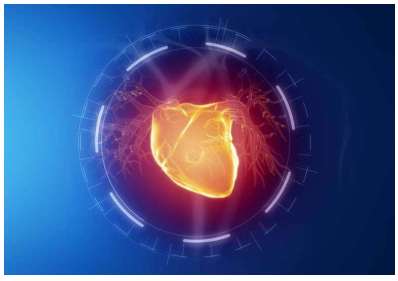
LOW RISK

Gene(s) Analysed

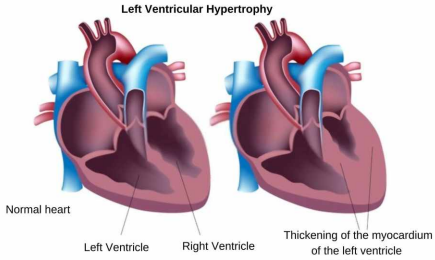
ACE

Risk / Response Variant(s) Presence

NO



GIFTED!



ACE gene helps to determine the responsive nature of your heart when it comes to the intensity at which you work out. The ACE gene provides instructions for making the angiotensin-converting enzyme. This enzyme is able to cut (cleave) proteins. It is part of the renin angiotensin system, which regulates blood pressure and the balance of fluids and salts in the body. It is important to prioritize the health of your heart. Sometimes a body needs to indulge in high intensity exercises, but it can be balanced out by developing a resting pattern.

RESEARCH RECOMMENDATIONS

- Based on your genotype you are predisposed to have a normal pumping ability of your heart walls.
- Monitor your work out intensity and make sure to give your body adequate rest.
- To avoid weight gain, regular exercise is required. Exercise type, intensity and duration to bedecided based on other genotypes.

12. Atrial Fibrillation

Your Genetic Result

Your Risk / Response

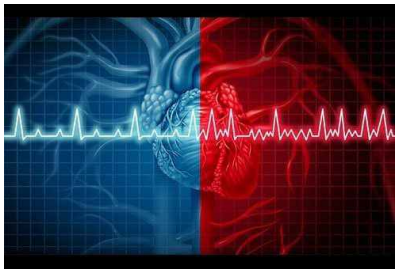
LOW RISK

Gene(s) Analysed

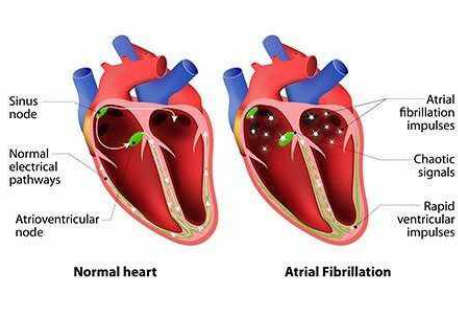
PITX2

Risk / Response Variant(s) Presence

NO



GIFTED!



Atrial fibrillation is an irregular and often rapid heart rate that can increase your risk of strokes, heart failure and other heart-related complications.|During atrial fibrillation, the heart's two upper chambers (the atria) beat chaotically and irregularly - out of coordination with the two lower chambers (the ventricles) of the heart. Atrial fibrillation symptoms often include heart palpitations, shortness of breath and weakness.|Episodes of atrial fibrillation may come and go, or you may develop atrial fibrillation that doesn't go away and may require treatment. Although atrial fibrillation itself usually isn't life threatening, it is a serious medical condition that sometimes requires emergency treatment.

RESEARCH RECOMMENDATIONS

- As per your genotype, you have low risk of developing Atrial Fibrillation.
- However, consumption of alcohol and tobacco, along with high blood pressure may increase the risk.
- Keep a check on your pulse rate as atrial fibrillation is one of the major causes of stroke.
- Include low fat foods, foods with high fiber, whole grains, fruits, and vegetables in your diet.
- Avoid drinking excessive amounts of alcohol and smoking.

GENOMAX GENE BASED WELLNESS PROGRAM

13. Coronary Artery Disease Risk

Your Genetic Result

Your Risk / Response

INCRESED RISK (OR:1.22)

Gene(s) Analysed

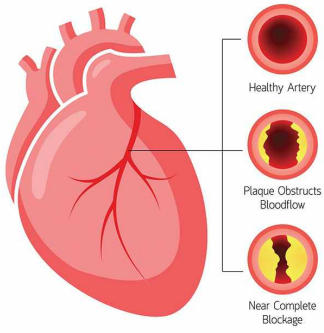
APOE(1) - APOE(2)

Risk / Response Variant(s) Presence

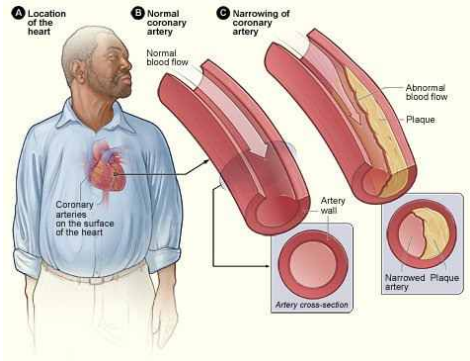
YES

Impact of Genotype(s)

Significantly associated with 22% Increased risk for coronary artery disease compared to the wild genotype carriers.



PAY ATTENTION



Coronary Artery Disease (CAD) is the narrowing or blockage of the coronary arteries, usually caused by atherosclerosis. Polymorphisms of ACE, CYP1A2, GC, FUT2, LPL, eNOS, APOA2 and FABP2 genes is associated with increasing risk of CAD. Studies have association between the ACEI/D polymorphism and high risk of CAD.

Associated Symptoms

- Pain
- discomfort
- pressure
- tightness
- numbness, or burning sensation in your chest, arms, shoulders, back, upper abdomen, or jaw
- Dizziness
- Fatigue
- Nausea or vomiting
- Indigestion or heartburn

RESEARCH RECOMMENDATIONS

- It is recommended to folow a plant-based diet which mainly includes fruits, vegetables, whole grains, legumes and nuts and replace butter with olive oil along with use herbs and spices.
- Its a good idea to limiting red meat not more than than 2 times a month on the other hand eating fish and poultry at least twice a week, preferably wild or organic is recommended.
- It is recommended to consume 1400mg EPA and 1000mg DHA per day since omega 3 is studied to supports vascular health.
- 200-400mg per day of ubiquinol CoQ10 is recommended since it acts as a first line defence against LDL oxidation.
- 2200mcg of vitamin K2 is recommended since high vitamin K2 intake is studied to show 57% reduction in risk of dying from vasuclar diseases.
- This genotype may be associated with an increased risk of cardiovascular disease due to poor low-density lipoprotein (LDL) recycling mechanisms.

14. Type 2 Diabetes risk (Insulin Sensitivity

Your Genetic Result

Your Risk / Response

MODERATE RISK

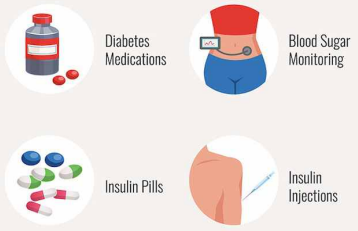
Gene(s) Analysed

FTO1 - TCF7L2 - PPARG - ADIPOQ

Risk / Response Variant(s) Presence

YES

TREATMENT



PAY ATTENTION!

Insulin sensitivity is the relationship between how much insulin needs to be produced in order to deposit a certain amount of glucose in your body. A person is called as insulin sensitive, if a small amount of insulin needs to be secreted to deposit a certain amount of glucose, and insulin resistant, if a lot of insulin needs to be secreted to deposit the same amount of glucose. Insulin resistance (IR) is generally regarded as a pathological condition in which cells fail to respond to the normal actions of the hormone insulin.

RESEARCH RECOMMENDATIONS

- Regularly test your HBA1c and fasting blood glucose levels.
- Keep a regular check on your HBA1c levels (a biomarker for diabetes) and fasting glucose.
- Supplements delaying carbohydrate uptake:
  - Green Tea extract (Catechins)
  - Coffee bean extract (Chlorogenic Acid)
- Insulin sensitizing supplement:
  - Resveratrol
  - L-Carnitine
- Consuming 10 g/day of ground freeze-dried mango pulp for 12 weeks can significantly reduce fasting blood glucose.
- Keep a regular check on your HBA1c levels (a biomarker for diabetes) and fasting glucose.

GENOMAX
GENE BASED WELLNESS PROGRAM

15. HbA1c Response to Fiber

Your Genetic Result

Your Risk / Response

HIGHLY BENEFICIAL

Gene(s) Analysed

TCF7L2

Risk / Response Variant(s) Presence

NO

GIFTED!

Dietary fibre refers to a group of compounds found in plant-based foods that cannot be digested by the human body. Most of these are carbohydrates but unlike other carbohydrates, fibres do not provide energy because they cannot be digested. In spite of these traits, dietary fibre provides many health benefits.

By measuring glycated haemoglobin (HbA1c), clinicians are able to get an overall picture of what our average blood sugar levels have been over a period of weeks/months. The term HbA1c refers to glycated haemoglobin. It develops when haemoglobin, a protein within red blood cells that carries oxygen throughout your body, joins with glucose in the blood, becoming 'glycated'. For people with diabetes this is important as the higher the HbA1c, the greater the risk of developing diabetes-related complications.

Food Sources

- Kidney Beans(1 cup) - 14g
- 1Avocado - 13g
- Split Peas(1/4th cup) - 13
- Black beans(1/2 cup) - 8.5g
- Dried figs(1 cup) - 15
- 1Sweet Potato - 4g
- Dates(1/2 cup) = 6g
- Lentils1(1/4th cup) - 15
- 1Pear - 6g
- Broccoli(1/2 bunch) - 6g

RESEARCH RECOMMENDATIONS

- Consume more than 13g/1000kcal of fibre per day for best results.

16. Insulin Resistance Response to Whole Grain

Your Genetic Result

Your Risk / Response

WHOLE GRAIN BENEFICIAL FOR INSULIN RESISTANCE

Gene(s) Analysed

TCF7L2

Risk / Response Variant(s) Presence

NO

GIFTED!

Insulin is a hormone secreted by your pancreas.Its main role is to regulate the amount of nutrients circulating in your bloodstream. Although insulin is mostly implicated in blood sugar management, it also affects fat and protein metabolism. When you eat a meal that contains carbs, the amount of blood sugar in your bloodstream increases. The cells in your pancreas sense this increase and release insulin into your blood. Insulin then travels around your bloodstream, telling your cells to pick up sugar from your blood. This process results in reduced blood sugar levels. Especially high blood sugar can have toxic effects, causing severe harm and potentially leading to death if untreated. However, cells sometimes stop responding to insulin correctly. This is called insulin resistance. Under this condition, your pancreas produces even more insulin to lower your blood sugar levels. This leads to high insulin levels in your blood, termed hyperinsulinemia. Over time, your cells may become increasingly resistant to insulin, resulting in a rise in both insulin and blood sugar levels. Eventually, your pancreas may become damaged, leading to decreased insulin production. After blood sugar levels exceed a certain threshold, you may be diagnosed with type 2 diabetes. Insulin resistance is the main cause of this common disease that affects about 9% of people worldwide. Whole grains or foods made from them contain all the essential parts and naturally-occurring nutrients of the entire grain in their original proportions. Whole grains are low glycaemic index carbohydrates that have more fibre than refined grains. They also contain more essential micronutrients such as folic acid, magnesium and vitamin E. Research has shown that whole grains may help to reduce the risk of several diseases, in particular, type 2 diabetes.

RESEARCH RECOMMENDATIONS

- Increase intake of whole grain in diet.
- Increase consumption of whole wheat bread, oats, brown rice, bran cereal etc.
- Avoid refined grain such as white flour, cornmeal, white bread and white rice etc.
- Increase intake of whole grain replacing any refined or polished grain product.
- Individuals with your gene profile for TCF7L2 gene are less likely to be at elevated risk for insulin resistance which can be further, reduced by 30mins of exercise, five days a week.

GENOMAX GENE BASED WELLNESS PROGRAM

17. Glucose Tolerance to Dietary Fat

Your Genetic Result

Your Risk / Response

NEUTRAL RISK

Gene(s) Analysed

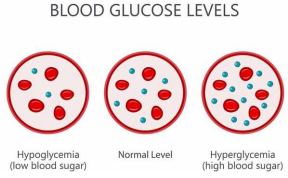
ACE

Risk / Response Variant(s) Presence

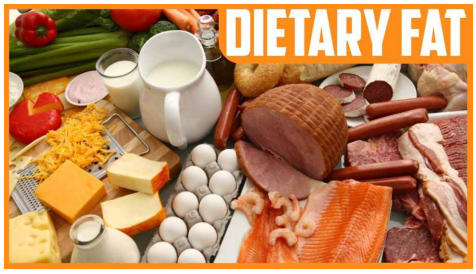
NO

Impact of Genotype(s)

No impact on high fat diet and glucose tolerance



NEUTRAL



Glucose tolerance is defined as the ability to dispose of a glucose load, and therefore glucose intolerance is defined as an impaired ability for glucose disposal.

Research studies have observed an enhanced upregulation of ACE by elevated fat intake and have established its nutrigenetic role in glucose metabolismIn. A nutritional intervention study of 46 healthy and non-obese twin pairs consumed recommended low fat diets for 6 weeks before they received a 6-week high fat (HF) diet under isocaloric conditions. Intravenous glucose tolerance tests were performed before and after 1 and 6 weeks of HF diet. While glucose tolerance did not differ between genotypes at baseline it significantly declined in risk allele carriers after 6 weeks HF diet (p = 0.001) with higher 2 h glucose and insulin concentrations compared to non risk carriers (p = 0.003 and p = 0.042).

How does glucose tolerance work?

In the glucose tolerance test, 75 g of glucose are dissolved in 250 to 300 ml of water. The amount given to children is based on their body weight. If the test is being done to confirm suspected diabetes, blood is drawn again after two hours and the blood sugar level is measured.

Associated Symptoms

- Type 2 diabetes
- Obesity risk
- Coronary artery disease

18. Ketogenic Diet (High Fat Diet) & Type 2 Diabetes risk

Your Genetic Result

Your Risk / Response

NEUTRAL RISK

Gene(s) Analysed

ACE

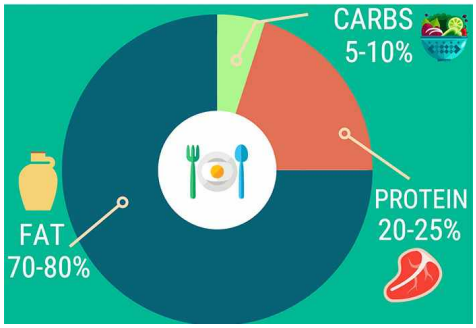
Risk / Response Variant(s) Presence

NO

Impact of Genotype(s)

No impact on high fat diet and type 2 diabetes risk.

NEUTRAL



Ketogenic Diet:
A ketogenic diet primarily consists of high-fats, moderate-proteins, and very-low-carbohydrates. The dietary macronutrients are divided into approximately 55% to 60% fat, 30% to 35% protein and 5% to 10% carbohydrates. Specifically, in a 2000 kcal per day diet, carbohydrates amount up to 20 to 50 g per day.

Type 2 Diabetes:
Type 2 diabetes is a chronic condition that affects the way your body metabolizes sugar (glucose) an important source of fuel for your body.With type 2 diabetes, your body either resists the effects of insulin a hormone that regulates the movement of sugar into your cells or doesn't produce enough insulin to maintain normal glucose levels.

A large body of evidence supports the role of the renin-angiotensin system (RAS) in modulation of glucose metabolism and its involvement in insulin resistance1. Inhibition of angiotensin-converting enzyme (ACE), and thereby antagonizing the RAS, has been shown to improve glucose homeostasis and, albeit inconsistently, to reduce incidence of type 2 diabetes mellitus in large-scale clinical trials.

19. Dinner Timing & Type 2 Diabetes Risk

Your Genetic Result

Your Risk / Response

NORMAL WITH LATE DINNER TIME

Gene(s) Analysed

MTNR1B

Risk / Response Variant(s) Presence

NO

Impact of Genotype(s)

This genotype has not been associated with impaired glucose tolerance with a late dinner time and increased risk for type-2 diabetes.

NEUTRAL

Nocturnal eating has recently become more common due to the modern 24/7 economy and lifestyle. A large-scale study in over 60 thousand people has demonstrated that late-night dinner eating is robustly associated with hyperglycemia independent of relevant confounders including BMI. However, the cause of the decreased glucose tolerance with night eating is still unknown. Although many factors may be involved, previous studies support the hypothesis that food intake coincident with high melatonin levels may lead to impaired glucose tolerance. Melatonin is a hormone known for its central role in the circadian system as the signal of the biological night; and for its sleep-promoting effects, with therapeutic potential for certain sleep disturbances and jet lag. Blood melatonin levels are high at night and near-undetectable during the day, and it may contribute to the nocturnal decrease in glucose tolerance.

In a randomized cross-over study, overweight or obese women were fed an evening meal either 4 hours before their usual bedtime (early) or one hour before their usual bedtime (late). The following week the mealtimes were reversed. When given the late meal, individuals with the high risk genotype had a dramatically impaired glucose tolerance as compared to those who received the early meal. Investigators did not observe this pattern in subjects with the non risk genotype. Based on these findings the authors recommend that individuals with the high risk genotype eat dinner no later than 2 to 4 hours before their usual bedtime in order to allow blood glucose levels to normalize before melatonin rises. This may be particularly important for pre- diabetic or diabetic individuals as well as those who consume a large portion of their daily food intake at the evening meal. The authors maintain that individuals with the high risk genotype who eat at night when melatonin levels are high, for example shift workers, may be at risk for metabolic disturbances.

GENOMAX
GENE BASED WELLNESS PROGRAM

20. Type 1 Diabetes

Your Genetic Result

Your Risk / Response

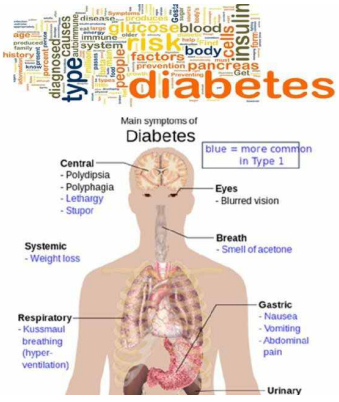
LOW RISK

Gene(s) Analysed

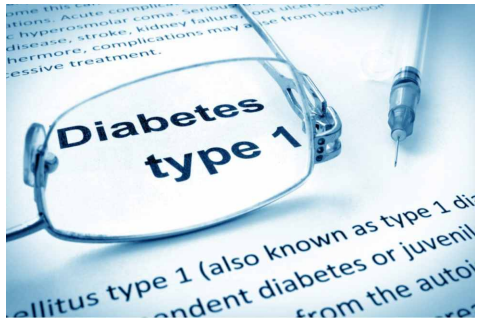
KCNJ11

Risk / Response Variant(s) Presence

NO



GIFTED!



Diabetes Mellitus (DM) is a set of metabolic disorders characterized by hyperglycemia. Diabetes Mellitus can be inherited or infested due to a poor lifestyle. DM is mainly caused by either the destruction of the body's insulin-producing cells stops responding to the produced insulin. Very common side-effects of DM are hypertension and infestation of cardiovascular diseases. The development of DM also depends upon ethnicity and age. In type-1 DM, insulin-producing pancreatic cells get destructed (autoimmune disorder), resulting in lower insulin production. A deficiency in insulin levels is responsible for the uptake of blood sugar (glucose) from the bloodstream to cells. Its metabolism gets hindered, resulting in increased blood sugar levels (hyperglycemia). Early symptoms include polyuria, polyphagia and polydipsia. Over controlled sugar can lead to hypoglycaemia, including drowsiness, dizziness, uncontrolled hunger, and eventually ketoacidosis. Blood sugar in Type 1 DM can be controlled by regular monitoring of blood glucose, following proper medication and maintaining a healthy lifestyle.

RESEARCH RECOMMENDATIONS

- Even though you have a low risk, you may consider the following preemptive suggestions.
- Consume small and frequent meals (5-6 meals /day) 4.) Avoid eating processed and refined food.
- Sleep 7-8 hours a day
- Maintain an active lifestyle (4-5 days workout in a week)
- Avoid eating processed and refined food

GENOMAX
GENE BASED WELLNESS PROGRAM

21. Tendency of Insulin Resistance

Your Genetic Result

Your Risk / Response

LOW RISK

Gene(s) Analysed

TCF7L2

Risk / Response Variant(s) Presence

NO

GIFTED!

Insulin resistance (IR) is an important metabolic activity that governs whether an individual would be obese or would have type 2 diabetes. Similarly, in individuals suffering from type 2 diabetes or Polycystic ovarian syndrome (PCOS-females), managing IR is an important and crucial step. Improving IR reduces the risk of type 2 diabetes, helps in weight management and in management of PCOS in females.|Excessive intake of Carbs or fats in the diet may lead to IR and obesity, hence right balance of carbs and fats in diet is needed the most. The following genes help in identifying the dietary component that would be useful in improving weight gain.

RESEARCH RECOMMENDATIONS

- Decreased risk of IR in response to carbohydrate or dietary fats.
- These individuals compared to other genotypes, have low tendency of IR and low likelihood of weight gain.
- Increased fat intake in diet with lack of activity may lead to weight gain and also IR.

22. Impact of Smoking

Your Genetic Result

Your Risk / Response

LOW RISK

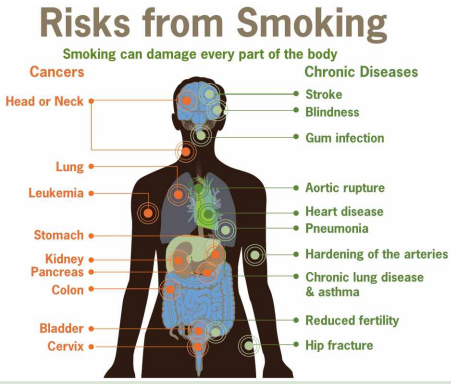
Gene(s) Analysed

TNF-A

Risk / Response Variant(s) Presence

NO

GIFTED!



According to some studies, Smokers are 30 to 40 percent more likely to develop type 2 diabetes than nonsmokers. Smoking can also make managing the disease and regulating insulin levels more difficult because high level s of nicotine can lessen the ef f ecti venes s of insulin, causing smokers to need more insulin to regulate blood sugar levels.

RESEARCH RECOMMENDATIONS

- As per you genotype, you have low risk for smoking induced diabetes.
- Incase of smoking, practice good lung exercise.
- Increase antioxidants in the diet to neutralize the ill effect of the smoke caused.

23. Risk of Diabetic Retinopathy

Your Genetic Result

Your Risk / Response

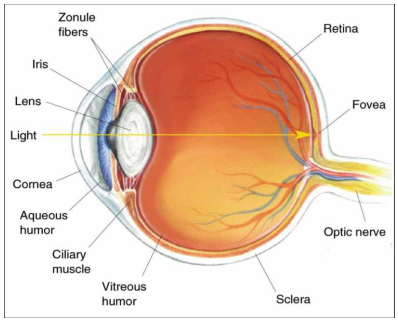
HIGH RISK

Gene(s) Analysed

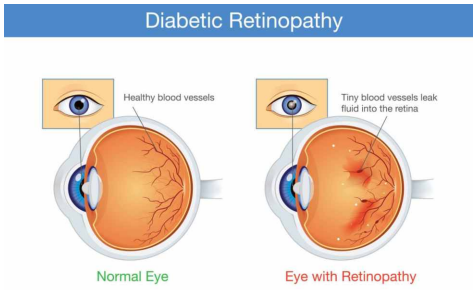
SORBS1

Risk / Response Variant(s) Presence

YES



PAY ATTENTION!



Diabetic Retinopathy is a diabetic complication that aff ects the eyes. It is caused by damage to the blood vessels in the tissue at the back of the eye (retina) due to high blood sugar levels. These blood vessels can swell and leak or they can close, stopping blood from passing through. Sometimes, abnormal new blood vessels grow on the surface of the retina.

RESEARCH RECOMMENDATIONS

- As per your genotype, you have a high risk of developing Diabetic Retinopathy.
- Diabetic retinopathy involves the abnormal growth of blood vessels in the retina.
- Complications can lead to serious vision problems like retinal detachment, glaucoma, and blindness. Consult your doctor for regular eye check ups. Check your blood sugar levels, cholesterol levels, and blood pressure regularly.
- Good intake of healthy foods, exercise regularly, and lose excess weight, which can help keep your blood sugar levels in check.

GENOMAX GENE BASED WELLNESS PROGRAM

24. Risk for Diabetic Cataract

Your Genetic Result

Your Risk / Response

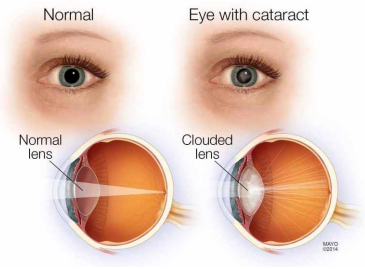
LOW RISK

Gene(s) Analysed

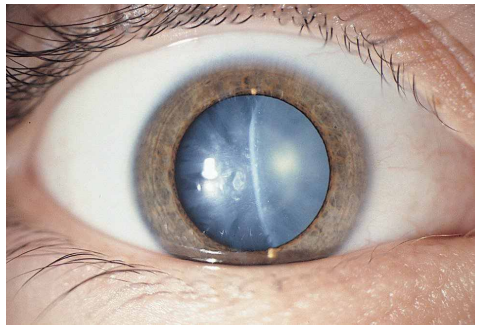
FTO1

Risk / Response Variant(s) Presence

NO



GIFTED!



Diabetic cataract is a condition which causes visual impairment in diabetic patients. A cataract is a dense, cloudy area that forms in the lens of the eye. For people who have cataracts, seeing through cloudy lenses is a bit like looking through a frosty or fogged-up window. Cataract is caused as a result of tissue breakdown and protein clumping. Nuclear cataract begins with a gradual hardening and yellowing of the central zone of the lens, also known as the nucleus. Over time, this hardening and yellowing will expand to the other layers of the lens.

RESEARCH RECOMMENDATIONS

- As per your genotype, you have a low risk of developing Diabetic Cataract.
- If you are diagnosed with diabetes, consult a physician and take measuresto lower high blood glucose levels.
- Control and maintain normal blood sugar levels, blood pressure, and cholesterol levels.
- Avoid smoking and use of tobacco as it is a major risk elevation factor.

GENOMAX
GENE BASED WELLNESS PROGRAM

25. Impact of Tobacco and Smoking on Diabetic Cataract

Your Genetic Result

Your Risk / Response

LOW RISK

Gene(s) Analysed

FTO1

Risk / Response Variant(s) Presence

NO

GIFTED!

Diabetic cataract is a condition which causes visual impairment in diabetic patients. A cataract is a dense, cloudy area that forms in the lens of the eye. For people who have cataracts, seeing through cloudy lenses is a bit like looking through a frosty or fogged-up window. Cataract is caused as a result of tissue breakdown and protein clumping. Nuclear cataract begins with a gradual hardening and yellowing of the central zone of the lens, also known as the nucleus. Over time, this hardening and yellowing will expand to the other layers of the lens.

RESEARCH RECOMMENDATIONS

- As per your genotype, you have a low risk of developing Diabetic Cataract.
- If you are diagnosed with diabetes, consult a physician and take measures to lower high blood glucose levels
- Control and maintain normal blood sugar levels, blood pressure, and cholesterol levels.
- Avoid smoking and use of tobacco asit is amajor risk elevation factor.

GENOMAX
GENE BASED WELLNESS PROGRAM

26. Risk of Diabetic Nephropathy

Your Genetic Result

Your Risk / Response

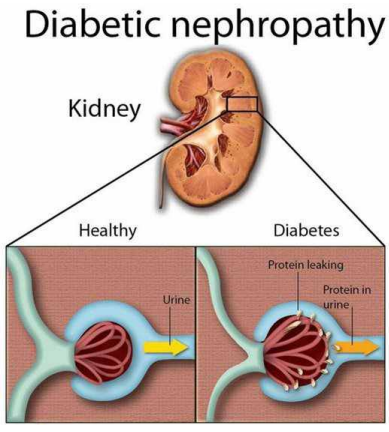
LOW RISK

Gene(s) Analysed

TNF-A

Risk / Response Variant(s) Presence

NO



GIFTED!

Diabetic nephropathy is the damage caused to kidneys due to high levels of blood glucose (diabetes mellitus). This occurs as a result of diabetes affecting the arteries in the body, post which the kidney filters blood from those very arteries.

RESEARCH RECOMMENDATIONS

- As per your genotype, you have a low risk of developing Diabetic Nephropathy.
- However, other factors such ashigh blood pressure, obesity, and high cholesterol levels may increase the risk.
- Exercise regularly to decrease chances of many diabetic complications
- Eat a nutritious diet that is low in carbohydrates, fats, and sugars.

GENOMAX
GENE BASED WELLNESS PROGRAM

27. Impact of Tobacco and Smoking on Diabetic Nephropathy

Your Genetic Result

Your Risk / Response

LOW RISK

Gene(s) Analysed

FTO-1

Risk / Response Variant(s) Presence

NO

GIFTED!

Diabetic nephropathy is the damage caused to kidneys due to high levels of blood glucose (diabetes mellitus). This occurs as a result of diabetes affecting the arteries in the body, post which the kidney filters blood from those very arteries.

RESEARCH RECOMMENDATIONS

- As per your genotype, you have a low risk of developing Diabetic Nephropathy
- However, other factors such as high blood pressure, obesity, and high cholesterol levels may increase the risk.
- Exercise regularly to decrease chances of many diabetic complications.
- Eat a nutritious diet that is low in carbohydrates, fats, and sugars.
- Avoid smoking and consumption of alcohol as they increase the risk of nephropathy.
- Avoid stress and high blood pressure levels.

GENOMAX
GENE BASED WELLNESS PROGRAM

28. Impact of Stress on Diabetic Nephropathy

Your Genetic Result

Your Risk / Response

LOW RISK

Gene(s) Analysed

TNF-A

Risk / Response Variant(s) Presence

NO

GIFTED!

Diabetic nephropathy is the damage caused to kidneys due to high levels of blood glucose(diabetes mellitus). This occurs as a result of diabetes affecting the arteries in the body, post which the kidney filters blood from those very arteries.

RESEARCH RECOMMENDATIONS

- As per your genotype, you have a low risk of developing Diabetic Nephropathy in response to stress.
- However, other factors such as high blood pressure, obesity, and high cholesterol levels may increase the risk.
- Exercise regularly to decrease chances of many diabetic complications.
- Eat a nutritious diet that is low in carbohydrates, fats, and sugars.
- Avoid smoking and consumption of alcohol as they increase the risk of nephropathy.
- Avoid stress and high blood pressure levels.

GENOMAX
GENE BASED WELLNESS PROGRAM

29. Risk of Diabetic Neuropathy

Your Genetic Result

Your Risk / Response

LOW RISK

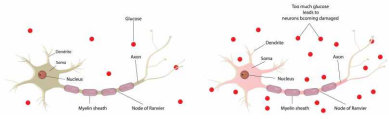
Gene(s) Analysed

FTO1

Risk / Response Variant(s) Presence

NO

Diabetic Neuropathy



GIFTED!

Diabetic neuropathy is a family of nerve disorders caused by diabetes. Over time, diabetes can result in some degree of nerve damage throughout the body. Some people with nerve damage experience no symptoms; others may experience symptoms such as pain, tingling or numbness, loss of feeling in the hands, arms, feet, and legs. Nerve problems can occur in every organ system including the digestive tract, heart, and sex organs.

RESEARCH RECOMMENDATIONS

- As per your genotype, you have low risk of developing Diabetic Neuropathy
- Maintaining proper blood glucose levels and exercising regularly may decrease the risk.
- Keep your blood glucose levels at normal, as maintaining safe blood glucose levels protects nerves throughout the body
- Exercise regularly and avoid overeating
- Avoid consumption of tobacco and alcohol.

GENOMAX
GENE BASED WELLNESS PROGRAM

30. Impact of Tobacco and Alcohol

Your Genetic Result

Your Risk / Response

LOW RISK

Gene(s) Analysed

TNF-A

Risk / Response Variant(s) Presence

NO

GIFTED!

Diabetic neuropathy is a family of nerve disorders caused by diabetes. Effects of cigarette smoking on diabetic peripheral neuropathy. Cigarette smoke might exacerbate diabetic neuropathy partly through the mechanism of oxidative stress. Nerves are very sensitive to alcohol and drinking can make nerve damage from diabetes worse. It might increase any pain, burning, tingling, and numbness you might already be experiencing from your neuropathy.

RESEARCH RECOMMENDATIONS

- As per your genotype, you have low risk of developing Diabetic Neuropathy.
- Maintaining proper blood glucose levels and exercising regularly may decrease the risk.
- Keep your blood glucose levels at normal, as maintaining safe blood glucose levels protects nerves throughout the body.
- Exercise regularly and avoid overeating.
- Limit consumption of tobacco and alcohol.

31. Risk of Foot Ulcers

Your Genetic Result

Your Risk / Response

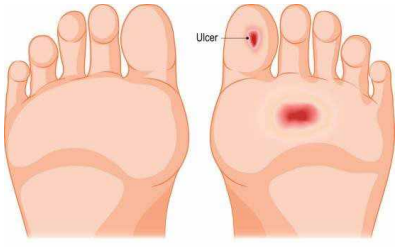
LOW RISK

Gene(s) Analysed

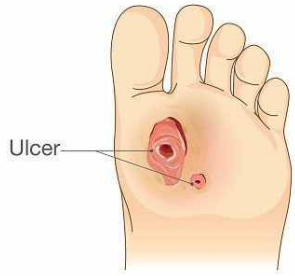
TNF-A

Risk / Response Variant(s) Presence

NO



GIFTED!



Certain degrees of nerve damage often lead to ineffective repairing of damaged skin, which under ideal circumstances would heal normally. The impaired healing process can be attributed to high or regularly Punctuating levels of blood sugar in diabetic conditions. Therefore, in such a condition even a mild injury can cause a foot ulcer.

RESEARCH RECOMMENDATIONS

- As per your genotype, you have a low risk of developing Diabetic Foot Ulcers.
- Maintaining proper blood glucose levels and routine hygiene is essential to prevent foot ulcers.
- Keep your foot clean and dry.
- Avoid consumption of tobacco as it inhibits blood circulation.
- Avoid wearing shoes with improper fitting.

GENOMAX GENE BASED WELLNESS PROGRAM

32. Gall Stone Predisposition

Your Genetic Result

Your Risk / Response

INCREASED RISK (OR:1.96)

Gene(s) Analysed

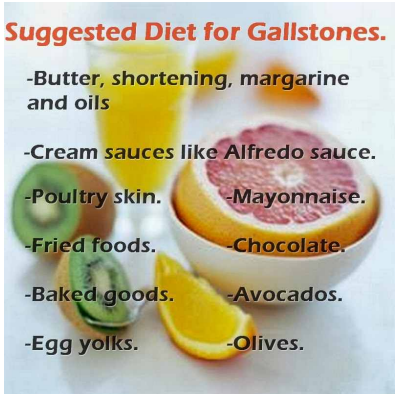
ADRB3

Risk / Response Variant(s) Presence

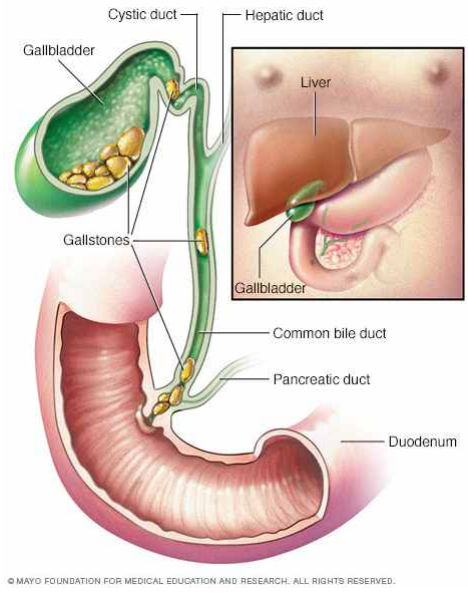
YES

Impact of Genotype(s)

SIgnificantly associated with increased risk for cholesterol gallstone disease.



PAY ATTENTION!



Cholesterol Gallstone disease (CGD) corresponds to one of the most recurrent and costly gastroenterological disorder. It is worldwide health problem representing 10% to 15% of the adult population in industrialised countries whereas a prevalence of 6% have been reported from North India. Gallstones occur when bile forms solid particles (stones) in the gall bladder. The stones form when the amount of cholesterol or bilirubin in the bile is high.

ADRB3 is also highly expressed in gallbladder tissue where it may be involved in gallstone disease thereby representing a genetic marker that identifies subjects at higher risk for gallstone formation.

Associated Symptoms

- Sudden and rapidly intensifying pain in the upper right portion of abdomen
- Sudden and rapidly intensifying pain in the center of abdomen and just below breastbone
- Back pain between shoulder blades
- Pain in right shoulder
- Nausea or vomiting

RESEARCH RECOMMENDATIONS

- Avoid foods that contain trans fats and saturated fats.
- Avoid processed foods and refined carbohydrates.
- Try to build your eating patterns around fiber-rich foods and healthy fats; as it helps prevent the crystallization of bile.
- Include vitamin C, plant-based protein sources like beans and lentils, and calcium rich foods.
- Your inhibiting risk variant in ADRB3 might result in gallstone formation by impairing the relaxation of the gallbladder and probably the biliary tree too, setting the stage for crystal formation

GENOMAX GENE BASED WELLNESS PROGRAM

33. Inflammatory Bowel Disease (Ulcerative Colitis)

Your Genetic Result

Your Risk / Response

TYPICAL RISK

Gene(s) Analysed

TNFA

Risk / Response Variant(s) Presence

NO

Impact of Genotype(s)

No Increased Risk to develop IBS, Ulcerative Colitis and Crohn's disease.

IBS Symptoms

NEUTRAL

Irritable bowel syndrome (IBS) is a common functional bowel disorder that affects the large intestine and is characterized by recurrent abdominal pain and altered bowel habits. Several mechanisms have been proposed in the pathophysiology of IBS, including visceral hypersensitivity, altered gut motility and psychosocial factors. In addition, inflammation and mucosal immune system activation may be import

Pro- and anti-inflammatory cytokines are important modulators of the immune response and play a role in intestinal inflammation. Cytokine production is under genetic control and imbalances in cytokine secretion may affect disease susceptibility and clinical outcome of various conditions.

Associated Symptoms	Associated Diseases
• Abdominal pain and cramping	• Arthritis, or inflammation of joints
• Diarrhea	• Skin Disorders
• Constipation	• Eye Disorders
• Changes in Bowel Movements	• Liver Disease
• Gas and Bloating	• Rheumatoid arthritis
• Food Intolerance	• Celiac Disease
• Fatigue and Difficulty Sleeping	• Psoriasis

RESEARCH RECOMMENDATIONS

- Your genotype does not predispose the onset of Ulcerative Colitis and is not known to increase production of TNF-a.

GENOMAX GENE BASED WELLNESS PROGRAM

34. Alcoholic Liver Disease

Your Genetic Result

Your Risk / Response

INCREASED RISK (ALD-CIRRHOSIS, OR: 2.09)

Gene(s) Analysed

PNPLA3

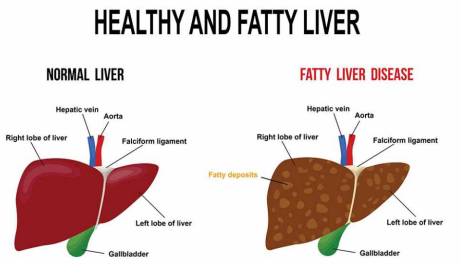
Risk / Response Variant(s) Presence

YES

Impact of Genotype(s)

Significantly associated Increased ALD-cirrhosis risk.

PAY ATTENTION!



Excess alcohol consumption and consequent alcoholic liver disease (ALD) pose a major burden on healthcare resources that has been recognized for many years. Alcoholic liver disease accounts for 70 to 80% of all directly recorded mortality from alcohol. It has been estimated that alcohol-attributable liver cirrhosis was responsible for 493,300 deaths globally in 2010 (representing 0.9% of all deaths) and 47.9% of all liver cirrhosis deaths (46.5% for women and 48.5% for men).
Multiple research studies have validated that PNPLA3 gene polymorphisms are associated with predisposition to alcoholic liver disease in heavy drinkers. In addition, these gene polymorphisms have been shown to influence the severity of alcohol-related liver damage. Alcohol-related cirrhosis is the most serious form of alcohol-related liver disease. The damage from alcohol-related cirrhosis is not reversible and can cause fatal liver failure.

Associated Symptoms

- Losing muscle tone (atrophy) Bruising easily
- Loss of appetite and weight loss
- Yellowing of the skin and eyes (jaundice)
- Fluid build-up and swelling of the legs (edema) and abdomen (ascites)
- Bleeding in your mouth (mouth bleeds) or vomiting blood

RESEARCH RECOMMENDATIONS

- Don't abuse alcohol.
- Eat a well-balanced, low-fat diet.
- Get vaccinated against hepatitis B.

GENOMAX GENE BASED WELLNESS PROGRAM

35. Non-Alcoholic Fatty Liver Disease (NAFLD)

Your Genetic Result

Your Risk / Response

NEUTRAL

Gene(s) Analysed

PEMT

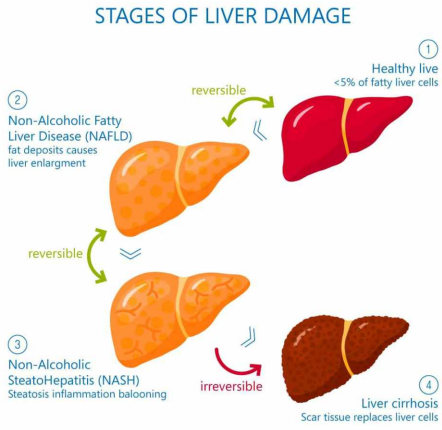
Risk / Response Variant(s) Presence

NO

Impact of Genotype(s)

Neutral Risk

NEUTRAL



Non-alcoholic fatty liver disease (NAFLD) encompasses a full pathological spectrum of progressive liver disease from simple steatosis (simple fatty infiltration of liver) to nonalcoholic steatohepatitis (NASH) (inflammation and/or fibrosis/liver cell damage in addition to fat accumulation) to cirrhosis. NAFLD occurs in individuals with no significant alcohol consumption and its incidence increases in parallel with features of metabolic syndrome. As a rapidly emerging disease, the prevalence rate of NAFLD 11-45% in the general population, with an alarming rate of greater than 50% in obese children and adolescents. NAFLD refers to a group of conditions where there is accumulation of excess fat in the liver of people who drink little or no alcohol.

The hallmark of NAFLD is the accumulation of trigly-cerides in the liver that occurs as a result of permanent imbalance between fatty acid influx, utilization and secretion of very low-density lipoproteins (VLDL)

Associated Symptoms	Associated Diseases
• Usually no signs or symptoms, Fatigue • Pain, or discomfort in the upper right abdomen, Abdominal swelling • Enlarged blood vessels just beneath the skin's surface • Enlarged spleen • Red palms • jaundice	• High cholesterol • High levels of triglycerides in the blood • Metabolic syndrome • Obesity • Polycystic ovary syndrome • Sleep apnea • Type 2 diabetes • hypothyroidism • Underactive pituitary gland

RESEARCH RECOMMENDATIONS

- Even though your risk is neutral for this gene you may have other risk factors. If you do have the associated diseases, please get diagnosed with the following tests; Complete blood count (CBC) Liver function test (liver enzyme test), Tests for chronic hepatitis (hepatitis A, C and others), Screening test for celiac disease, Fasting blood sugar test, Hemoglobin A1C test (to know the stability of blood sugar), Lipid profile test (for measuring cholesterol and triglycerides in the blood).

36. NAFLD Mitigation and - Choline Deficiency

Your Genetic Result

Your Risk / Response

NEUTRAL

Gene(s) Analysed

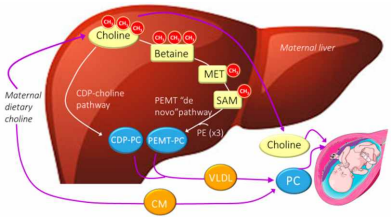
PEMT

Risk / Response Variant(s) Presence

NO

Impact of Genotype(s)

Normal phosphatidylcholine production in the liver



NEUTRAL

Phosphatidylcholines:
Phosphatidylcholines are a class of phospholipids that incorporate choline as a headgroup. They are a major component of biological membranes and can be easily obtained from a variety of readily available sources, such as egg yolk or soybeans, from which they are mechanically or chemically extracted using hexane.

PEMT:
Phosphatidylethanolamine-N-methyltransferase (PEMT) is an enzyme that catalyzes the synthesis of phosphatidylcholine and, thus, choline in the liver. Phosphatidylcholine is a fundamental component in all cell membranes and plays an essential role in the structure and function of the cell.

Fatty Liver Disease:
In addition to the essential role that phosphatidylcholine plays in cell membranes (particularly in neurons), it is also necessary in the liver. Phosphatidylcholine is required for the liver to secrete triglycerides into very low-density lipoproteins (VLDL Cholesterol). Decreased phosphatidylcholine can lead to reduced fat removal from the liver, and for that reason, may be associated with fatty liver disease.
There are common polymorphisms in the PEMT gene, which codes for the Phosphatidylethanolamine-N-methyltransferase enzyme. The risk variant form of the polymorphism is located in the coding region of the gene and results in an enzyme with partial loss of activity.

Food Sources

- Eggs, Chicken breast
- Soybeans
- Mustard
- Sunflower
- Codfish
- Shiitake mushrooms
- Quinoa
- Broccoli
- Peanuts

37. Tendency of Developing Liver Cirrhosis

Your Genetic Result

Your Risk / Response

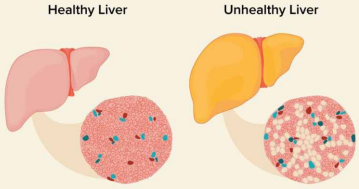
MODERATE RISK

Gene(s) Analysed

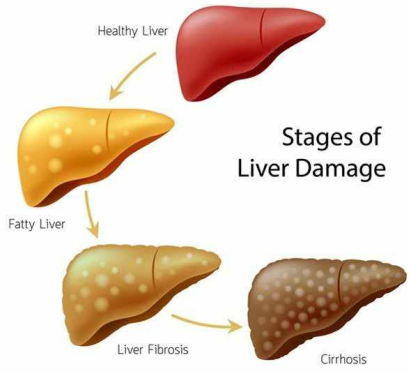
PNPLA3

Risk / Response Variant(s) Presence

YES



PAY ATTENTION!



Liver cirrhosis is a condition in which there is late-stage scarring of liver tissue. The healthy liver tissue gets replaced by scar tissue and hampers the normal functioning of the liver. The liver's ability to produce proteins and other substances is reduced, its ability to process drugs, hormones, nutrients, and toxins is reduced, and the regular flowof blood through the organ is hindered. Liver-damaging conditions like excess alcohol consumption and hepatitis can caus e liver cirrhosis. The liver damage caused by cirrhosis is usually irreversible however early diagnosis can help to manage the conditions and prevent further tissue.

RESEARCH RECOMMENDATIONS

- As per your genotype, you have increased risk of developing liver cirrhosis. Other factors like excessive alcohol consumption, being overweight or obese, viral hepatitis, fatty liver disease, autoimmune liver diseases, Wilson disease, and hemochromatosis may increase your risk of developing liver cirrhosis.
- Consume a healthy diet. Include more vegetables and fruits, whole grains, and lean protein in the diet.
- Limit alcohol consumption. Avoid alcohol consumption, especially if you have cirrhosis or any liver disease.
- Avoid excess consumption of fatty foods and fried foods

38. Requirement of Fat in Liver Cirrhosis

Your Genetic Result

Your Risk / Response

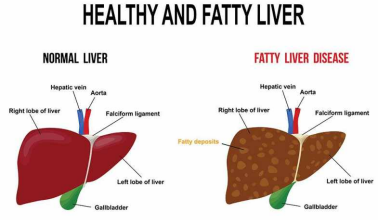
MODERATE RISK

Gene(s) Analysed

PNPLA3

Risk / Response Variant(s) Presence

YES



PAY ATTENTION!

Liver Cirrhosis (Liver Scarring)

Liver cirrhosis is a condition in which there is late-stage scarring of liver tissue. The healthy li ver tissue gets replaced by scar tissue and hampers the normal functioning of the liver. The liver's ability to produce proteins and other substances is reduced, its ability to process drugs, hormones, nutrients, and toxins is reduced, and the regular flow of blood through the organ is hindered. Liver-damaging conditions like excess alcohol consumption and hepatitis can cause liver cirrhosis. The liver damage caused by cirrhosis is usually irreversible however early diagnosis can help to manage the conditions and prevent further tissue.

RESEARCH RECOMMENDATIONS

- As per your genotype, you have increased risk of developing liver cirrhosis.
- Consume a healthy diet. Include more vegetables and fruits, whole grains, and lean protein in the diet
- Limit alcohol consumption. Avoid alcohol consumption, especially if you have cirrhosis or any liver disease.
- Avoid excess consumption of fatty foods and fried foods.
- Maintain a healthy body weight.

39. Impact of Alcohol On Liver Cirrhosis

Your Genetic Result

Your Risk / Response

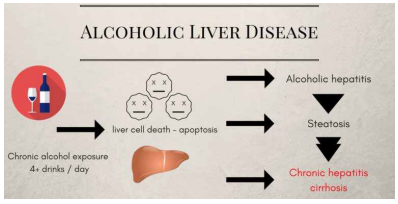
HIGH RISK

Gene(s) Analysed

ALDH2

Risk / Response Variant(s) Presence

NO



GIFTED!

Liver cirrhosis is a condition in which there is late-stage scarring of liver tissue. The healthy liver tissue gets replaced by scar tissue and hampers the normal functioning of the liver. The liver's ability to produce proteins and other substances is reduced, its ability to process drugs, hormones, nutrients, and toxins is reduced, and the regular flow of blood through the organ is hindered. Liver-damaging conditions like excess alcohol consumption and hepatitis can cause liver cirrhosis. The liver damage caused by cirrhosis is usually irreversible however early diagnosis can help to manage the conditions and prevent further tissue.

RESEARCH RECOMMENDATIONS

- As per your genotype, you have low risk of developing liver cirrhosis.
- Consume a healthy diet. Include more vegetables and fruits, whole grains, and lean protein in the diet.
- Limit alcohol consumption. Avoid alcohol consumption, especially if you have cirrhosis or any liver disease

GENOMAX GENE BASED WELLNESS PROGRAM

40. Risk of Hyperuricemia

Your Genetic Result

Your Risk / Response

TYPICAL RISK

Gene(s) Analysed

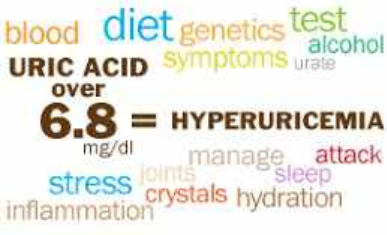
ABGC2

Risk / Response Variant(s) Presence

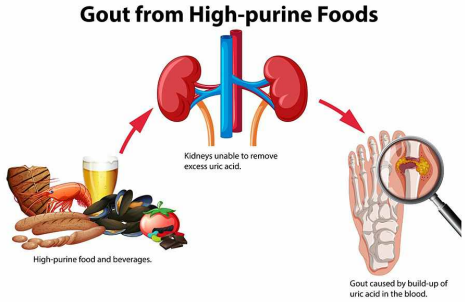
NO

Impact of Genotype(s)

Not Significantly associated with increased risk for hyperuricemia and increased serum uric acid levels.



NEUTRAL



Hyperuricemia (HUA) is defined by high serum uric acid (sUA) levels due to an imbalance of purines from food, urate synthesis, and/or urate excretion into the urine or gastrointestinal tract, which is related to gout, diabetes, hypertension, cardiovascular disease, and kidney disease. The cause of HUA is multi-factorial, including age, gender, obesity, diet, alcohol consumption, insulin resistance, hypertension, and medication. Hyperuricemia is a condition in the body where blood contains excess uric acid. Uric acid passes through the liver, and enters your blood stream. Most of it is excreted (removed from your body) in your urine, or passes through your intestines to regulate "normal" levels. Causes of high uric acid levels (hyperuricemia) can be primary (increased uric acid levels due to purine), and secondary (high uric acid levels due to another disease or condition). Sometimes, the body produces more uric acid than it is able to excrete. Hyperuricemia does not have notable symptoms except joint pains and swelling of joints.
A certain ABCG2 single nucleotide polymorphism (SNP) is one of the most significant genetic variants associated with hyperuricemia (HUA) in Asian populations.

Associated Symptoms	Associated Diseases
• Joint pain, Swelling of joints • Type 2 Diabetes • Kidney disease • Gout • Cardiac disease	• heart disease • diabetes • kidney disease • gout

GENOMAX GENE BASED WELLNESS PROGRAM

41. Glaucoma Risk

Your Genetic Result

Your Risk / Response

TYPICAL RISK

Gene(s) Analysed

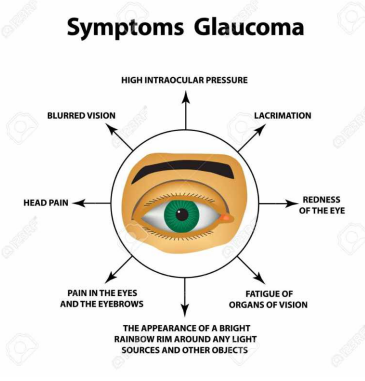
TNFA

Risk / Response Variant(s) Presence

NO

Impact of Genotype(s)

No significant increased risk towards Glaucoma (Indian Population)



NEUTRAL

Glaucoma is a condition that causes damage to your eye's optic nerve and gets worse over time. It's often linked to a buildup of pressure inside your eye. Glaucoma tends to be inherited and may not show up until later in life. Variants in MYOC gene has been associated with Glaucoma. The MYOC gene provides instructions for producing a protein called myocilin. Myocilin is found in certain structures of the eye, called the trabecular meshwork and the ciliary body, that regulate the pressure within the eye (intraocular pressure). It is also found in various types of muscle.

Glaucoma is proposed to be the second most common cause of blindness worldwide after cataract.

Researchers estimated the global prevalence of glaucoma to be 3.54% among population aged between 40?80 years. The prevalence of primary open angle glaucoma(POAG) is reported to be highest(4.20%) among African ancestry people and of primary angle closure glaucoma(PACG) (1.09%) among Asian population. In the year 2013, 64.3 million people worldwide were estimated to be suffering from glaucoma with estimates rising to 76 million in 2020 and to 111.8 million by 2040. Glaucoma is a silent disease in which patients usually do not have any signs and symptoms until last stage damage has been observed.

Glaucoma is defined as a cluster of optic neuropathies characterized by progressive degeneration of retinal ganglion cells (RGCs) and their axons in the specific regions of the retina resulting in loss of visual field.

A noteworthy Indian research started study has found that polymorphisms in the TNFa can significantly influence your risk for Glaucoma.

Risk Factors:

Having high internal eye pressure (intraocular pressure). Being over age 60. Being black, Asian or Hispanic. Having a family history of glaucoma. Having certain medical conditions, such as diabetes, heart disease, high blood pressure and sickle cell anemia. Having corneas that are thin in the center.

Associated Symptoms

- Severe pain in eye
- Nausea and vomiting accompanying with severe eye pain
- Sudden onset of visual disturbance, often in low light
- Blurred vision
- Halos around lights
- Reddening of the eye

GENOMAX GENE BASED WELLNESS PROGRAM

42. Risk of Cataract

Your Genetic Result

Your Risk / Response

MODERATE RISK

Gene(s) Analysed

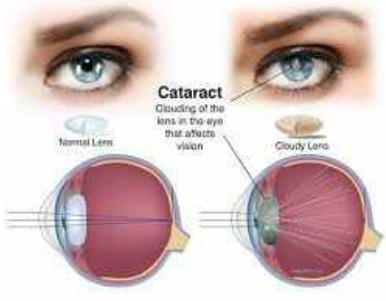
MTHFR

Risk / Response Variant(s) Presence

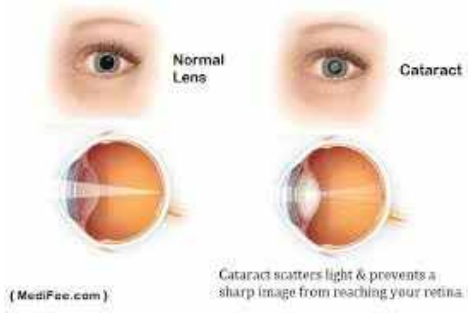
YES

Impact of Genotype(s)

~35 decrease of the normal enzyme activity and elevated homocysteine levels.



PAY ATTENTION!



Cataract is the leading cause of visual impairment and blindness, affecting about 16 million people worldwide. The most common type of cataract is age-related cataract (ARC), which is characterized by loss of transparency of the normal crystalline lens in people aged 50 years and over. Although the etiology of ARC is not fully understood, it is widely accept that oxidative stress caused by excessive reactive oxygen species (ROS) generation plays a vital role in the development of ARC. An increase in ROS can lead to DNA damage and formation of urea-insoluble proteins in the lens epithelium, and these processes are involved in cataract formation.

Homocysteine (Hcy) is a potential risk factor for age-related cataract (ARC). Methylenetetrahydrofolate reductase (MTHFR) is the key enzyme for Hcy metabolism, and variants of MTHFR may affect MTHFR enzyme activity.

Factors that increase your risk of cataracts include:

- Increasing age
- Diabetes
- Excessive exposure to sunlight
- Smoking, Drinking excessive amounts of alcohol
- Obesity
- High blood pressure
- Previous eye injury, surgery or inflammation
- Prolonged use of corticosteroid medications

Associated Symptoms

- Clouded, blurred or dim vision
- Increasing difficulty with vision at night
- Sensitivity to light and glare
- Seeing "halos" around lights
- Frequent changes in eyeglass or contact lens prescription
- Fading or yellowing of colors

RESEARCH RECOMMENDATIONS

- Omega-3 fatty acids have also been linked to a reduced risk of cataracts and its progression.
- Quit smoking and reduce alcohol use
- Choose a healthy diet that includes plenty of fruits and vegetables. Consumption of anti-oxidants and phytochemicals in the diet help to prevent the oxidative damage to the eyes.
- Your genotype had a moderately increased risk of Age Related Cataract compared with the reference group.

GENOMAX
GENE BASED WELLNESS PROGRAM

43. Age Related Hearing Loss

Your Genetic Result

Your Risk / Response

INCREASED RISK (2X)

Gene(s) Analysed

APOE(1) - APOE(2)

Risk / Response Variant(s) Presence

YES

Impact of Genotype(s)

Intermediate levels of hearing loss

PAY ATTENTION!

The Contribution of APOE to age-related hearing loss ranges between 6- and 10-dB hearing loss, thus explaining for 10 - 15% of age-related hearing loss in the high-frequency range (4000 - 8000 Hz) and 20 - 30% of age-related hearing loss occurring in the lower-frequency range (250 - 2000 Hz). Also it is important to note that the presence of cardiovascular disease was associated with a 2.4-fold increased risk of hearing impairment compared with those without cardiovascular disease. Hearing loss was measured using pure-tone audiometry because pure-tone audiometry is the golden standard to determine hearing threshold. Hearing impairment was defined as a hearing loss more than 35 dB for the best ear.

The prevalence and severity of hearing loss increases with age. Age-related hearing loss affects up to 80% of people aged 80 years and more. It is a disabling condition associated with problems in daily life, social isolation, depression, and a lower quality of life. Because of the impact of agerelated hearing loss on all aspects of everyday life and possibilities for prevention, it is essential to understand more about the pathophysiological basis of this disorder. The apolipoprotein E (APOE) genotype is unique. Studies show that APOE contributes to maintenance and repair of neuronal cell membranes.

GENOMAX GENE BASED WELLNESS PROGRAM

44. Gum Disease (Periodontitis)

Your Genetic Result

Your Risk / Response

TYPICAL RISK

Gene(s) Analysed

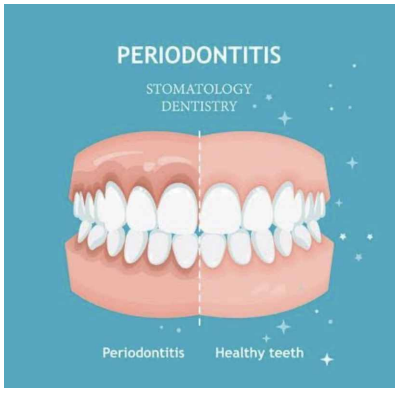
TNFA

Risk / Response Variant(s) Presence

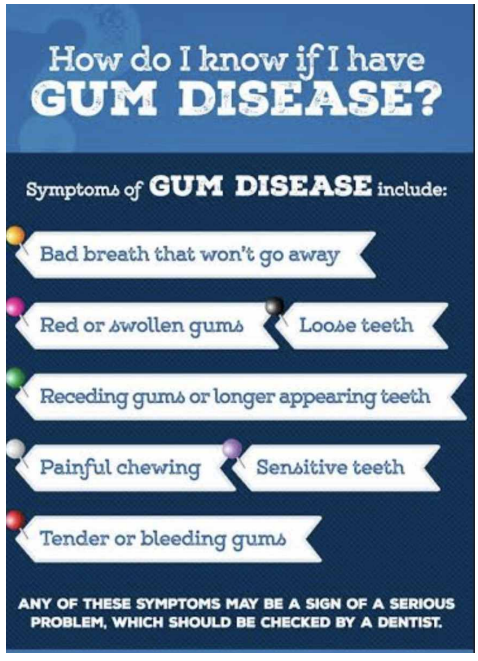
NO

Impact of Genotype(s)

No Increased risk for chronic periodontitis and not significantly associated with elevated risk for aggressive periodontitis.



NEUTRAL



Periodontitis is a complex chronic inflammatory disease that results in the loss of connective tissue and alveolar bone support of the teeth. Periodontal diseases are highly prevalent, with chronic periodontitis (CP) being the most common form of disease affecting more than 90% of adults above 60 years (Pihlstrom et al. 2005). Furthermore, it is also the leading cause of tooth loss, particularly in the elderly. Although pathogenic microbes is thought to be the initial factor, genetic factors as well as environmental factors play an important role in the pathogenesis of this inflammatory disease. Tumor necrosis factor-alpha (TNF-a) is an important inflammatory cytokine and modulator of immune responses, which also plays a role in the pathogenesis of periodontitis.

Chronic periodontitis:
Chronic periodontitis is a common disease of the oral cavity consisting of chronic inflammation of the periodontal tissues that is caused by the accumulation of profuse amounts of dental plaque.

Aggressive periodontitis:
Aggressive periodontitis is a destructive disease characterized by the following: the involvement of multiple teeth with a distinctive pattern of periodontal tissue loss; a high rate of disease progression; an early age of onset; and the absence of systemic diseases.

What is the difference between Chronic and Agressive periodontits?
In chronic periodontitis, there is no well-defined pattern of bone loss. In generalized aggressive periodontitis, most permanent teeth are affected.

Associated Symptoms

- Swollen or puffy gums
- Bright red, dusky red or purplish gums
- Gums that feel tender when touched, Gums that bleed easily
- Pink-tinged toothbrush after brushing
- Spitting out blood when brushing or flossing your teeth
- Pus between your teeth and gums

GENOMAX GENE BASED WELLNESS PROGRAM

45. Hypothyroidism

Your Genetic Result

Your Risk / Response

INCREASED RISK

Gene(s) Analysed

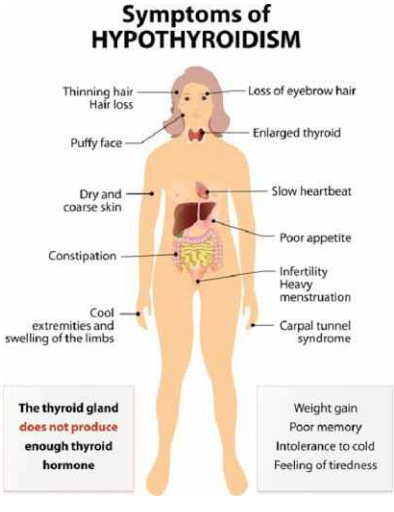
MTHFR(1) - MTHFR(2)

Risk / Response Variant(s) Presence

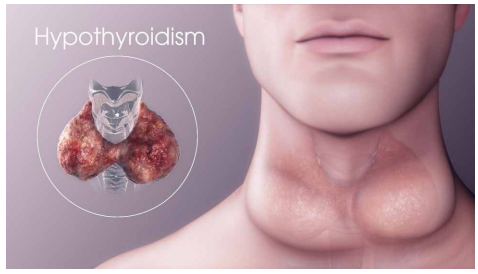
YES

Impact of Genotype(s)

Moderate risk for Hypothyroidism



PAY ATTENTION



Hypothyroidism is a common health problem with a worldwide annual incidence of 1.5 cases per 1,000 individuals. It occurs more often in females, with an incidence around 10-15 times higher than in males. Hypothyroidism during pregnancy has been associated with gestational diabetes, premature deliveries, offspring with low intelligence, risk of peripartum death, and a higher risk of spinal cord malformations and Down's syndrome. The methylenetetrahydrofolate reductase (MTHFR) enzyme catalyzes the conversion of 5, 10-methylenetetrahydrofolate to 5-methyltetrahydrofolate. MTHFR contributes to the hypermethylation of genomic DNA. The resulting DNA hypermethylation may affect genes that influence the risk of autoimmune thyroid diseases (AITD), leading to pathological changes in thyroid gland function. Variants in MTHFR gene are studied to effect thyroid function and thus related to risk of hypothyroidism.

Associated Symptoms

- Fatigue
- Constipation
- Weight gain
- Muscle weakness
- Elevated blood cholesterol level
- Pain, stiffness or swelling in your joints
- Heavier than normal or irregular menstrual periods (females)
- Thinning hair, Dry skin
- Slowed heart rate
- Impaired memory
- Goiter

RESEARCH RECOMMENDATIONS

- While there isn't any particular step you can take to prevent hypothyroidism, there are certain epigenetic or lifestyle choices you can make that may reduce your risk, or if you've been diagnosed with thyroid disease, help you manage your condition.
- Studies have shown that selenium lowers Thyroperoxidase (TPO) antibodies thus helps in decreasing the symptoms of hypothyroidism The active form in supplements is Selenomethionine.
- Consume foods rich in Vitamin A, folate (active form) and zinc.
- Reduce the intake of gluten-rich foods even if not at risk of Gluten Intolerance, and avoid it completely if you are at risk.

GENOMAX
GENE BASED WELLNESS PROGRAM

46. Requirement of Iodine Intake

Your Genetic Result

Your Risk / Response

LOW RISK

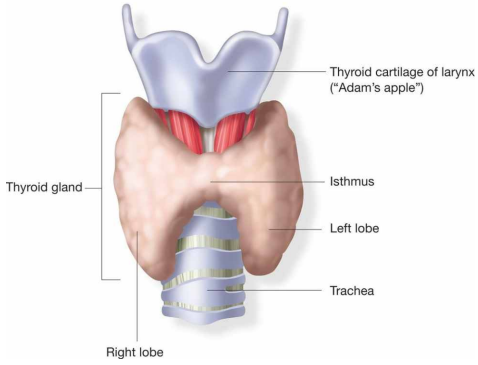
Gene(s) Analysed

PTPN22

Risk / Response Variant(s) Presence

NO

GIFTED!



Iodine is an essential mineral you must get from your diet. Interestingly, your thyroid gland needs it to produce thyroid hormones, which have many important responsibilities in your body. The recommended daily intake (RDI) of iodine is 150 mcg per day for most adults. For women who are pregnant or nursing, the requirements are higher. Iodine deficiency can lead to swelling of the thyroid gland, known as goiter, and hypothyroidism, which can cause fatigue, muscle weakness and weight gain. The World Health Organization (WHO) recommended dietary allowance (RDA) of iodine is as follows : Adults and adolescents - 150 mcg/day. Pregnant and lactating women - 250 mcg/day. Children aged 6-12 years - 120 mcg/day.

RESEARCH RECOMMENDATIONS

- As per your genotype, your requirement for iodine low.
- Routine intake of iodine suggested.
- Consume variety and a balanced diet.

GENOMAX
GENE BASED WELLNESS PROGRAM

47. Impact of Alcohol and Smoking On Hypothyroidism

Your Genetic Result

Your Risk / Response

LOW RISK

Gene(s) Analysed

ALDH2

Risk / Response Variant(s) Presence

NO

GIFTED!

The effect of heavy alcohol use on the hypothalamic pituitary thyroid axis also known as thyroid homeostasis is significant. Most significantly, heavy alcohol use reduces the thyroid hormones-T4 and T3 and blunts the thyroid-stimulating hormone (TSH) response to thyrotropin-releasing hormone (TRH) from the hypothalamus gland. In addition to reducing T3, T4, and TSH values, alcohol may also reduce thyroid volume i.e the sum of the volumes of both lobes of the thyroid gland. This reduction is due to alcohol's direct toxic effect on thyroid cells. However, the toxic effect of alcohol on thyroid volume may also be a protective element against the development of goiter which is an abnormal enlargement of the thyroid gland. In fact, some treatments for thyroid nodules use ethanol ablation therapy a minimally invasive radiology treatment that destroys tumors by using alcohol. The symptoms include fatigue, constipation, weight gain, hoarness, dry skin , muscle weakness, etc.

RESEARCH RECOMMENDATIONS

- As per your genotype, you have low risk to develop Hypothyroidism.
- Hence, there is less impact of alcohol and smoking on hypothyroidism.
- Low risk of developing fatigue, constipation, weight gain, etc.
- Consumption of alcohol and smoking should be monitored and controlled.

GENOMAX GENE BASED WELLNESS PROGRAM

48. Hashimoto's Thyroiditis

Your Genetic Result

Your Risk / Response

NEUTRAL RISK

Gene(s) Analysed

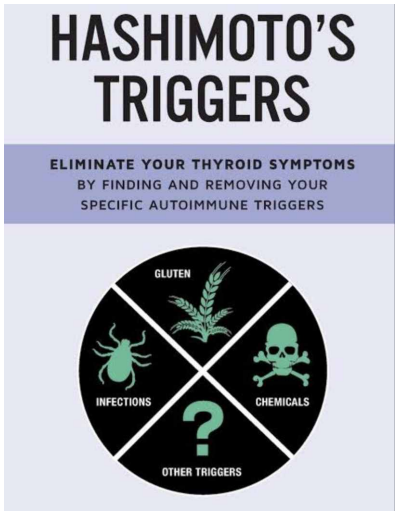
TNFA - IL6

Risk / Response Variant(s) Presence

NO

Impact of Genotype(s)

No Significantly associated with high risk for Hashimotos Thyoiditis



NEUTRAL

Also called Hashimoto's disease, Hashimoto's thyroiditis is an autoimmune disease, a disorder in which the immune system turns against the body's own tissues. In people with Hashimoto's, the immune system attacks the thyroid. This can lead to hypothyroidism, a condition in which the thyroid does not make enough hormones for the body's needs.

Autoimmune diseases, which affect 5 to 7% of the population and are frequently responsible for severe disability, represent a major cause of chronic illness and an important issue in general healthcare. Autoimmune thyroid diseases (AITD), including Hashimoto's thyroiditis (HT) is one of the most common organ specific autoimmune disorders.

HT is a T cell-mediated organ-specific autoimmune disease characterized by lymphocytic infiltration that leads to thyroid cells loss, clinically expressed by hypothyroidism

Associated Symptoms

- Weight gain
- Fatigue
- Paleness or puffiness of the face, Joint and muscle pain
- Constipation
- Inability to get warm
- Difficulty getting pregnant
- Hair loss or thinning
- brittle hair
- Irregular or heavy menstrual periods, Depression
- Slowed heart rate

GENOMAX
GENE BASED WELLNESS PROGRAM

49. Grave's Disease

Your Genetic Result

Your Risk / Response

NEUTRAL RISK

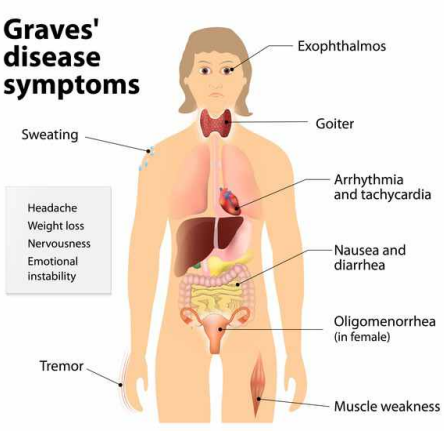
Gene(s) Analysed

IL6 - TNFA

Risk / Response Variant(s) Presence

NO

NEUTRAL



Graves disease is an autoimmune disorder that causes hyperthyroidism, or overactive thyroid. With this disease, your immune system attacks the thyroid and causes it to make more thyroid hormone than your body needs. The thyroid is a small, butterfly-shaped gland in the front of your neck.

Autoimmune diseases, which affect 5 to 7% of the population and are frequently responsible for severe disability, represent a major cause of chronic illness and an important issue in general healthcare. Autoimmune thyroid diseases (AITD), including Graves' disease (GD), is one of most common organ specific autoimmune disorders.

GD patients exhibit hyperthyroidism, which is due to excessive secretion of the thyroid hormone induced by specific autoantibodies to the thyrotropin receptor (TSHR) produced by TSHR-reactive B cells

Associated Symptoms	Associated Diseases
• Anxiety and irritability • A fine tremor of the hands or fingers • moist skin,Weight loss • Goiter • Change in menstrual cycles • Frequent bowel movements • Bulging eyes (Graves ophthalmopathy) • Fatigue, Thick, red skin • Rapid or irregular heartbeat • Sleep disturbance	• Pregnanacy Issues (miscarriage, preterm birth, fetal thyroid dysfunction, poor fetal growth, maternal heart failure and preeclampsia) • Brittle Bones • Heart Disorders • Thyroid Storm

GENOMAX GENE BASED WELLNESS PROGRAM

50. Risk of CKD

Your Genetic Result

Your Risk / Response

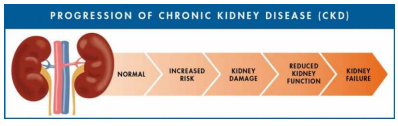
HIGH RISK

Gene(s) Analysed

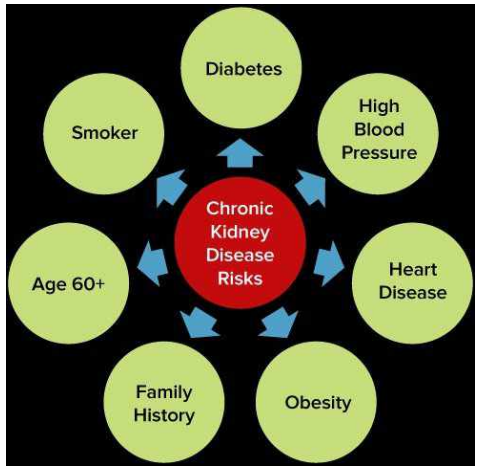
UMOD

Risk / Response Variant(s) Presence

YES



PAY ATTENTION!



Chronic Kidney Disease (CKD), also called chronic kidney failure is a condition where in there is a gradual loss of kidney function. In the early stages of CKD, only a few signs or symptoms may manifest; there is a slow and progressive loss of kidney function over a period of several years which may eventually result in permanent kidney failure. As the kidney failure advances and kidney function is severely impaired, dangerous levels of waste and fluid scan rapidly build up in the body.

RESEARCH RECOMMENDATIONS

- As per your genotype, you have high risk of developing Chronic Kidney Disease (CKD). Other factors like a family history of kidney disease, smoking, diabetes, high blood pressure, cardio vascular diseases, obesity, abnormal kidney structure, are also low.
- Eat a balanced diet and limit the amount of salt intake, as excess salt can increase the risk of developing high blood pressure.
- If you suffer from conditions that pose as risk factors for CKD, follow regimens recommended by a doctor to control them.
- Follow a diet that is low in potassium and phosphorus; limit fluid intake.

GENOMAX GENE BASED WELLNESS PROGRAM

51. Requirement of Sodium and Potassium Intake

Your Genetic Result

Your Risk / Response

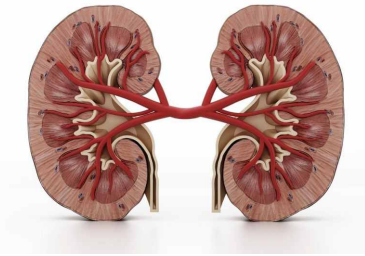
HIGH RISK

Gene(s) Analysed

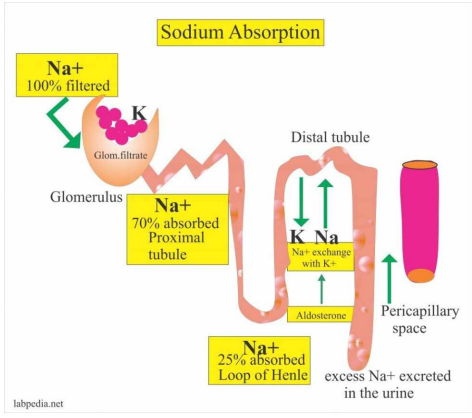
UMOD

Risk / Response Variant(s) Presence

YES



PAY ATTENTION!



Sodium is an important electrolyte and an essential nutrient for human health, whose role in the body is primarily as an electrolyte and maintaining Fluid balance. Sodium enables the transmission of nerve impulses around the body, regulating the electrical charges moving in and out of the cells. Potassium is a mineral and an electrolyte. Sodium potassium pump in our system helps the muscles work, including the muscles that control your heart beat and breathing.

RESEARCH RECOMMENDATIONS

- As per your genotype, your Salt Metabolism is very poor.
- People with such a genotype are likely to respond poorly to increased salt intake, and therefore are advised to limit consumption.
- Adopt a healthy diet, low in sodium and regulate your potassium after consulting your health practitioner.

GENOMAX
GENE BASED WELLNESS PROGRAM

52. Requirement of Fluid Intake

Your Genetic Result

Your Risk / Response

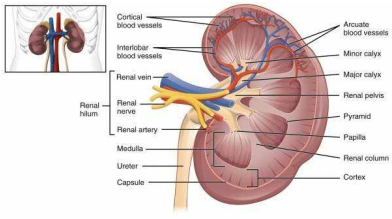
HIGH RISK

Gene(s) Analysed

UMOD

Risk / Response Variant(s) Presence

YES



PAY ATTENTION!

In kidney disease bodies ability to urinates reduces which increases the risk of water retention. Thus it is very important to restrict fluids as high fluid intake can increase renal load. Tabl e salt is a mineral composed primarily of sodium chloride. Sodium is an important electrolyte and an essential nutrient for human health, whose role in the body is primarily as an electrolyte and maintaining fluid balance. Excess sodium in the body has many side effects such as hypertension, fluid retention, swelling, and edema. Severe sweating, vomiting, and diarrhea are also markedly associated with increased sodium levels Thus, in case of renal diseases sodium restriction is also essential with fluid restriction. Genetic variations can in indicate how an individual responds to salt intake, thereby influencing how much fluid can be tolerated in their diet.

RESEARCH RECOMMENDATIONS

- As per your genotype, You do have increased risk of fluid retention and thus low requirement of fluids in case of kidney disease.
- Limit intake of sodium in diet.
- Increase intakeof citrus fruits in diet as they are rich in potassium.
- Sodium and potasium balance is essential for normal fluid in body

GENOMAX
GENE BASED WELLNESS PROGRAM

53. Tendency of Alcohol Sensitivity

Your Genetic Result

Your Risk / Response

LOW RISK

Gene(s) Analysed

ALDH2

Risk / Response Variant(s) Presence

NO

GIFTED!

Alcohol sensitivity, also known as alcohol intolerance or hypersensitivity is a condition that causes immediate, unpleasant reactions after alcohol consumption. The common reactions are stuffy nose and flushing of the skin. Alcohol sensitivity is caused by variations in genes that are responsible for the breakdown of alcohol in the body. Although not an allergic reaction, alcohol sensitivity can be the reaction to certain ingredients in an alcoholic drink; such reactions can also be caused while combining medications with alcohol. Avoiding alcohol consumption is often the only solution to prevent such adverse reactions.

RESEARCH RECOMMENDATIONS

- As per your genotype, you have a low risk of developing alcohol sensitivity.
- Individuals with such a genotype may have less likely to experiencing adverse or unpleasant reactions to the consumption of alcohol. However, having asthma or allergic rhinitis, all ergy towards certain grai ns or other food products, and Hodgkin's lymphoma may further increase the risk of developing alcohol intolerance or other reactions of alcohol.
- If you experience any adverse reactions to alcohol, avoid alcohol consumption or consumption of foods and beverages containing the particular substance that triggers your reaction.

GENOMAX
GENE BASED WELLNESS PROGRAM

54. Tendency of Alcohol Flush

Your Genetic Result

Your Risk / Response

LOW RISK

Gene(s) Analysed

ALDH2

Risk / Response Variant(s) Presence

NO

GIFTED!

Alcohol flush is a condition in which a person develops flushes, redness or a large irregular patch or unsightly mark on the skin or another surface throughout their entire body or on specific areas after consuming alcohol. Alcohol flush is encoded by the gene ALDH2, which stands for Aldehyde Dehydrogenase 2. This is an important enzyme involved in alcohol metabolism and is responsible for the breakdown of a toxic compound called Acetaldehyde. The main site of ethanol metabolism is the liver, although some metabolism also occurs in other tissues and can cause local damage there. The variations in this gene have shown to influence a person's drinking levels and, consequently, the risk of developing alcohol dependence. The variants also shows higher levels of white blood cells with chromosomal damage.

RESEARCH RECOMMENDATIONS

- As per your genotype you have good alcohol metabolism and hence, have decreased risk of developing liver-related issues on consistent consumption of alcohol. Also has decreased risk of developing alcohol dependence.
- The body;s ability to eliminate toxins and flush out alcohol is average.
- As per your genotype, you are less prone to have increased levels of white blood cells with chromosomal damage.
- Consumption of alcohol should be monitored and controlled. Increase intake of high fiber and antioxidant foods such as fruits and vegetable will help to eliminate toxins and flush out alcohol.

GENOMAX
GENE BASED WELLNESS PROGRAM

55. Risk of Parkinson's Disease (Early Onset)

Your Genetic Result

Your Risk / Response

NEUTRAL

Gene(s) Analysed

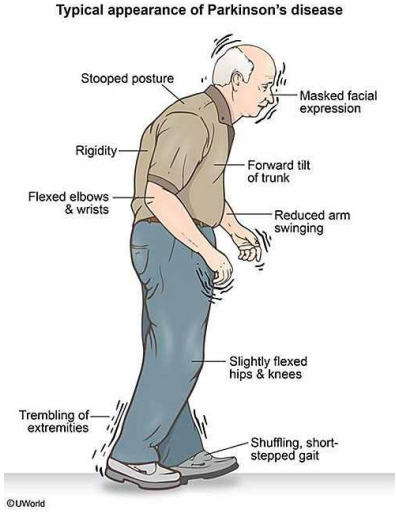
MTHFR

Risk / Response Variant(s) Presence

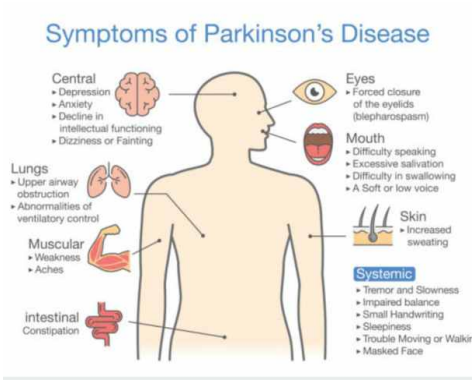
NO

Impact of Genotype(s)

No Significant association with Earlier onset of Parkinsons disease compared to other genotypes.



NEUTRAL



Parkinson's disease is a progressive nervous system disorder that affects movement. Symptoms start gradually, sometimes starting with a barely noticeable tremor in just one hand. Tremors are common, but the disorder also commonly causes stiffness or slowing of movement. In the early stages of Parkinson's disease, your face may show little or no expression. Your arms may not swing when you walk. Your speech may become soft or slurred. Parkinson's disease symptoms worsen as your condition progresses over time.
Parkinson disease's (PD) is the second most common agerelated neurodegenerative disorder affecting 1 - 2 % of the

Associated Symptoms

- Tremor
- Slowed movement (bradykinesia)
- Rigid Muscles
- Impaired posture balance
- Speech changes
- Writing changes

RESEARCH RECOMMENDATIONS

- Consume a diet rich in Tyrosine- an amino acid that helps make the neurotransmitter 'Dopamine', thus helping in the prevention of Parkinson's Disease.
- Research studies show that caffeine and green tea may lower your risk of developing PD.
- Staying active and exercising may also lower your risk of PD.
- Even though you may not carry this genetic risk factor you may still be susceptible to other risk factors. Hence you may follow the recommendations in this section for prevention.
- Consume a diet rich in foods that help in increasing the secretion of Dopamine naturally, like bananas, beet, sunflower seeds etc. after discussion with your counselor.
- Go Organic (and Local) because pesticides and herbicides have been heavily implicated in causing Parkinson's.
- Eat Fresh, Raw Vegetables.
- Incorporate Omega-3 Fatty Acids Into Your Diet.

GENOMAX
GENE BASED WELLNESS PROGRAM

56. Alzheimer's Disease

Your Genetic Result

Your Risk / Response

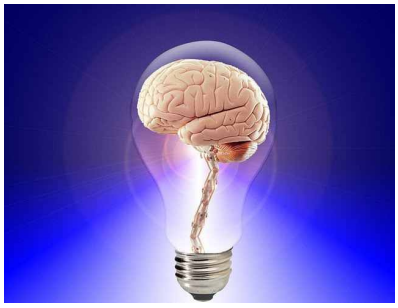
INCREASED RISK

Gene(s) Analysed

APOE(1) - APOE(2)

Risk / Response Variant(s) Presence

YES



PAY ATTENTION!

Alzheimer's disease is a progressive brain disorder that slowly destroys memory and thinking skills, and, eventually, the ability to carry out the simplest tasks. In the brain, ApoE is a protein involved in clearing harmful plaques that form around nerve cells. These plaques are a hallmark of Alzheimer's disease, and consist of damaged proteins called amyloid-beta which stick together to form the toxic plaques. Some genetic profiles are more effective removing A-beta plaque from the brain and subsequently are protective against Alzheimer's disease(AD). Whereas others are not very effective at removing A-beta plaque and carry an increased risk for developing AD.

Associated Symptoms

- Mental decline, mental confusion
- difficulty in thinking and understanding
- memory loss that causes disruption in daily routine
- challenges in planning or solving problems
- disorientation, jumbled speech
- inability to create new memories
- inability to do simple maths, or inability to recognise common things
- aggression
- loneliness
- inability to combine muscle movements

RESEARCH RECOMMENDATIONS

- Colostrinin 100mcg/day is studied to show cognitive improvement when given for 16-28 months for the high risk carrier.
- 2000mg of Magnesium L-Threonate providing 144mg elemental magnesium /day has been studied to maintain and improve the quantity of synaptic connections between brain cells and inhibits the dysregulation of important brain cell signaling pathways.
- Huperzine 600mcg-800mcg/day has been shown to maintain healthy levels of acetylcholine which is needed for learning and memory and declines in Alzheimer's disease high risk group.
- It is important to include green Leafy vegetables, other vegetables, nuts, berries, beans, whole grains, fish, poultry, olive oil in diet to prevent cognitive decline.
- It is important to avoid high fatty food such as red meats, butter and margarine, cheese, pastries and sweets, fried/fast food since these individuals show hyperabsorption of cholesterol from diet.

GENOMAX GENE BASED WELLNESS PROGRAM

57. Vascular Dementia

Your Genetic Result

Your Risk / Response

NEUTRAL

Gene(s) Analysed

MTHFR

Risk / Response Variant(s) Presence

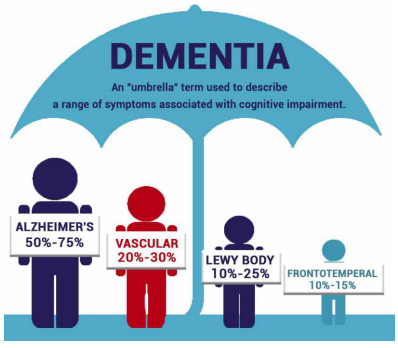
NO

Impact of Genotype(s)

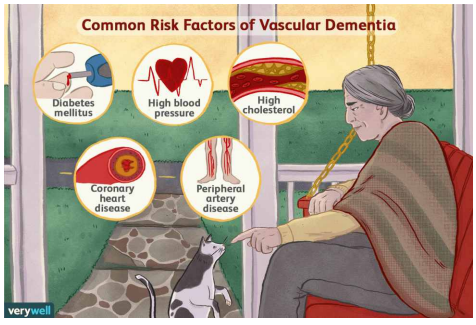
Not associated developing Dementia (Asian Population)

Significantly with Vascular

TYPES



NEUTRAL



The word dementia describes a set of symptoms that can include memory loss and difficulties with thinking, problem-solving or language. In vascular dementia, these symptoms occur when the brain is damaged because of problems with the supply of blood to the brain. Dementia is one of the most important neurological disorders in the elderly. As life expectancy increases, the worldwide number of dementia patients is projected to grow from 24.3 million in 2001 to 81.1 million in 2040. Among this vast group, vascular dementia (VaD) is traditionally considered the second most common cause of dementia after Alzheimer's disease (AD). The prevalence rate of VaD ranges from about 1.5/100 at age 70 - 75 years to 14-16/100 at age 80 years and above, and VaD might become the most common form of dementia with progressive aging of populations.
It is very important to identify the risk factors for VaD in order to take an effective preventive and treatment measures.

Associated Symptoms	Associated Diseases
• In early stages, the condition causes cognitive difficulty with reasoning and judgment • In later stages, memory is affected • Disorientation • Difficulty thinking and understanding • Inability to create new memories • Agitation • Depression	• Increasing age • History of heart attack • strokes or ministrie strokes • Abnormal ageing of blood vessels (atherosclerosis) • High Cholesterol • High blood pressure • Diabetes • Smoking • Obesity • Atrial fibrillation

GENOMAX
GENE BASED WELLNESS PROGRAM

58. Requirement of Anti-Inflammatory Food

Your Genetic Result

Your Risk / Response

HIGH RISK

Gene(s) Analysed

MNSOD

Risk / Response Variant(s) Presence

YES

PAY ATTENTION!

Inflammation is a complex biological response of body tissues to harmful stimuli, such as pathogens, damaged cells, or irritants. It involves a whole array of immune cells and molecular mediators which provide a protective effect. Exercise tends to damage muscle cells, thereby eliciting an inflammatory response. This inflammatory response repairs the muscle and aids in its growth and adaptation. However, the severity of this inflammation manifests itself as muscle soreness. If there is an upregulation of the body's inflammatory enzymes, it can possibly lead to greater inflammation and hence greater muscle soreness.

RESEARCH RECOMMENDATIONS

- As per your genotype, your body may exhibit a high degree of inflammatory response.
- Anti inflammatory nutritional support needed.
- Include anti inflammatory foods like seeds, nuts, fish, ginger, turmeric for better management of inflammation

GENOMAX
GENE BASED WELLNESS PROGRAM

59. Requirement of Flavonoids

Your Genetic Result

Your Risk / Response

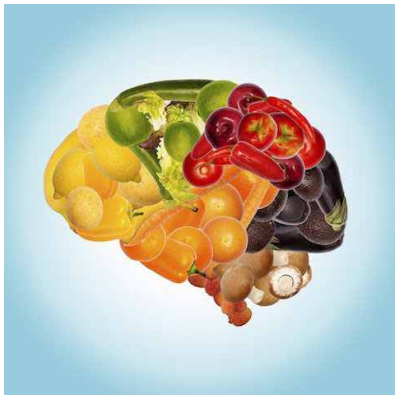
MODERATE RISK

Gene(s) Analysed

GSTP1

Risk / Response Variant(s) Presence

YES



PAY ATTENTION!

Flavonoids are a group of plant metabolites thought to provide health benefits through cell signaling pathways and antioxidant effects. These molecules are found in a variety of fruits and vegetables. Flavonoids are important antioxidants and promote several health effects. Aside from antioxidant activity, these molecules provide the following beneficial effects: anti-viral, anti-cancer, anti-inflammatory, anti-allergic.

RESEARCH RECOMMENDATIONS

- As per your genotype, your body may need increased amounts of flavonoids
- Almost all fruits, vegetables and herbs contain a certain amount of flavonoids.
- They can also be found in other food sources including dry beans, grains, red wine and green and black teas

GENOMAX
GENE BASED WELLNESS PROGRAM

60. Impact of Alcohol and Caffeine

Your Genetic Result

Your Risk / Response

LOW RISK

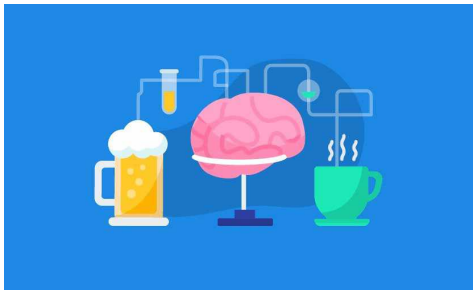
Gene(s) Analysed

ALDH-2

Risk / Response Variant(s) Presence

NO

GIFTED!



Drinking heavily puts people at risk for many adverse health consequences, including alcoholism, liver damage, and various cancers. Research shows that alcohol (ethanol) use and alcoholrelated problems are influenced by individual variations in alcohol metabolism. Alcohol metabolismis controlled by genetic factors, such as variations in the enzymes(ALDH2) that break down alcohol; and environmental factors, such as the amount of alcohol metabolism tendency in an individual consumed and his or her overall nutrition. Caffeine is consumed in various forms such as coffee, tea, and other caffeinated products and is a commonly consumed psychoactive substance. Caffeine consumption above a certain amount has been linked with the development of caffeine dependence.

RESEARCH RECOMMENDATIONS

- As per your genotype, you have normal alcohol metabolism and hence, have reduced risk of developing liver-related issues on consistent consumption of alcohol . Also have low risk of developing alcohol dependence.
- Consumption of alcohol should be monitored and controlled. Increase intake of high fiber and antioxidant foods such as fruits and vegetable will help to eliminate toxins and flush out alcohol.
- As per your genotype, you have a normal tendency to consume higher amounts of caffeine and a typical susceptibility for developing caffeine-induced anxiety.

GENOMAX GENE BASED WELLNESS PROGRAM

61. Response to Pesticide Exposure

Your Genetic Result

Your Risk / Response

ELEVATED TOXICITY RISK

Gene(s) Analysed

PON1

Risk / Response Variant(s) Presence

YES

Impact of Genotype(s)

Have a 74% greater risk of pesticide toxicity compared to those without it.

PAY ATTENTION!

Organophosphates are one of the most commonly used pesticides in farming. Although these pesticides are supposed to degrade when exposed to air and light, there is evidence that organophosphate residue remains on many of the fruits and vegetables we eat. The widespread use of pesticides in schools, parks, and other public spaces also puts many people at risk of low-level exposure. Farm workers and military members who have been exposed to nerve agents have an even greater risk of toxicity.

Examples of organophosphates include the following:

Insecticides - Malathion, parathion, diazinon, fenthion, dichlorvos, chlorpyrifos, ethion.

Nerve gases - Soman, sarin, tabun, VX.

Ophthalmic agents - Echothiophate, isoflurophate.

Antihelmintics - Trichlorfon.

Herbicides - Tribufos (DEF), merphos.

Pesticides are a growing health concern in many parts of the world. The PON1 gene, encodes the PON1 protein, which may help protect you by detoxifying a common type of pesticide called organophosphate depending on your genotype.

Associated Symptoms

- Infertility
- Cancer
- Birth defects
- Increased risk of Alzheimer's
- Increased risk of Parkinson's
- Increased risk of ALS

RESEARCH RECOMMENDATIONS

- Consume the following nutrigenomic suggestions based on your genotype: Mediterranean Diet, Extra virgin olive oil, Green tea, Blueberries, Pomegranate juice, Dates(Hallawi variety), Fish oil(DHA), Broccoli sprouts(in cell studies), Mustard and wasabi(in cell studies).
- Research shows that exercising, quitting cigarettes, and reducing inflammation can significantly improve your PON1 function.
- Fish oil (DHA) Vitamins C & E Grape seed extract Curcumin Berberine Resveratrol.
- Your genotype reduces the activity of the protein, resulting in lesser breakdown (and more potential buildup) of organophosphate toxins.

GENOMAX GENE BASED WELLNESS PROGRAM

62. Risk of Migraine (with aura)

Your Genetic Result

Your Risk / Response

HIGHER RISK FOR MIGRAINE WITH AURA

Gene(s) Analysed

MTHFR

Risk / Response Variant(s) Presence

YES

PARTIALLY BAD!

Migraines are a recurring type of headache. They cause moderate to severe pain that is throbbing or pulsing. The pain is often on one side of your head. You may also have other symptoms, such as nausea and weakness. Warning symptoms known as aura may occur before or with the headache. These can include flashes of light, blind spots, or tingling on one side of the face or in your arm or leg. Though migraine causes aren't understood, genetics and environmental factors appear to play a role. There is currently no single cure for migraines. Treatment is aimed at preventing a full-blown attack, and alleviating the symptoms that occur.

RESEARCH RECOMMENDATIONS

- Consume the right amount of folate your body needs, which is ~520 mcg per day in order to keep control on homocysteine levels which can be a major trigger for migraine with aura.
- Consider supplementation with L-methylfolate and methyl B12 (active form).
- Since your detox system is hampered, avoid exposure to heavy metals and environmental toxins. Help your body to eliminate toxins, by using detox baths, the sauna, drinking enough water, and exercising.

63. Impact of Caffeine and Alcohol (On Migraine)

Your Genetic Result

Your Risk / Response

LOW RISK

Gene(s) Analysed

CYP1A2

Risk / Response Variant(s) Presence

NO

GIFTED!

Migraines are severe, recurring, and painful headaches, usually, one-sided. They can be preceded or accompanied by sensory warning signs and other symptoms like nausea, vomiting and extreme sensitivity to light and sound.|Caffeine and alcohol consumption above a certain amount has been linked with migraine.

RESEARCH RECOMMENDATIONS

- As per your genotype, you have low risk of triggering migraine due to alcohol and caffeine intake. However, any family history of migraine, age (the tendency of developing migraine is generally higher during in the 30s, and may decrease in severity and frequency in the following decades) can increase the risk of migraine.
- Excessive caffeine consumption, and hormonal changes in women may increase the risk of developing migraine attacks.
- Maintain a healthy weight, and lead an active and healthy lifestyle.
- Avoid over-consumption of caffeine. Reduction in caffeine consumption should be done gradually as a sudden caffeine cut back may cause headaches.
- Keep a check on food intake, as some foods like cheese , alcohol, caffeine , etc. may trigger the symptoms of migraine.

GENOMAX GENE BASED WELLNESS PROGRAM

64. Impact of Cheese on Migraine

Your Genetic Result

Your Risk / Response

MODERATE RISK

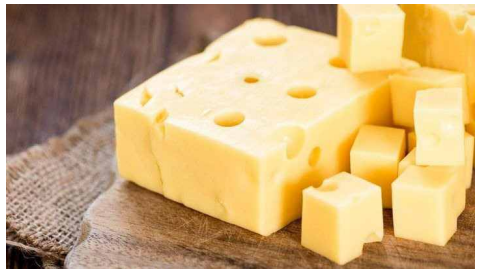
Gene(s) Analysed

MTHFR

Risk / Response Variant(s) Presence

YES

PAY ATTENTION!



Migraines are severe, recurring, and painful headaches, usually, one-sided. They can be preceded or accompanied by sensory warning signs and other symptoms like nausea, vomiting and extreme sensitivity to light and sound. Cheese consumption above a certain amount has been linked with migraine. Aged cheeses are high in tyramine, a natural chemical found in some foods. Tyramine can cause headaches by constricting and dilating blood vessels.

RESEARCH RECOMMENDATIONS

- As per your genotype, you have increased risk of triggering migraine due to cheese intake in the diet.
- Limit intake of cheese and can be replaced with other milk products for protein and calcium
- Maintain a healthy weight, and lead an active and healthy lifestyle.
- Keep a check on food intake, assome foodslike cheese may trigger the symptoms ofmigraine

GENOMAX GENE BASED WELLNESS PROGRAM

65. Septic Shock

Your Genetic Result

Your Risk / Response

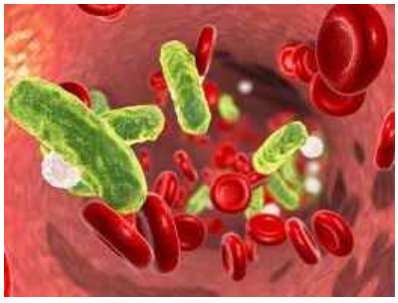
NEUTRAL RISK

Gene(s) Analysed

TNFA - IL6

Risk / Response Variant(s) Presence

NO



NEUTRAL

Septic shock is a serious condition that occurs when a bodywide infection leads to dangerously low blood pressure.The most serious complication of pneumonia is septic shock, which has led to the highest number of deaths in intensive care units (ICUs) around the world. The systemic immune system reaction plays a major role in septic shock pathogenesis. When local pneumonia develops into widely systemic sepsis, many infection defense factors are activated. Among them, tumor necrosis factor (TNF) alpha is recognized as the most important immune regulation factor contributing to sepsis pathogenesis. In daily management of an ICU, many clinical providers found that even patients with similar infection conditions may have totally different clinical outcomes. When factors such as age, sex, and lifestyle differences are removed, gene polymorphism may be the main contributor to these dramatic differences in clinical outcomes. Scientific studies have revealed that people carrying risk alleles in the promoter region of TNFa and IL6 have an increased risk of sepsis developing into septic shock.

Associated Symptoms

- A higher or lower body temperature
- This can mean a fever higher than 101.3 degrees or a body temperature lower than 95 degrees
- A racing heart rate that is beating faster than 90 beats per minute
- Confusion and difficulty answering questions
- Fast and shallow breathing
- taking more than 20 breaths per minute
- Shaking or trembling

GENOMAX GENE BASED WELLNESS PROGRAM

66. Pain Sensitivity

Your Genetic Result

Your Risk / Response

INCREASED RISK

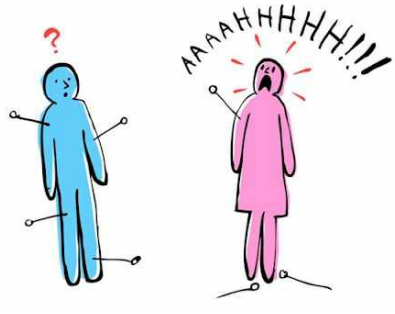
Gene(s) Analysed

COMT

Risk / Response Variant(s) Presence

YES

PAY ATTENTION!



Pain:
Pain is an unpleasant feeling triggered by the nervous system that can be mild to severe. Pain tolerance refers to the maximum amount of pain that someone can withstand. Pain threshold is a term that refers to the point where you begin to feel pain that causes discomfort to a degree at which it is difficult for you to withstand. For example a threshold at which you cannot continue to exercise at a certain intensity due to the intense level of discomfort There are substantial differences in the way, or the degree at which people feel pain. Overall, men tend to have higher pain tolerances than women. Research now shows that variations in the COMT gene also impact how we feel and perceive pain.

Associated Symptoms	Associated Diseases
• Paralysis • urinary and bowel control problems • blindness • deafness • intellectual disability • lack of conciousness • some people with NTD's have no symptoms	• Obesity • Having Poorly Controlled Diabetes

RESEARCH RECOMMENDATIONS

- Consume enough folic acid or active folate, a type of B vitamin, before and during pregnancy after consulting your doctor and nutrigenomic counsellor.

GENOMAX
GENE BASED WELLNESS PROGRAM

67. Autism Risk

Your Genetic Result

Your Risk / Response

INCREASED RISK (2.79X)

Gene(s) Analysed

MTHFR

Risk / Response Variant(s) Presence

YES

Impact of Genotype(s)

Significantly higher frequency in autistic children. (Indian Population)

PAY ATTENTION!

Autism, also called autism spectrum disorder (ASD), is a condition that includes problems with communication and behavior. People with autism have trouble with communication. They have trouble understanding what other people think and feel along with learning. This makes it hard for them to express themselves, either with words or through gestures, facial expressions, and touch. Their skills might develop unevenly. They could have trouble communicating but be unusually good at art, music, math, or memory. Autism is considered to be complex, polygenic disorder predominantly characterized by multi-factorial inheritance. It is observed that a genetic polymorphism in DRD2 gene has been associated with autism in individuals.
Autism is considered to be complex, polygenic disorder predominantly characterized by multi-factorial inheritance. It is observed that a genetic polymorphism in MTHFR gene has been associated with autism in individuals.

Associated Symptoms

- Communication problem
- Emotional problem
- Behavioral problem
- Difficulties in developing and maintaining relationships
- Repetitive movements, motions or speech
- Increase or decrease in sensory response
- Rigid adherence to specific routines or behaviors

RESEARCH RECOMMENDATIONS

- Consume a diet rich in protein which helps synthesize dopamine from the precursor tyrosine.
- Exercise significantly increases dopamine secretion, hence live an active lifestyle.
- Consume a diet rich in foods that help in increasing the secretion of Dopamine naturally, like bananas, beet, sunflower seeds etc. after discussion with your counselor.
- Certain therapies also help in increasing Dopamine secretion.
- Folate fortification of food is recomended
- Your genotype frequency was found in Indian autistic children with a 2.79 fold increased risk, and the risk was dose dependent with high significance.

GENOMAX GENE BASED WELLNESS PROGRAM

68. Schizophrenia Risk

Your Genetic Result

Your Risk / Response

MODERATE RISK

Gene(s) Analysed

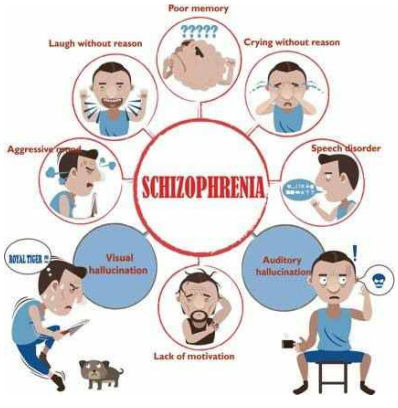
MTHFR

Risk / Response Variant(s) Presence

YES

Impact of Genotype(s)

Significantly associated with increased risk and also more likely to be of a younger age at onset of Schizophrenia.



PAY ATTENTION!

Schizophrenia is a chronic and severe mental disorder that affects how a person thinks, feels and behaves. People with schizophrenia may seem like they have lost touch with reality. Methylenetetrahydrofolate reductase (MTHFR) is a key enzyme for the critical process of one-carbon metabolism involving folate and homocysteine metabolisms. It is known that some polymorphism of MTHFR would have significant impacts in various psychiatric diseases including schizophrenia.

Associated Symptoms

- Delusions
- Hallucinations
- Disorganized thinking
- Speech disorder
- Extremely disorganized behavior
- Abnormal motor behavior
- Mood swings
- Lack of emotion

RESEARCH RECOMMENDATIONS

- Don't use street drugs, and moderate any use of alcohol. Make an ongoing effort to develop your social skills as much as you can. Avoid social isolation. Make an ongoing effort to maintain friendship.
- Consume a diet rich in Tyrosine- an amino acid that helps make the neurotransmitter 'Dopamine'
- Exercise significantly increases dopamine secretion, hence live an active lifestyle.
- Consume a diet rich in foods that help in increasing the secretion of Dopamine naturally, like bananas, beet, sunflower seeds etc. after discussion with your counselor.
- Your genotype has a 1.5 fold higher distribution in people suffering from Schizophrenia compared to controls.

GENOMAX
GENE BASED WELLNESS PROGRAM

69. ADHD (Attention Deficit Hyperactivity Disorder)

Your Genetic Result

Your Risk / Response

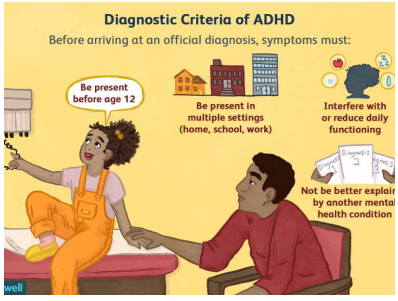
LOWER RISK FOR ADHD

Gene(s) Analysed

DRD2

Risk / Response Variant(s) Presence

NO



GIFTED!

ADHD in Adults: More than 60 percent of children with ADHD still exhibit symptoms as adults.That said, treatment is important. Untreated ADHD in adults can have a negative impact on many aspects of life. Symptoms such as trouble managing time, forgetfulness, and impatience can cause problems at work, home, and in all types of relationships.

ADHD in children: One in 10 children between ages 5 to 17 years receives an ADHD diagnosis, making this one of the most common childhood neurodevelopmental disorders in the United States. For children, ADHD is generally associated with problems at school. Children with ADHD often have trouble succeeding in a controlled classroom setting. Boys are more than twice as likely as girls to receive an ADHD diagnosis. This may be because boys tend to exhibit hallmark symptoms of hyperactivity. Although some girls with ADHD may have the classic symptoms of hyperactivity, many don't.

In many cases, girls with ADHD may: Daydream frequently, Be hyper-talkative rather than hyperactive

Associated Symptoms

- Impulsiveness
- Disorganization and problems prioritizing
- Poor time management skills
- Problems focusing on a task
- Trouble multitasking
- Excessive activity or restlessness
- Poor planning

RESEARCH RECOMMENDATIONS

- Even though you have a lower risk for ADHD, it is important to build your focus and concentration, and one of the best ways to do that is to practice meditation regularly.

GENOMAX
GENE BASED WELLNESS PROGRAM

70. Tendency of Panic Disorder

Your Genetic Result

Your Risk / Response

HIGH RISK

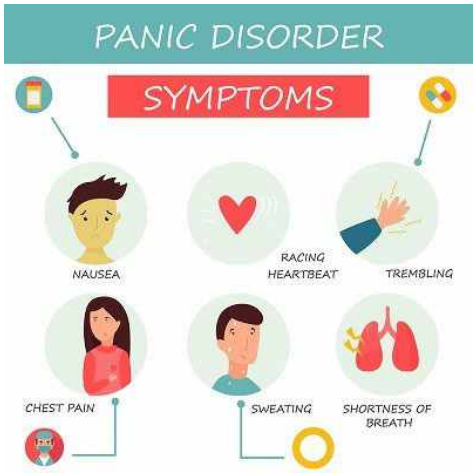
Gene(s) Analysed

NEAR RGS2

Risk / Response Variant(s) Presence

YES

PAY ATTENTION!



Panic disorder is a disorder wherein an individual experiences reoccurring and unexpected panic attacks. Panic attacks are episodes of intense fear or terror with sudden onset and such episodes may peak within a few minutes. Attacks could occur unexpectedly or could be triggered by a situation or object. It may cause severe physical reactions with no real danger, and the person may feel powerless, out of control or like they are having a heart attack or even dying.

RESEARCH RECOMMENDATIONS

- As per your genotype , you have a high risk of developing panic disorder
- History of childhood a buse, smoking, excessive caffeine intake, s tress ful or tra umatic events like death of a loved one, and family history of having panic attacks may increase the risk of developing panic disorder
- Get adequate rest and sleep
- Follow a healthy, nutritious die t a nd engage in regular physical activities/exercise.
- Seeking help and support f rom close friends a nd family, or emotional support groups ca n help deal with ma jor life changes and traumatic/stressful events

GENOMAX
GENE BASED WELLNESS PROGRAM

71. Requirement of Sleep (Panic Disorder)

Your Genetic Result

Your Risk / Response

HIGH RISK

Gene(s) Analysed

NEAR RGS2

Risk / Response Variant(s) Presence

YES

PAY ATTENTION!

Panic disorder is a disorder wherein an individual experiences reoccurring and unexpected panic attacks. Panic attacks are episodes of intense fear or terror with sudden onset and such episodes may peak within a few minutes. Attacks could occur unexpectedly or could be triggered by a situation or object. It may cause severe physical reactions with no real danger, and the person may feel powerless, out of control or like they are having a heart attack or even dying. Getting a good night's sleep is essential for our health and wellbeing. Sleep promotes rest and relaxation, and gives us a chance to recuperate and let go of the stresses of the day. However, this isn't the case for the many individuals who struggle with panic attacks at night. Lack of sleep can, in turn, increase panic attacks and symptoms of anxiety.

RESEARCH RECOMMENDATIONS

- You have increased requirement of sleep to deal with panic disorder
- As per your genotype score, you have highly elevated risk of developing panic disorder. History of childhood abuse, smoking, excessive caffeine intake, stressful or traumatic events like death of a loved one, and family history of having panic attacks may increase the risk of developing panic disorder.
- Get adequate rest and sleep.
- Practice stress management or relaxation techniques like meditation.

GENOMAX
GENE BASED WELLNESS PROGRAM

72. Requirement of Exercise (Panic Disorder)

Your Genetic Result

Your Risk / Response

HIGH RISK

Gene(s) Analysed

NEAR RGS2

Risk / Response Variant(s) Presence

YES

PAY ATTENTION!

Panic disorder is a disorder wherein an individual experiences reoccurring and unexpected panic attacks. Panic attacks are episodes of intense fear or terror with sudden onset and such episodes may peak within a few minutes. Attacks could occur unexpectedly or could be triggered by a situation or object. It may cause severe physical reactions with no real danger, and the person may feel powerless, out of control or like they are having a heart attack or even dying. Exercise is one of the best remedies for anxiety. It's actually been found to be nearly as effective as Prozac at calming sensory nervous systems, producing feel-good hormones, lowering resting heart rate, increasing confidence, and decreasing sensitivity to anxiety symptoms.

RESEARCH RECOMMENDATIONS

- As per your genotype, You have increased requirement of exercise to deal with panic disorder
- History of childhood abuse, smoking, excessive caffeine intake, stressful or traumatic events like death of a loved one, and family history of having panic attacks may increase the risk of developing panic disorder.
- Choose something enjoyable so you will do it repeatedly, building resilience.
- Work out with a friend or in a group to reap the added benefit of social support.
- If possible, exercise in nature or green space, which further lowers stress and anxiety.
- Practice stress management or relaxation techniques like meditation

GENOMAX
GENE BASED WELLNESS PROGRAM

73. Impact of Medication (Panic Disorder)

Your Genetic Result

Your Risk / Response

HIGH RISK

Gene(s) Analysed

NEAR RGS2

Risk / Response Variant(s) Presence

YES

PAY ATTENTION!

Panic disorder is a disorder wherein an individual experiences reoccurring and unexpected panic attacks. Panic attacks are episodes of intense fear or terror with sudden onset and such episodes may peak within a few minutes. Attacks could occur unexpectedly or could be triggered by a situation or object. It may cause severe physical reactions with no real danger, and the person may feel powerless, out of control or like they are having a heart attack or even dying. Treatment can help reduce the intensity and frequency of your panic attacks and improve your function in daily life. The main treatment options are psychotherapy and medications. Medications can help reduce symptoms associated with panic attacks as well as depression if that's an issue for you. Several types of medication have been shown to be effective in managing symptoms of panic attacks.

RESEARCH RECOMMENDATIONS

- As per your genotype , you have increased requirement of medical management for panic disorder and medical help might be needed .
- Seeking help and support from close friends and family, or emotional support groups can help deal with major life changes and traumatic/stressful events
- Take medicines prescribed by your doctor

GENOMAX GENE BASED WELLNESS PROGRAM

74. Caffeine Intake (Panic Disorder)

Your Genetic Result

Your Risk / Response

HIGH RISK

Gene(s) Analysed

NEAR RGS2

Risk / Response Variant(s) Presence

YES

PAY ATTENTION!

Caffeine is consumed in various forms such as coffee, tea, and other caffeinated products and is a commonly consumed psychoactive substance. Caffeine consumption above a certain amount has been linked with the development of caffeine dependence. In low amounts, caffeine can induce minor effects like alertness and improved cognition; however, at larger amounts, it can cause many detrimental effects , especially the side-effect of caffeine-induced anxiety. Genetics can influence the pattern of caffeine response and consumption in many ways.

RESEARCH RECOMMENDATIONS

- As per your genotype, you have a high susceptibility for developing caffeine-induced anxiety.
- While reducing caffeine consumption, wean off caffeine gradually as a sudden stop increase the chances of negative side effects
- Understand how much caffeine can be tolerated by your body and strictly avoid going over this limit to prevent the negative side effects
- Stop caffeine consumption if you experience any negative side effects of caffeine consumptions such as heart anxiety, palpitations, or jitteriness

GENOMAX
GENE BASED WELLNESS PROGRAM

75. Impact of Alcohol (Panic Disorder)

Your Genetic Result

Your Risk / Response

HIGH RISK

Gene(s) Analysed

NEAR RGS2

Risk / Response Variant(s) Presence

YES

PAY ATTENTION!

Panic disorder is a disorder wherein an individual experiences reoccurring and unexpected panic attacks. Panic attacks are episodes of intense fear or terror with sudden onset and such episodes may peak within a few minutes. Attacks could occur unexpectedly or could be triggered by a situation or object. It may cause severe physical reactions with no real danger, and the person may feel powerless, out of control or like they are having a heart attack or even dying. Alcohol sensitivity, also known as alcohol intolerance or hypersensitivity is a condition that causes immediate, unpleasant reactions after alcohol consumption.

RESEARCH RECOMMENDATIONS

- As per your genotype, you have a high risk of having panic disorder post alcohol intake due to poor alcohol flushing or detoxification
- Limit alcohol intake
- Improve water intake with alcohol to avoid panic attacks

GENOMAX
GENE BASED WELLNESS PROGRAM

76. Impact of Smoking (Panic Disorder)

Your Genetic Result

Your Risk / Response

HIGH RISK

Gene(s) Analysed

NEAR RGS2

Risk / Response Variant(s) Presence

YES

PAY ATTENTION!

Panic disorder is a disorder wherein an individual experiences reoccurring and unexpected panic attacks. Panic attacks are episodes of intense fear or terror with sudden onset and such episodes may peak within a few minutes. Attacks could occur unexpectedly or could be triggered by a situation or object. It may cause severe physical reactions with no real danger, and the person may feel powerless, out of control or like they are having a heart attack or even dying. Smokers are three times more likely to have panic attacks -- and panic disorder -- than nonsmokers. In addition to harming a person's physical health, smoking can harm a person's mental health. Risko f panic attackgets smaller in people who quit smoking.

RESEARCH RECOMMENDATIONS

- As per your genotype, you have a high risk of panic disorder due to smoking
- Smokers are three times more likely to have panic attacks -- and panic disorder -- than nonsmokers
- In addition to harming a person's physical health, smoking can harm a person's mental health.
- Risk of panic attack gets smaller in people who quit smoking, but it is not clear how long it takes for the risk to go down
- Thus, the only solution is to quit smoking

GENOMAX
GENE BASED WELLNESS PROGRAM

77. Personality Disorder (Antisocial)

Your Genetic Result

Your Risk / Response

LOWER RISK

Gene(s) Analysed

DRD2

Risk / Response Variant(s) Presence

NO

GIFTED!

ntisocial personality disorder is characterized by a pattern of disregard for and violation of the rights of others. While the exact causes of this disorder are unknown, both environmental and genetic factors have been implicated. Genetic factors are suspected since the incidence of antisocial behaviour is higher in people with an antisocial biological parent. Symptoms of antisocial disorder include disregard for society's laws, violation of the physical or emotional rights of others and lack of stability in job and home life, irritability, aggressiveness, consistent irresponsibility, recklessness and impulsivity. It is confirmed by a psychological evaluation. Antisocial personality disorder is one of the most difficult personality disorders to treat.

RESEARCH RECOMMENDATIONS

- Although at lower risk for antisocial disorder, it is important to identify children who show sign of conduct disorder, and offer early intervention.

GENOMAX
GENE BASED WELLNESS PROGRAM

78. Polycystic Ovarian Syndrome (PCOS) Risk

Your Genetic Result

Your Risk / Response

HIGH RISK

Gene(s) Analysed

IL6

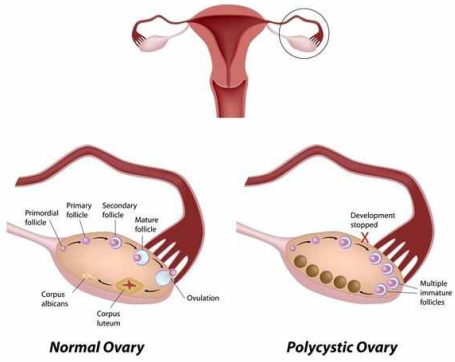
Risk / Response Variant(s) Presence

YES

Impact of Genotype(s)

Increased risk for PCOS (Indian Population)

PAY ATTENTION



Polycystic ovary syndrome (PCOS) is a heterogeneous endocrinopathy that affects women in their reproductive age. The prevalence of PCOS can reach 15%-20%, depending on the diagnostic criteria established to characterize the disease. PCOS is characterized by anovulation, hyperandrogenism, polycystic ovary, and infertility. Thus, women with PCOS may have hirsutism, obesity, insulin resistance,dyslipidemia, type 2 diabetes mellitus, and atherosclerosis. It is also known that women with PCOS have chronic low-level inflammation,6 and several mechanisms contribute to this and to the etiology of disease, such as aberrant luteinizing hormone (LH) secretion and hyperinsulinemia, in addition to the environmental factors, but this is not yet entirely clear. Furthermore, the genetic factors and the immune system have an important role and are associated with the risk of PCOS. Cytokines produced by immune cells, such as IL-6 and others, have been show to affect events of reproduction such as the ovarian function.

Associated Symptoms	Associated Diseases
• Irregular periods or no periods at all • Difficulty in getting pregnant • Excessive hair growth • Weight gain • Thinning hair and hair loss • Oily skin or acne	• Cardiac disease • Obstructive sleep apnea • Endometrial cancer • Type 2 Diabetes

RESEARCH RECOMMENDATIONS

- Although PCOS can be treated with medications, treatment is often highly dependent on your goals and your symptoms. If you want to become pregnant, you may need the assistance of oral or injected fertility medications.
- If you do not want to become pregnant, you may consider birth control pills to prevent pregnancy and regulate periods.
- Periods can also be regulated using the hormone progesterone.
- Other symptoms such as unwanted hair growth, acne, obesity, and diabetes should be managed by specialists in those areas. Birth control pills are often helpful in the treatment of hair growth and acne.

GENOMAX GENE BASED WELLNESS PROGRAM

79. Neural Tube Defect Risk in Offspring

Your Genetic Result

Your Risk / Response

NORMAL RISK OF NEURAL TUBE DEFECT IN OFFSPRING

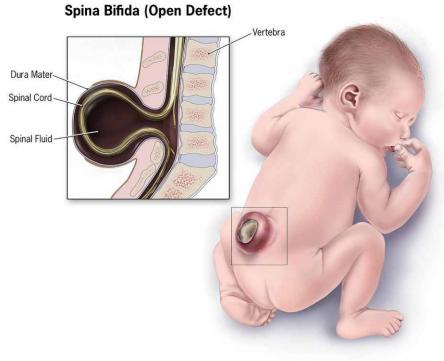
Gene(s) Analysed

MTHFD1

Risk / Response Variant(s) Presence

NO

NEUTRAL



Neural tube defects are severe birth defects of the brain and spine. NTDs occur when the neural tube does not close properly. The neural tube forms the early brain and spine. They happen in the first month of pregnancy, often before a woman even knows that she is pregnant. The two most common neural tube defects are spina bifida and anencephaly. Genetic and environmental factors that produce alterations in folate metabolism are likely to play a major role in the development of NTDs.

Associated Symptoms	Associated Diseases
• Paralysis • urinary and bowel control problems • blindness • deafness • intellectual disability • lack of conciousness • some people with NTD's have no symptoms	• Obesity • Having Poorly Controlled Diabetes

RESEARCH RECOMMENDATIONS

- Consume prenatal multivatimins and consult your nutrigenomic counsellor if you are considering becoming a parent on appropriate nutrition requirements.

GENOMAX
GENE BASED WELLNESS PROGRAM

80. Adverse Pregnancy Outcomes with Prenatal Caffeine Intake

Your Genetic Result

Your Risk / Response

HIGHER RISK FOR ADVERSE PREGNANCY OUTCOME WITH HIGH PRENATAL CAFFEINE INTAKE

Gene(s) Analysed

CYP1A2

Risk / Response Variant(s) Presence

YES

PAY ATTENTION!

Caffeine is one of the most commonly consumed stimulants. But if you are pregnant you might want to rethink that cup of coffee. Nutrition plays a major role in maternal and child health during pregnancy. When pregnant, poor maternal nutrition has been related to adverse birth outcomes. Excess caffeine can also cross the placental barrier and enter the baby's system. Some of these outcomes linked to caffeine intake during pregnancy include spontaneous abortion, baby with low birth weight and birth defects. Because caffeine is a stimulant, it increases your blood pressure and heart rate, both of which are not recommended during pregnancy. Caffeine also increases the frequency of urination. This causes a reduction in your body fluid levels and can lead to dehydration.

RESEARCH RECOMMENDATIONS

- Limit intake of caffeine to less than equal to 300mg per day.
- Switch to decaffeinated beverages and supplements like green and herbal tea which are also rich in antioxidants.

GENOMAX
GENE BASED WELLNESS PROGRAM

81. Risk for Spot Baldness in Females (Alopecia Areata)

Your Genetic Result

Your Risk / Response

HIGHER RISK FOR ALOPECIA AREATA

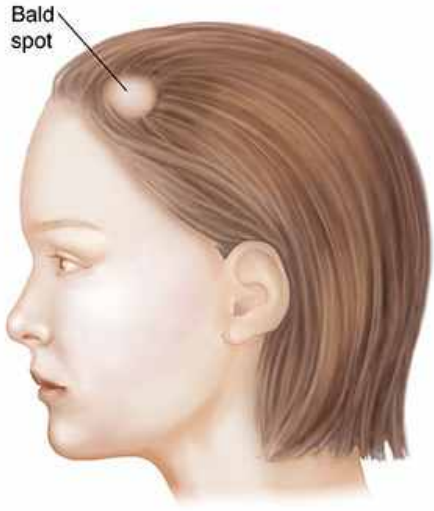
Gene(s) Analysed

MTHFR

Risk / Response Variant(s) Presence

YES

PARTIALLY BAD!



Spot baldness (alopecia areata) is a skin disorder that causes hair loss, usually in circular patches, most often on the scalp. Usually, the bald patches appear suddenly and affect only a limited area. The hair grows back within 12 months or less. For some people, however, the problem can last longer and be more severe, causing total baldness (alopecia totalis) or total loss of body hair (alopecia universalis). Genetic factors play a role in spot baldness, if you carry the genetic variation that increases your risk to it. The symptoms of spot baldness are patchy hair loss, mild itching, tingling, tenderness or a burning sensation in the affected area. Treatments include application of chemicals such as cortisone cream, minoxidil and diphenylcyclopropenone.

RESEARCH RECOMMENDATIONS

- Consume folate based on your body requirements which for you is ~520 mcg per day, in order to keep control on homocysteine levels which can be a major trigger for this autoimmune disorder.
- Treat inflammation using different means such as injecting steroids used for blocking inflammation, healthy diet rich in antioxidants and is anti-inflammatory.
- Avoid diet high in added sugar, drinking alcohol, and smoking or any such habit causing increased inflammation.
- Exercise helps in release of happy hormones called endorphins helping in lowering stress levels which is one of the major cause for Alopecia areata.
- Consume folate based on your body requirements which for you is ~520 mcg per day, in order to keep control on homocysteine levels which can be a major trigger for this autoimmune disorder.
- Exercise helps in release of happy hormones called endorphins helping in lowering stress levels which is one of the major cause for Alopecia areata.

GENOMAX GENE BASED WELLNESS PROGRAM

82. Obesity Risk

Your Genetic Result

Your Risk / Response

HIGH RISK

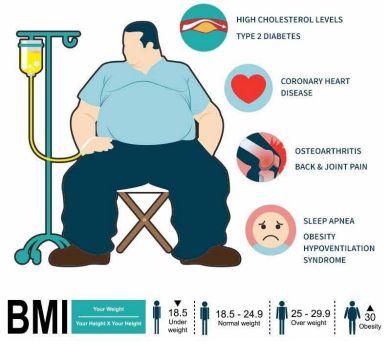
Gene(s) Analysed

FTO1 - PLIN - APOA2

Risk / Response Variant(s) Presence

YES

Obesity-Related Diseases



PAY ATTENTION!

Did you know that by just controlling obesity you can lower more than ~50% of your risk for cardiovascular diseases, cancer and diabetes? And did you know that 40% to 70% of your predisposition to obesity is inherited. When an individual reaches a BMI of 30 to 35 (clinically obese) or above 40 morbidly obese), genetic factors with strong effects are likely to be involved.

Associated Diseases

- Type 2 Diabetes Mellitus
- Abnormal cholesterol levels
- Heart disease
- Hypertension
- Fatty liver disease
- Kidney disease
- Depression
- Gallbladder diseases
- Infertility in both males and females
- Erectile dysfunction in males
- Osteoarthritis and musculoskeletal pain
- Sleep Apnea
- Certain cancers

RESEARCH RECOMMENDATIONS

- Refer to your other results in this report for specific recommendations.
- Use the knowledge and strategies highlighted in this report to help you find the most effective way to get fit.
- You need to make a well planned, structured diet and lifestyle change.
- Be prepared to work harder than others.

83. Impact of Alcohol on Obesity

Your Genetic Result

Your Risk / Response

LOW RISK

Gene(s) Analysed

ALDH2

Risk / Response Variant(s) Presence

NO

GIFTED!

Apolipoprotein E present on liver cells & is involved in binding to plasma LDL, VLDL and hence clearance of LDL and VLDL from plasma. Variati ons at two points in ApoE protein generates six different protein types with altered LDL and VLDL binding capacities and other characteristics. ApoE protein gene may have three forms, hence has six different genotypes/ protein present are as follows: E2/E2, E2/E3, E3/E3, E2/E4, E3/E4 & E4/E4 These genotypes show variations in response to dietary modification, response to statins and tendency of diseases. ApoE variations can cause variations in levels of LDL, VLDL, triglycerides & HDL. ApoE variants have tendency of several cardio vascular diseases and even neurological conditions such as Alzheimer's disease.

RESEARCH RECOMMENDATIONS

- As per your genotype you have low response to alcohol consumption on cholesterol, hence low risk for obesity due to alcohol.
- You have low risk of developing liver-related issues on consistent consumption of alcohol.
- The body's ability to eliminate toxins and flush out alcohol is good.
- Consumption of alcohol should be monitored and controlled.

84. Satiety

Your Genetic Result

Your Risk / Response

LESS LIKELY TO OVEREAT

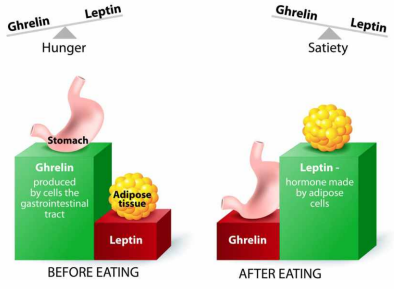
Gene(s) Analysed

FTO1

Risk / Response Variant(s) Presence

NO

GIFTED!



Satiety can be described as the feeling of being full. Satiety lasts until the recovery of hunger and readiness for the next meal. Satiety is controlled by a number of factors that begin when foods and drinks are consumed and continue as the food enters the gut, is digested and absorbed. Signals feed into specific areas of the brain in response to the expansion of the stomach, our sensory responses and the brain's perceptions of what's consumed. These signals are integrated in areas of the brain involved in the regulation of energy intake, which leads to the feeling of satiety.

RESEARCH RECOMMENDATIONS

- Fiber rich foods enhance the feeling of fullness. Hence consume, beans, baked potato with the skin, wholegrain bread, nuts, oatmeal etc. in all your meals.
- Healthy satiety facilitates weight loss by allowing you to go on calorie restricted diet and still feel satisfied. Thus, you are more likely to stay on calorie restricted diet until your goal in terms of weight loss is achieved.
- You are more benefitted with low protein diet (15 % total calorie) for more effective weight loss.
- Fiber rich foods enhance the feeling of fullness. Hence consume, beans, baked potato with the skin, wholegrain bread, nuts, oatmeal etc. in all your meals.

85. Response to Dieting

Your Genetic Result

Your Risk / Response

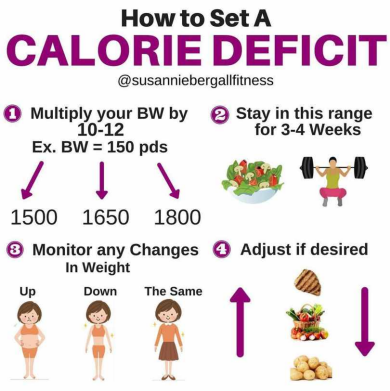
LOW RESPONDER TO DIETING

Gene(s) Analysed

ADRB2(2)

Risk / Response Variant(s) Presence

YES



PAY ATTENTION!

Calorie or energy restriction is a dietary regiment where one reduces calorie intake without incurring malnutrition or a reduction in essential nutrients. "Low calorie restriction" can be defined relative to the subject's previous intake before intentionally restricting calories. A restricted diet aims to reduce the intake of calories to a level 20-40% lower than their typical intake, while still consuming all the necessary nutrients and vitamins.

RESEARCH RECOMMENDATIONS

- You are less likely to respond to calorie restriction but will show greater weight loss with aerobic exercise.
- Less sensitivity to amount of carbohydrate in diet.
- Exercising is likely to show greater improvement in VO2 max.
- Greater improvement in VO2 max with exercise.

GENOMAX GENE BASED WELLNESS PROGRAM

86. Ideal Weight Loss Diet

Your Genetic Result

Your Risk / Response

SENSITIVE TO FATS AND NORMAL SENSITIVITY TO CARBS

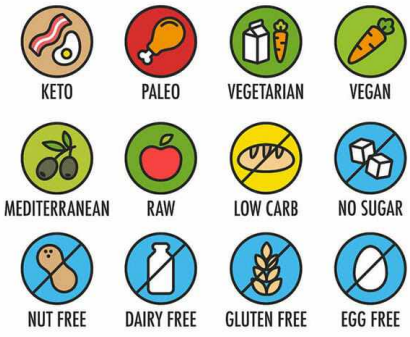
Gene(s) Analysed

FABP2 - PPARG - ADRB2(1) - ADRB2(2) - ADRB3 - TCF7L2 - FTO1

Risk / Response Variant(s) Presence

YES

PAY ATTENTION!



Our diets consist of three types of macronutrients; carbohydrates, proteins and fats. And their ratio, in our daily diets, play a very important role when it comes to how much weight one can expect to lose. There have been many debates within the scientific community regarding the ideal proportions for effective weight-loss in individuals. However, no consensus has ever been reached, which is why we live in a world of confusion, where there are countless diets (all different in their macronutrient ratios) and all claiming to have worked for some people. The fact remains that since we are all different; our responses to these macronutrients are also different. Recent research explains why people respond differently, based on their genetic profile. Changing your macronutrients is so profound that a recent study showed that people who adjusted this ratio and consumed a diet according to their genetic profile lost ~3x more weight over a twelve-month period compared to the control group.

RESEARCH RECOMMENDATIONS

- Consume a diet plan where your macronutrients are restricted to Fats: 25%, Carbohydrates: 50%, Proteins: 25% of your total daily energy intake for optimizing weight loss.
- Choose low glycemic foods to balance blood sugar level.

GENOMAX
GENE BASED WELLNESS PROGRAM

87. Weight Regain Risk

Your Genetic Result

Your Risk / Response

NORMAL RISK

Gene(s) Analysed

FTO4 - FTO3

Risk / Response Variant(s) Presence

NO

NEUTRAL

Weight regain is the phenomenon where an individual regains his or her weight back after losing a certain percentage of body weight. The change in body weight is caused by an imbalance between energy intake and energy expenditure and the body tries to resist this weight change and correct this energy imbalance. When an individual suddenly starts decreasing their calorie intake they get hungry all the time. This hunger drives the individual to eat more in order to bring back the energy and burn lesser calories.

RESEARCH RECOMMENDATIONS

- Even though you may have a normal genetic predisposition to weight regain based on the genes tested, you may experience weight regain due to other factors.
- In order to identify weight regain prevention strategies refer to the ideal weight maintenance diet section of your report.

GENOMAX
GENE BASED WELLNESS PROGRAM

88. Adiponectin Level

Your Genetic Result

Your Risk / Response

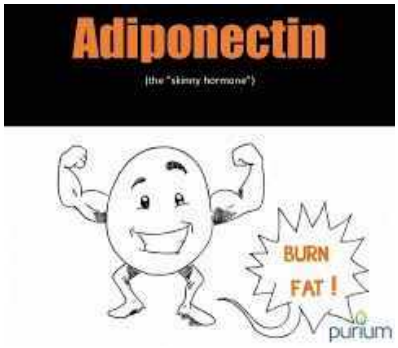
LOW LEVELS

Gene(s) Analysed

ADIPOQ

Risk / Response Variant(s) Presence

YES



PAY ATTENTION!

Adiponectin is known as a fat-burning hormone, allowing the body to lose weight naturally. It is a protein hormone produced and secreted by adipocytes that regulate metabolism of lipids and glucose. Adiponectin influences the body's response to insulin and has an anti-inflammatory effect on the cell linings of the walls of the blood vessels. High levels of adiponectin are associated with reduced risk for cardiovascular events. And low levels of adiponectin are normally found in obese people, increasing their risk for insulin resistance, cardiovascular diseases.

Food Sources

- Avocados
- Chocolates
- Lentils (1/2 cup)
- Olive Oil
- Pumpkin
- Peanuts
- turmeric

RESEARCH RECOMMENDATIONS

- Increase intake of foods rich in omega-3 such as avocados, olive oil, pumpkin, peanuts and turmeric etc. Take fish oil (if non-vegetarian) supplements.
- Increase intake of foods rich in omega-3 such as avocados, olive oil, pumpkin, peanuts and turmeric etc. as it stimulates production of adiponectin levels.
- Replace all saturated fat sources with monounsaturated fats. Include fish oil or fish oil supplements as part of your daily routine.
- Increase intake of foods rich in omega-3 and MUFA such as avocados, olive oil, pumpkin, peanuts and turmeric etc. as it stimulates production of adiponectin levels.
- Replace all saturated fat sources with monounsaturated fats. Include fish oil or fish oil supplements as part of your daily routine.
- Include fish oil or fish oil supplements as part of your daily routine.
- Regular exercise activity is beneficial as it simulates adiponectin production by your fat cells.

GENOMAX GENE BASED WELLNESS PROGRAM

89. Appetite Response to Ginger Supplementation

Your Genetic Result

Your Risk / Response

GINGER SUPPLEMENT IS NOT BENEFICIAL

Gene(s) Analysed

ADRB3

Risk / Response Variant(s) Presence

NO

NEUTRAL!

Ginger is an underground stem of the zingiber plant. Traditionally it has been used in medicine all around the world. It has anti-inflammatory and anti-oxidant properties. Ginger can regulate digestive problems, blood pressure, asthma, cholesterol, also some types of cancer and new studies now reveal that it's also helps in improving anthropometric measurements.

11 Proven Health Benefits of Ginger:

1. Ginger contains gingerol, a substance with powerful medicinal properties
2. Ginger can treat many forms of nausea, especially morning sickness
3. Ginger may reduce muscle pain and soreness
4. The anti-inflammatory effects can help with osteoarthritis
5. Ginger may drastically lower blood sugars and improve heart disease risk factors
6. Ginger can help treat chronic indigestion
7. Ginger powder may significantly reduce menstrual pain
8. Ginger may lower cholesterol levels
9. Ginger contains a substance that may help prevent cancer
10. Ginger may improve brain function and protect against Alzheimer's disease
11. The active ingredient in ginger can help fight infections

RESEARCH RECOMMENDATIONS

- Consuming ginger supplements or ginger powder every day will not have beneficial effect in terms of lowering your appetite.
- Individuals with the above genotype combination needed high intensity workout for weight loss.
- High intensity workout needed for weight loss.

GENOMAX
GENE BASED WELLNESS PROGRAM

90. BMI Response to PUFA

Your Genetic Result

Your Risk / Response

MORE BENEFICIAL

Gene(s) Analysed

PPARG - LPL1

Risk / Response Variant(s) Presence

NO

GIFTED!

Polyunsaturated fat is considered a healthy fat and is important for heart and brain function, as well as growth and development. Two types of polyunsaturated fats are omega-3 and omega-6 fats. Omega-3 fatty acids have numerous beneficial effects on your health, from anticoagulant and anti-inflammatory properties to benefits on the immune and cardiovascular systems. Omega-6 fatty acids are largely required for promoting growth and during the inflammatory cascade to halt cell damage and promote cell repair by their conversion to omega-6 eicosanoids that bind to diverse receptors found in every tissue of the body.

Food Sources

- Eggs
- Salmon
- Whitefish
- Soybean
- Flaxseed oil
- Walnut oil
- Cod fish
- Tuna fish

RESEARCH RECOMMENDATIONS

- Consume PUFA rich foods for example eggs (if non-vegetarian), rawas (if non-vegetarian), soybean, whitefish (if non-vegetarian) etc. as it will likely lower your BMI.
- Consume moderate quantity of PUFA rich foods for example eggs(if non-vegetarian), salmon(if non-vegetarian), soybean, whitefish etc. Change your food oil every few months to get the optimal mix of different PUFA's in commercially available oils.

GENOMAX GENE BASED WELLNESS PROGRAM

91. Tendency of Snacking Between Meals

Your Genetic Result

Your Risk / Response

INCREASED TENDENCY FOR SNACKS CONTAINING HIGH ENERGY DENSITY

Gene(s) Analysed

TAS2R38

Risk / Response Variant(s) Presence

YES

Impact of Genotype(s)

Increased Tendency to pick snacks with high total energy density.

PAY ATTENTION!

Snacking is when you consume food or beverages between your regular main meals. The term "snack foods" is often used to refer to processed, high-calorie items like chips and cookies. However, snacking simply means to eat or drink something between meals, regardless of whether the food is healthy.

Snacking is an integral component of eating habits in young children that is often overlooked in nutrition research. While snacking is a substantial source of calories in preschooler's diets, there is limited knowledge about the factors that drive snacking patterns. Recent Studies have found genetic associations sith snacking tendencies and the TAS2R38 gene.

RESEARCH RECOMMENDATIONS

- Make a concious effort to eat snacks that have a low energy density.
- The healthiest lower energy-dense choices are foods that are high in protein but low in fat and calories, such as legumes (beans, peas and lentils, which are also good sources of fiber), fish, skinless white-meat poultry, fat-free dairy products and egg whites.
- Beware of overating snacks as your snacking preferences may increase your risk for obesity.

GENOMAX
GENE BASED WELLNESS PROGRAM

92. BMI Response to MUFA

Your Genetic Result

Your Risk / Response

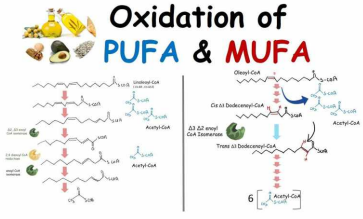
LIMIT INTAKE

Gene(s) Analysed

PPARG - ADIPOQ

Risk / Response Variant(s) Presence

YES



PAY ATTENTION!

Monounsaturated fats are simply fat molecules that have one unsaturated carbon bond in the molecule; which is also called a double bond. Oils that contain monounsaturated fats are typically liquid at room temperature but start to turn solid when chilled. Studies have shown that eating foods rich in monounsaturated fatty acids improve blood cholesterol levels that in turn decrease risk of heart diseases and improve blood insulin that improves blood sugar.

Food Sources

- Avocado 1cup(150g)- 14.7g
- Vegetable oil, Avocados 1tsp(4g) - 3.2g
- Olive oils 1tsp - 3.3g
- Pistachios 28g(1ounce) - 6.6g
- Hazelnut 28g(1ounce) - 13.5g
- Canola Oil 1tsp(4g) - 2.8g
- Safflower oil 1tsp(4g) - 0.6g
- Walnuts 8g - 1.2g

RESEARCH RECOMMENDATIONS

- To avoid weight gain, strictly limit your MUFA (Olives, avocado, flaxseeds, pumpkin seeds, nuts like almonds) intake to less than 13% of your total daily energy consumption.
- Make use of olive oil for procedures like shallow frying, making salad dressing etc. in limited quantities.

GENOMAX GENE BASED WELLNESS PROGRAM

93. Desire for Food

Your Genetic Result

Your Risk / Response

LESS LIKELY TO EMOTIONAL BINGE

Gene(s) Analysed

DRD2

Risk / Response Variant(s) Presence

NO

GIFTED!

Food desire is defined as an intense desire to consume specific foods and differs from normal hunger. Emotional eating is when people eat for reasons other than hunger; it can be triggered by feelings of loneliness, boredom, sadness, anxiety and sometimes even happiness. For those with low satiety, emotional eating can easily lead to weight gain and in severe cases, binge eating. Emotional eating is driven by the brain's reward (also called as hedonic system); it remembers when you enjoy particular foods and seeks them out during times of emotional stress. These foods, called trigger foods, act like drugs by eliciting positive emotional responses and fostering cravings.

RESEARCH RECOMMENDATIONS

- You are less likely to put forth additional effort to obtain your favourite food.

GENOMAX GENE BASED WELLNESS PROGRAM

94. Risk of Inflammation

Your Genetic Result

Your Risk / Response

LOWER

Gene(s) Analysed

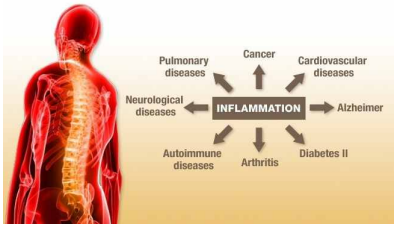
IL6

Risk / Response Variant(s) Presence

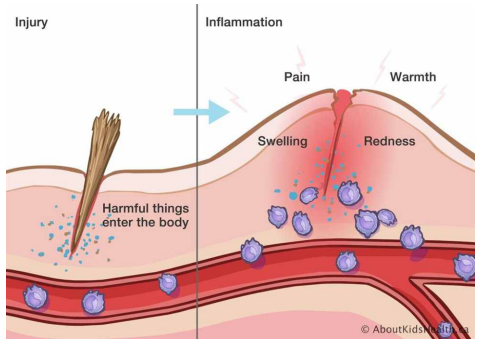
NO

Impact of Genotype(s)

Increased IL6 production and CRP expression



GIFTED!



IL6 is a cytokine that is involved in inflammatory responses within the immune system, and in the regulation of metabolic, regenerative, and neural processes. In response to infection, inflammation, or trauma, cytokine IL6 plays a role in pathophysiological responses of the immune system, mainly as the first line of defence, and it minimises the level of damage caused. In muscles and adipose tissue, the release of IL6 has both pro and anti-inflammatory impacts and is an essential component for muscle repair, may contribute to hypertrophy, and could be involved in glucose and lipid metabolism.

Inflammation is a normal immune response and an essential step in tissue healing. The release of these inflammatory substances is controlled by genes that govern inflammation. However, when these genes are not "switched off" the inflammatory response continues. An increasing number of common disorders, such as obesity, heart disease, arthritis and inflammatory bowel disease have been associated with chronic low-grade inflammation.

Interleukin 6 is a pro-inflammatory cytokine that plays a crucial role in inflammation and regulating the CRP expression. The risk allele for a variant in IL6 is associated with increased IL6 production and CRP expression which is an important inflammation marker. Thus, individual with the risk allele need to work towards regulating the IL6 expression in order to reduce inflammation in the body. On the other hand, individuals with the non risk genotype are likely to have minimum inflammation in absence of any environmental factor or metabolic condition.

Associated Symptoms	Food Sources
• inflammation • obesity • insulin resistance • dyslipidaemia • raised systolic blood pressure.	• Black pepper • jasmine tea • Curcumin • Zinc • Vitamin D3 • Cod liver/fish oil/DHA • Cinnamon

RESEARCH RECOMMENDATIONS

- Consume food low in glycemic index such as sweet potato, yams, legumes, lentils, chickpea, peas, parboiled rice, oat bran cereal etc.
- Consume a diet rich in omega -3 fatty acids such as flax seeds, chia seeds, salmon(if non-vegetarian), fish oil (if non-vegetarian), walnuts, soybeans, eggs(if non-vegetarian) , cauliflower, canola oil etc.

GENOMAX GENE BASED WELLNESS PROGRAM

95. Tendency of Skin Allergy

Your Genetic Result

Your Risk / Response

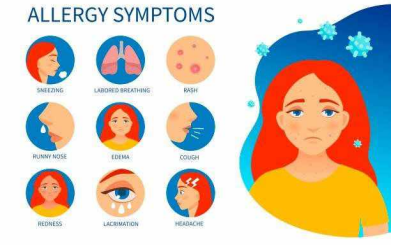
HIGH RISK

Gene(s) Analysed

IL6

Risk / Response Variant(s) Presence

YES



PAY ATTENTION!

The immune system plays a vital role in maintaining the health of all the tissues of the body. It protects your body from harmful substances, germs and cell changes that could make you ill. Usually the immune system reaction protects the body and aids healing. However, sometimes an immune system reaction is misdirected at healthy tissues and causes intense inflammation and damage, hypersensitivity (allergic) and inflammatory skin disorders are examples of auto immune skin disorders. IL-6 encodes a cytokine that functions in immune response and inflammation. Mutation in IL-6 has be studies in multiple autoimmune conditions including poor skin health, Acne Vulgaris, increased immune responses , psoriasis and slow wound healing. Variations in the IL6 gene has been shown to be significantly associated with low immune response.

RESEARCH RECOMMENDATIONS

- As per your genotype, you have very high inflammation tendencies.
- High risk of inflammation associated with obesity and visceral fat deposition, insulin resistance, dyslipidemia are very high and hence increased association with increased tendencies of cardiovascular disease and other inflammatory diseases.
- Inflammation is a contributing factor for obesity or infections

GENOMAX GENE BASED WELLNESS PROGRAM

96. Rheumatoid Arthritis

Your Genetic Result

Your Risk / Response

MODERATELY HIGH RISK (IL1A, OR: 1.17)

Gene(s) Analysed

TNFA - IL1A

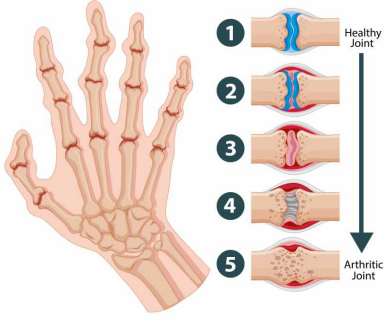
Risk / Response Variant(s) Presence

YES

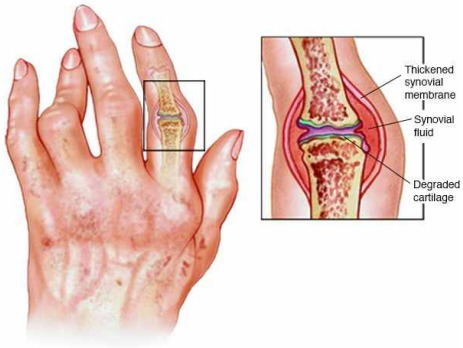
Impact of Genotype(s)

Moderately high risk of rheumatoid arthiritis

Rheumatoid Arthritis in Hand



PAY ATTENTION!



The tumour necrosis factor (TNF-alpha) is a cytokine in the human immune system that regulates the activity of immune cells. TNF regulates apoptosis, cell proliferation, cell differentiation and the secretion of various cytokines. The risk variant leads to a highly increased TNFa expression, and thus to an increased inflammatory capacity. | Whereas the interleukin-1 gene cluster on chromosome 2 contains the gene for IL1A. The presence risk variant increases IL-1 synthesis, leading to an increase of the inflammatory capacity.

Rheumatoid arthritis is a chronic inflammatory disorder that can affect more than just your joints. In some people, the condition can damage a wide variety of body systems, including the skin, eyes, lungs, heart and blood vessels. An autoimmune disorder, rheumatoid arthritis occurs when your immune system mistakenly attacks your own body's tissues. Unlike the wear-and-tear damage of osteoarthritis, rheumatoid arthritis affects the lining of your joints, causing a painful swelling that can eventually result in bone erosion and joint deformity.

Associated Symptoms	Associated Diseases
• Tender & warm, swollen joints • Joint stiffness • Fatigue • Fever • loss of appetite	• Osteoporosis • Rheumatoid nodules • Dry eyes and mouth • Infections • Abnormal body composition • Carpal tunnel syndrome • Heart problems • Lung disease • Lymphoma

RESEARCH RECOMMENDATIONS

- Stop smoking
- Limit exposure to environmental pollutants. Wear a pollution mask. While you may not always be able to avoid exposure to environmental irritants, whenever possible avoid asbestos and/or silica.
- If you have any symptoms of RA, see a doctor as soon as possible. Early, aggressive treatment can delay serious side effects of RA.
- Include anti-inflammatory foods like turmeric, ginger, bell peppers, tomatoes, omega fats etc. to reduce your risk of inflammation.
- Avoid foods that can cause auto-immunity in the body, especially if you are intolerant to any food components.

GENOMAX GENE BASED WELLNESS PROGRAM

97. Tendency of Osteoarthritis

Your Genetic Result

Your Risk / Response

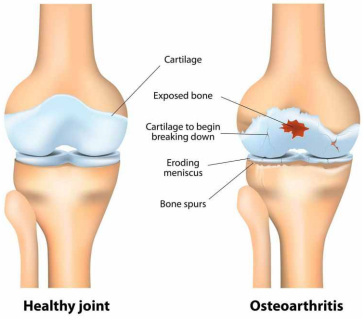
HIGH RISK

Gene(s) Analysed

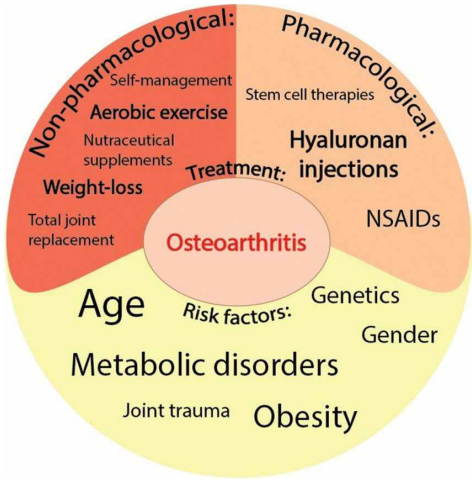
IL6

Risk / Response Variant(s) Presence

YES



PAY ATTENTION!



Osteoarthritis is the most common form of arthritis, affecting millions of people worldwide. It occurs when the protective cartilage that cushions the ends of your bones wears down over time. Although osteoarthritis can damage any joint, the disorder most commonly affects joints in your hands, knees, hips and spine. Genes has a role to play in the development and healing of skeletal, joint and soft tissues. Mutations in the gene raises the risk of sports and training injuries, and has been linked to osteoarthritis and dislocation of the hip. High impact in the genes causes increased risk of sports injuries, tendinopathy and osteoarthritis in later life. Incorporation of resistance exercises is equally important to prevent injuries.

RESEARCH RECOMMENDATIONS

- You have high risk of reduced BMD which increases the risk of diseases such as Osteoarthritis.
- Risk of osteoarthritis is very high in your case, hence routine exercise is needed to maintain ideal body weight and enhance good bone health.
- Routine intake of lutein and lycopene through diet, along with anti┐inflammatory diet is suggested.

GENOMAX GENE BASED WELLNESS PROGRAM

98. Allergic Rhinitis Risk

Your Genetic Result

Your Risk / Response

NORMAL

Gene(s) Analysed

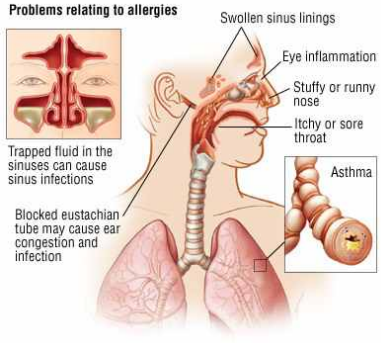
IL-33

Risk / Response Variant(s) Presence

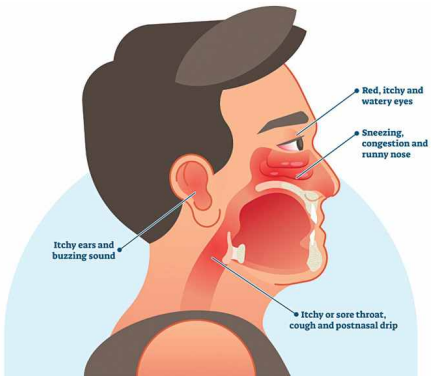
NO

Impact of Genotype(s)

Normal risk for hay fever



NEUTRAL



Many different substances and pollen cause the allergic symptoms commonly called hay fever. While hay is not the only allergen that causes problems and it does not cause fever, this popular name appeared from early descriptions of sneezing, nasal congestion, and eye irritation while harvesting hay fields. The scientific term for it is allergic rhinitis that originates from rhino (nose). At peak seasons hay fever affects up to 30% of all people worldwide. Symptoms of hay fever often mimic those of chronic colds, and in? clude nasal congestion, a runny nose with clear mucus, sneezing, nose, eye itching, excess tears. Hay fever can make you feel miserable, and generally interfere with your daily life affecting your performance at work or school. Large genome-wide association studies have been done to find the genetic variants associated with Allergic Rhinitis.

Given the importance of IL-33 in atopic and inflammatory diseases, studies have found a risk association with Allergic Rhinitis.

Associated Symptoms

- Runny or stuffy nose
- Sneezing
- Red, itchy and watery eyes
- Swelling around the eyes

RESEARCH RECOMMENDATIONS

- Since you do not carry the risk variant for IL 33 gene variant you are less likely to be affected with symptoms such as chronic colds, nasal congestion, a runny nose with clear mucus, sneezing, itching in nose and eyes, excess tears at peak of pollen seasons.

GENOMAX GENE BASED WELLNESS PROGRAM

99. Risk of Asthma

Your Genetic Result

Your Risk / Response

TYPICAL RISK

Gene(s) Analysed

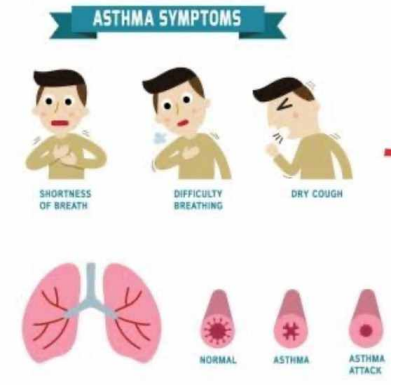
TNFA

Risk / Response Variant(s) Presence

NO

Impact of Genotype(s)

Not Significantly associated with asthma.



NEUTRAL

Asthma is the most common chronic disorder in children, and exacerbation of asthma is a major cause of childhood morbidity and hospitalization. Asthma is a complex and chronic disease in which allergen-induced inflammatory processes in the airways contribute to the development of symptoms, such as wheezing, cough, dyspnea, and breathlessness.
Tumor necrosis factor (TNF) is a potent inflammatory cytokine that contributes to airway inflammation in asthma

Associated Symptoms

- Shortness of breath
- Chest tightness or pain
- Trouble in sleeping caused by shortness of breath, coughing or wheezing
- A whistling or wheezing sound when exhaling
- Respiratory disorder
- Pulmonary diseases

GENOMAX GENE BASED WELLNESS PROGRAM

100. Pancreatitis

Your Genetic Result

Your Risk / Response

INCREASED

Gene(s) Analysed

RIPPLY1

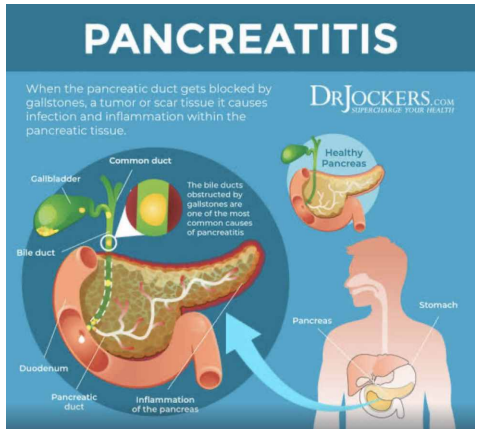
Risk / Response Variant(s) Presence

YES

Impact of Genotype(s)

Significantly associated with increased suseptibility to chronic pancreatitits and also alcohol related chronic pancreatitis.

PAY ATTENTION



The pancreas is a large gland behind the stomach and close to the first part of the small intestine. It secretes digestive juices into the small intestine through a tube called the pancreatic duct. The pancreas also releases the hormones insulin and glucagon into the bloodstream. Pancreatitis is inflammation of the pancreas. It happens when digestive enzymes start digesting the pancreas itself. Pancreatitis can be acute or chronic. Either form is serious and can lead to complications.

Alcohol misuse is the predominant cause of chronic pancreatitis (CP); however, only 3% - 5% of alcohol misusers develop the disease. This implicates genetic susceptibility factors that are well researched in replication studies like the RIPPLY1 gene.

Associated Symptoms

- Pain in the upper belly that spreads into the back.
- Pain in the belly that gets worse when you eat or drink alcohol.
- Diarrhea or oily stools.
- Nausea and vomiting.
- Severe belly (abdominal) pain that may be constant or that comes back.
- Weight loss.

RESEARCH RECOMMENDATIONS

- Limit alcohol consumption. By drinking less (or not at all), you can help protect your pancreas from the toxic effects of alcohol and reduce your risk for pancreatitis.
- Eat a low-fat diet
- Exercise regularly and lose excess weight.
- Skip crash diets
- Don't smoke.

GENOMAX GENE BASED WELLNESS PROGRAM

101. Chronic Obstructive Pulmonary Disease

Your Genetic Result

Your Risk / Response

NEUTRAL

Gene(s) Analysed

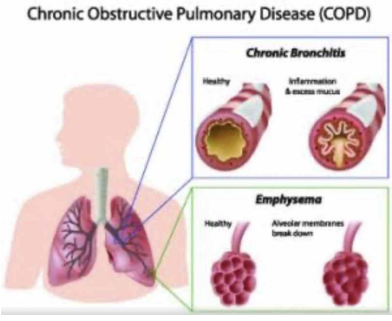
TNFA

Risk / Response Variant(s) Presence

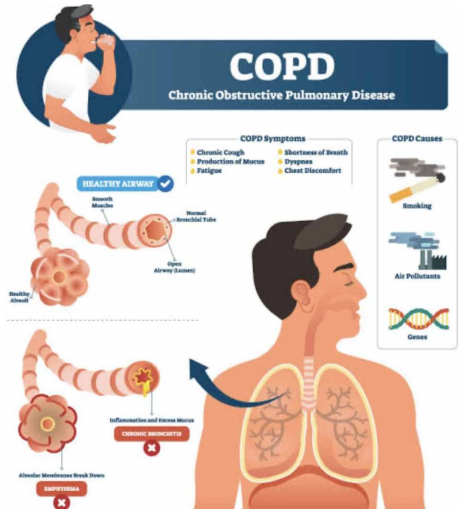
NO

Impact of Genotype(s)

Not Significantly associated with increased COPD risk



NEUTRAL



Chronic obstructive pulmonary disease (COPD) is a chronic inflammatory lung disease that causes obstructed airflow from the lungs. Symptoms include breathing difficulty, cough, mucus (sputum) production and wheezing. It's typically caused by long-term exposure to irritating gases or particulate matter, most often from cigarette smoke. People with COPD are at increased risk of developing heart disease, lung cancer and a variety of other conditions.

Emphysema and chronic bronchitis are the two most common conditions that contribute to COPD. These two conditions usually occur together and can vary in severity among individuals with COPD. Emphysema slowly destroys air sacs in your lungs, which interferes with outward air flow. Bronchitis causes inflammation and narrowing of the bronchial tubes, which allows mucus to build up.

COPD has been estimated to become the third leading cause of death in the world by 2020. Cigarette smoking is considered to be a major environmental factor. However, only 25% - 40% of cigarette smokers develop COPD.

Accumulated evidence indicates that genetic factors influence COPD susceptibility. A number of studies have demonstrated that TNF-a is relevant to the pathogenesis of COPD, including involvement in neutrophil release from the bone marrow and neutrophil activation. Increased levels of TNF-a have been found in the sputum, bronchoalveolar lavage fluid, bronchial biopsies, and circulation of COPD patients.

Associated Symptoms

- Cough: can be dry or with phlegm
- Respiratory: frequent respiratory infections, shortness of breath
- fatigue or inability to exercise Also common: chest pressure, loss of muscle/weight loss

RESEARCH RECOMMENDATIONS

- Even though you have a neutral genetic risk, If you experience symptoms, you should consider having a blood test to measure levels of alpha-1-antitrypsin. This is an important protein that helps protect the lungs from damage due to inflammation. Low levels of this protein increase your risk of developing COPD.

GENOMAX
GENE BASED WELLNESS PROGRAM

102. DNA Damage & Toxicity Risk from Eating Tandoori Food

Your Genetic Result

Your Risk / Response

HIGHER RISK FOR DNA DAMAGE & TOXICITY

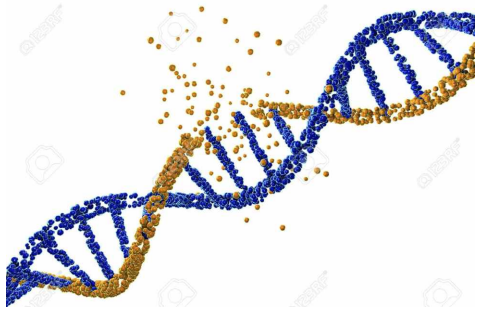
Gene(s) Analysed

CYP1A2

Risk / Response Variant(s) Presence

YES

PAY ATTENTION!



Cooking certain meats at high temperature creates formation of certain chemicals that are not naturally present in uncooked meal. Some of these chemical known as HCA (Heterocyclic Amines) and PAH (Polycyclic Aromatic hydrocarbons), are regarded as toxic compounds that can lead to DNA and protein damage in cell. These chemicals are formed when cooking muscle meats such as beef lamb, pork, fowl and fishes at high temperature, and has become blackened, crispy, or chargrilled. Foods cooked for a long time i.e. well done or very well done by different methods form more of HCA's. When we eat this meat, our body starts to break down these HCA's and PAH's creating a toxic by product. These toxic by-products are created at different rates depending by phase 1 enzymes based on your genetics.

RESEARCH RECOMMENDATIONS

- Limit your consumption of smoked and chargrilled meat to 1-2 servings per week.
- Focus on protecting the meat during cooking processes, lower the cooking temperature, and cook with liquids (curries, stews, stir fries, etc.)
- The riskiest meats are barbecued meats, like chicken tikka, which are often blackened and chargrilled; Meat which tends to be cooked at a high temperature for a long period of time, and steaks, especially if they are well done.

GENOMAX GENE BASED WELLNESS PROGRAM

103. Lifespan and Longevity

Your Genetic Result

Your Risk / Response

INCREASED LIFESPAN

Gene(s) Analysed

FOXO3

Risk / Response Variant(s) Presence

NO

Impact of Genotype(s)

Associated with increased lifespan.

YOUR LUCKY!

Life expectancy in humans is influenced by various environmental and genetic factors. Approximately 25-32% of the overall variation in adult lifespan is accounted for by genetic differences that become particularly important for survival after the age of 60.

Forkhead box O3 protein (FOXO3) is a transcription factor involved in the regulation of genes involved in many cellular processes, including DNA repair, tumor suppression, immune function, and resistance to oxidative stress. FOXO3A has been well researched as a susceptibility gene for prolonged survival in humans.

Findings from a meta-analysis of several studies suggest that individuals who had achieved an older age (greater than 90 years) were more likely to carry lucky variant of this polymorphism.

RESEARCH RECOMMENDATIONS

- More Likely to live more than 90 years.

GENOMAX
GENE BASED WELLNESS PROGRAM

104. Tendency of Oxidative Stress

Your Genetic Result

Your Risk / Response

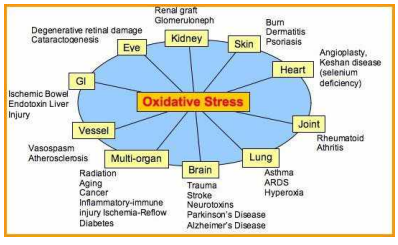
LOW RISK

Gene(s) Analysed

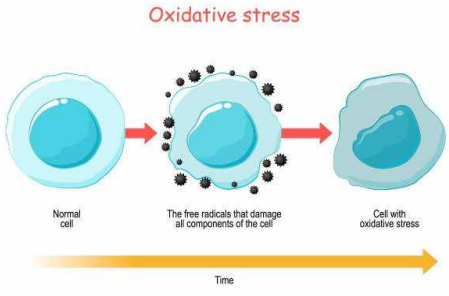
MNSOD

Risk / Response Variant(s) Presence

NO



GIFTED!



Oxidative stress is the imbalance between the production of free radicals or reactive oxygen species (ROS) and antioxidants. ROS are generated as a by product during normal cellular metabolism and tend to easily react with other molecules. Antioxidants help stabilize the ROS, making them less reactive. An excess of ROS can lead to the oxidation of proteins, lipids, carbohydrates, and DNA which can cause damage to tissues and organs, and subsequently several disorders such as diabetes, atherosclerosis, inflammation, cancer, and neurodegenerative diseases.

RESEARCH RECOMMENDATIONS

- As per your genotype, you have a low risk of developing oxidative stress.
- The number of free radicals or reactive oxygen species in the body may not increase due to influences from environmental factors such as pollution, heavy metals, UV radiation, ionizing radiation, certain drugs, chemical solvents, lifestyle, aging, or underlying diseases, which may further increase the risk of developing oxidative stress.
- Include antioxidant-rich foods especially fruits and vegetables like berries, citrus fruits, dark green leafy vegetables and tomatoes, vitamin E rich foods, vitamin C rich foods, turmeric, and green tea in your diet.

GENOMAX
GENE BASED WELLNESS PROGRAM

105. Requirement of Antioxidants

Your Genetic Result

Your Risk / Response

LOW RISK

Gene(s) Analysed

MNSOD

Risk / Response Variant(s) Presence

NO

GIFTED!

Antioxidants are compounds that inhibit the oxidation process in the body. Certain processes can lead to the formation of oxidative species in the body, which can damage the cells and DNA, leading to impaired cellular functions.|The ability of antioxidants to destroy oxidative species protects the structural integrity of cells and tissues. Antioxidants also function in strengthening the immune response of the body. They have also been known to reduce the risk of cancer and neurodegenerative diseases such as Alzheimer's and Parkinson's. Sources rich in antioxidants include dark chocolate, spinach, green tea, and blueberries. Genetic variations can lead to altered functioning of the body's innate antioxidant defense system, thereby influencing the dietary requirement for antioxidants.

RESEARCH RECOMMENDATIONS

- As per your genotype, your requirement of anti oxidants is low as your Antioxidant Metabolism is good.
- People with such a genotype tend to have an efficient antioxidant defense system, which reduces their risk for oxidative stress induced health complications
- Increase consumption of vitamin E and vitamin C food sources such as oranges, lemon, guava, bell pepper, tomato, etc

GENOMAX
GENE BASED WELLNESS PROGRAM

106. Requirement of Sunscreen

Your Genetic Result

Your Risk / Response

LOW RISK

Gene(s) Analysed

MNSOD

Risk / Response Variant(s) Presence

NO

GIFTED!

Dermatologists recommend using a sunscreen with an SPF of at least 30, which blocks 97 percent of the sun's UVB rays. Higher-number SPFs block slightly more of the sun's UVB rays, but no sunscreen can block 100 percent of the sun's UVB rays. The number one reason you should prioritize wearing sunscreen is that it helps to protect you from developing skin cancer. Daily SPF use, even if it is cloudy or raining, can help protect your skin from harmful rays that cause cancer.

RESEARCH RECOMMENDATIONS

- As per your genotype, your need of sunscreen daily is low
- Get enough rest and ample sleep.
- Improve antioxidants in diet to improve skin health
- It is important to be mindful of your eating, emphasize portion control, and space your meals well to avoid overeating.
- Practice stress-relieving activities like meditation to deal with stress.

GENOMAX
GENE BASED WELLNESS PROGRAM

107. Impact of Alcohol and Smoking on Oxidative Stress

Your Genetic Result

Your Risk / Response

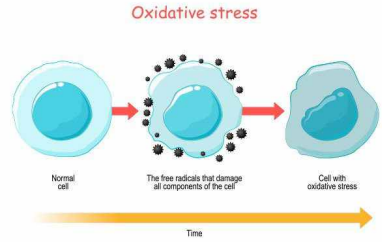
LOW RISK

Gene(s) Analysed

MNSOD

Risk / Response Variant(s) Presence

NO



GIFTED!

Alcohol consumption and cigarette smoking elevates ROS production, which results in oxidative stress and increased DNA damage. Smoking and/or alcohol use increases oxidative stress. Alcohol consumption also may promote the conversion of xanthine dehydrogenase to xanthine oxidase which can generate ROS, thereby enhancing oxidative stress. Smoking is associated with an increased oxidative stress, as demonstrated by an increased activation of NADPH oxidase (Nox) 2, which is an essential enzyme producing ROS by phagocytes and platelets.

RESEARCH RECOMMENDATIONS

- As per your genotype, you have a low risk of developing oxidative stress.
- Low tendency of increased oxidation
- Balance stress and other factors leading to increased oxidation
- Avoid Alcohol and smoking as there is increased risk of oxidation due to alcohol and smoking

GENOMAX
GENE BASED WELLNESS PROGRAM

108. Impact of Radiation and Pollution on Oxidative Stress

Your Genetic Result

Your Risk / Response

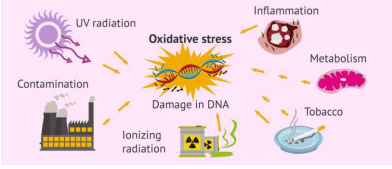
LOW RISK

Gene(s) Analysed

MNSOD

Risk / Response Variant(s) Presence

NO



GIFTED!

Ionizing radiation-induced oxidative stress is attributed to generation of reactive oxygen species (ROS) due to radiolysis of water molecules and is short lived. Persistent oxidative stress has also been observed after radiation exposure and is implicated in the late effects of radiation. UV radiation causes oxidative damage of the cells due to the release of inflammatory cytokines which in turn generates reactive oxygen species (ROS) that damages lipids, proteins and DNA.

RESEARCH RECOMMENDATIONS

- As per your genotype, you have low risk of developing oxidative stress due to impact of free radicals and pollution
- Avoid exposure to unnecessary radiation and pollution.
- Avoid unnecessary exposure to harmful chemicals like pesticides.

GENOMAX GENE BASED WELLNESS PROGRAM

109. Tendency of Detoxification

Your Genetic Result

Your Risk / Response

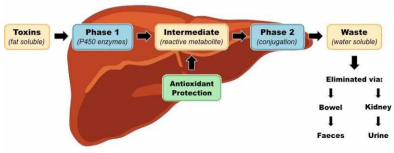
MODERATE RISK

Gene(s) Analysed

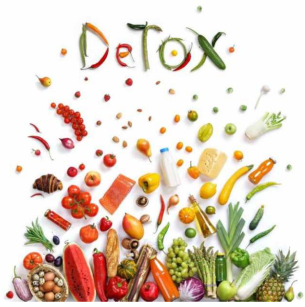
GSTP1

Risk / Response Variant(s) Presence

YES



PAY ATTENTION!



Detoxification is an important mechanism for metabolism and bio transformation of toxic substances; the process also provides protection to the cells. Detoxification primarily takes place in 3 phases. Phase I detoxification enzymes are involved in the activation of potentially toxic compounds while phase II and phase III detoxification enzymes react with the activated compounds making it easy for it to be excreted from the body. Having a balance between these phases is important to ensure the metabolism of reactive oxygen species and other toxic agents which can make us susceptible to many diseases.

RESEARCH RECOMMENDATIONS

- As per your genotype, you have reduced detoxification process
- Factors such as diet, lifestyle habits like drinking and smoking, environmental triggers, and underlying diseases will increase the risk of developing an imbalance of detoxification activities.
- Effective Detox mechanism in body, Can remove external carcinogens and products of oxidative stress
- As you have poor detoxification activity, very high intake of antioxidants is necessary

GENOMAX
GENE BASED WELLNESS PROGRAM

110. Impact of Smoking and Alcohol on Detoxification Process

Your Genetic Result

Your Risk / Response

MODERATE RISK

Gene(s) Analysed

GSTP1

Risk / Response Variant(s) Presence

YES

PAY ATTENTION!

Detoxification or detoxification (detox for short) is the physiological or medicinal removal of toxic substances from a living organism, including the human body, which is mainly carried out by the liver. Addictive substances like alcohol or carbon from smoke are toxins from the body which needs to be eliminated. Every individual have different ability of detoxification and our genes have major role to play.

RESEARCH RECOMMENDATIONS

- As per your genotype, you have reduced risk of developing an imbalance in the detoxification process due to alcohol and smoking.
- Factors such as diet, lifestyle habits like drinking and smoking, environmental triggers, and underlying diseases will increase the risk of developing an imbalance of detoxification activities.
- It is advised to avoid smoking and drinking.
- Improve detoxification with better hydration and more intake of fruits and vegetables

GENOMAX
GENE BASED WELLNESS PROGRAM

111. Risk of Developing Acne

Your Genetic Result

Your Risk / Response

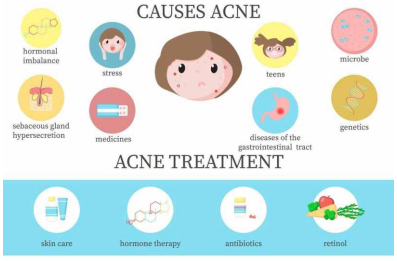
HIGH RISK

Gene(s) Analysed

TGFB2

Risk / Response Variant(s) Presence

YES



PAY ATTENTION!

Acne is a skin condition that occurs when your hair follicles become plugged with oil and dead skin cells. It causes whiteheads, blackheads or pimples. Acne is most common among teenagers, though it affects people of all ages. Acne typically appears on your face, forehead, chest, upper back and shoulders because these areas of skin have the most oil (sebaceous) glands. Hair follicles are connected to oil glands. Hormonal changes, certain medication, diet and stress can trigger acne.

RESEARCH RECOMMENDATIONS

- As per your genotype you have High risk of developing acne.
- Increased intake of zinc, vitamins A and E, omega-3 fatty acids, antioxidants suggested.
- Keep your self hydrated as dry skin can trigger excess oil production, which could contribute to acne.

GENOMAX GENE BASED WELLNESS PROGRAM

112. Risk of Sunburns

Your Genetic Result

Your Risk / Response

LOW RISK

Gene(s) Analysed

ASIP

Risk / Response Variant(s) Presence

NO

GIFTED!

Sunburn is red, painful skin that feels hot to the touch. It usually appears within a few hours after too much exposure to ultraviolet (UV) li ght fromsunshine or artificial sources, such as sunlamps. Home remedies can usually provide sunburn relief, but sunburn may take days to fade.|Intense, repeated UV light exposure that results in sunburn increases the risk of other skin damage, such as dark spots, rough spots, and dry or wrinkled skin. It also raises the risk of skin cancers such as melanoma.

RESEARCH RECOMMENDATIONS

- As per your genotype you have a low risk of developing sunburn.
- Avoid skin exposure from UV light exposure.
- Use a sunscreen not less than 50 SPF, each timebefore an exposure to sunlight.

GENOMAX
GENE BASED WELLNESS PROGRAM

113. Risk of Sun Spots

Your Genetic Result

Your Risk / Response

LOW RISK

Gene(s) Analysed

MC1R

Risk / Response Variant(s) Presence

NO

GIFTED!

Sunspots are flat brown spots that develop on areas of your skin that are exposed to the sun. These are flat areas of skin discoloration that can be tan or varying shades of brown. They appear on the parts of your body that get the most sun exposure, such as your face, shoulders, back, and the backs of your hands. They're also known as liver spots, though they have nothing to do with your liver. Sunspots are harmless. They are noncancerous and don't pose any risk to your health or require treatment unless you're looking to remove them for cosmetic reasons.

RESEARCH RECOMMENDATIONS

- As per your genotype you have low risk for Sunspots.
- Limit exposure of your skin from sun.
- Make use of sunscreen while going out.
- Use a sunscreen each time before an exposure to sunlight for better skin protection

114. Tanning Ability

Your Genetic Result

Your Risk / Response

LOW RISK

Gene(s) Analysed

MC1R

Risk / Response Variant(s) Presence

NO

GIFTED!

The tanning ability shows a better correlation with skin complexion characteristics than the burning tendency. If you have a darker skin tone (more melanin), you tend to tan easily. Themelanin (brown pigment) containing melanocytes spread out across the sun-exposed skin to cover and protect the skin from more damage. Melanin, a skin pigment, plays a crucial protective role against the damage to DNA after exposure to UV rays. Tanning ability is a heritable trait, but the genetic basis of it and its effect on skin cancer susceptibility is not fully understood.

RESEARCH RECOMMENDATIONS

- As per your genotype you have low tendency for tanning of your skin.
- Make use of sunscreen while going out
- As our skin naturally dries during the tanning process, it's vitally important to hydrate Yourself, hence always be hydrated.

GENOMAX
GENE BASED WELLNESS PROGRAM

115. Tendency of Psoriasis

Your Genetic Result

Your Risk / Response

LOW RISK

Gene(s) Analysed

NOS2

Risk / Response Variant(s) Presence

NO

GIFTED!

Psoriasis is an autoimmune skin disease leading to faster growth of skin cells. It is characterized by red patches of skin covered with thick, silvery scales and small scaling spots. An overactive immune system causes T-cells (immune cells)to attack healthy skin cells,resulting in increased production of healthy skin cells, which leads to scaly patches, redness, and sometimes pus. Other conditions associated with psoriasis include cardiovascular diseases, obesity, diabetes, metabolic syndrome, Inflammatory Bowel Disease (IBD), and psoriatic arthritis, whichcontribute to decreased longevity

RESEARCH RECOMMENDATIONS

- As per your genotype, you have a low risk of developing psoriasis.
- Other factors such as cold weather, physical trauma, certain drugs and infections, as well as modifiable variables such as psychological stress,obesity, smoking, and alcohol increases the risk of developing and worsening of psoriasis.
- Maintain a healthy diet and body weight as per your Body Mass Index (BMI) to reduced risk of comorbidities associated with psoriasis.
- Maintain good skin hygiene, & Limit smoking and alcohol.
- Routine antioxidant support will help manage psoriasis.

116. Nutritional Requirement for Psoriasis Management

Your Genetic Result

Your Risk / Response

LOW RISK

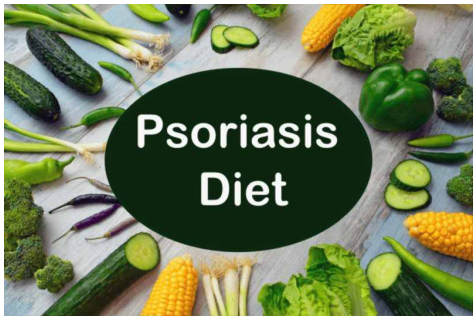
Gene(s) Analysed

NOS2

Risk / Response Variant(s) Presence

NO

GIFTED!



A condition in which skin cells build up and form scales and itchy, dry patches. Psoriasis is thought to be an immune system problem. Triggers includeinfections, stress and cold. The most common symptom is a rash on the skin, but sometimes the rash involves the nails or joints. Studies show that men who drink heavily don't respond to psoriasis treatments as well, hence limit alcohol. Some studies suggest that antioxidants, like vitamin C, vitamin E, beta-carot ene, and selenium, fatty acids from fishoil can be helpful.

RESEARCH RECOMMENDATIONS

- As per your genotype, you have low risk of developing psoriasis.
- Routine Intake of antioxidants, like vitamin C, vitamin E, beta-carotene, and selenium, fatty acids from fish oil is suggested.

GENOMAX
GENE BASED WELLNESS PROGRAM

117. Risk of Developing Eczema

Your Genetic Result

Your Risk / Response

HIGH RISK

Gene(s) Analysed

IL-6

Risk / Response Variant(s) Presence

YES

PAY ATTENTION!

Atopic dermatitis (eczema) is a condition that makes your skin red and itchy. It's common in children but can occur at any age. Atopic dermatitis is long lasting (chronic) and tends to flare periodically. It maybe accompanied by asthma or hay fever.

RESEARCH RECOMMENDATIONS

- As per your genotype you have high risk for developing Eczema.
- Healthy skin helps retain moisture and protects you from bacteria, irritants and allergens.
- Eczema is related to a gene variation that affects the skin's ability to provide this protection. This allows your skin to be affected by environmental factors, irritants and allergens.

GENOMAX GENE BASED WELLNESS PROGRAM

118. Risk of Vitiligo

Your Genetic Result

Your Risk / Response

HIGH RISK (2.23X OR)

Gene(s) Analysed

VDR

Risk / Response Variant(s) Presence

YES

PAY ATTENTION!

Vitiligo is a disease that causes loss of skin color in patches. The discolored areas usually get bigger with time. The condition can affect the skin on any part of the body. It can also affect hair and the inside of the mouth.|Normally, the color of hair and skin is determined by melanin. Vitiligo occurs when cells that produce melanin die or stop functioning. Vitiligo aff ects people of all skin types, but it may be more noticeable in people with darker skin. The condition is not lifethreatening or contagious.

RESEARCH RECOMMENDATIONS

- As per your genotype, you have high risk of developing vitiligo.
- Hence increased risk of inflammation and oxidative stress.
- Ensure thefollowing for a better oxidant control:
- Routine consumption of coloured fruits and vegetables in the diet.
- Antioxidants like vitamin A, E and C needs to be consumed through diet.
- Reduced exposure to sunlight.
- Avoiding excessive friction in skin areas such as palms, soles etc where tendency of vitiligo patches are increased.

GENOMAX
GENE BASED WELLNESS PROGRAM

119. Requirement of Vitamin D for Vitiligo

Your Genetic Result

Your Risk / Response

LOW RISK

Gene(s) Analysed

VDR

Risk / Response Variant(s) Presence

NO

GIFTED!

Vitamin D3 increases synthesis of melanin (Melanogenesis) and protects the melanin cells from UVB-induced damage. This in turn contributes to regimentation in vitiligo macules. Supporting the role of vitamin D in inducing depigmentation in vitiligo skin using calcipotriol and tacalcitol, have been shown in many studies and has been shown to enhance regimentation in patients with vitiligo. In addition, vitamin D has been shown to exert immunomodulatory effects by suppressing the levels of inflammation causing molecules such as IL-6, IL-8, tumor necrosis factor (TNF)-? andTNF-?

RESEARCH RECOMMENDATIONS

- As per your genotype, ability to assimilate or absorb Vit D is normal
- There is tendency of "high regimentation" and "low inflammation" due to Vit D deficiency.
- Ensure the following for a good Vit D metabolism.
- Routine consumption of Vit D as per RDA through diet
- Routine exposure to mild sunlight, mostly in early morning for better Vit D synthesis,

GENOMAX
GENE BASED WELLNESS PROGRAM

120. Impact of Gluten on Vitiligo

Your Genetic Result

Your Risk / Response

MODERATE RISK

Gene(s) Analysed

HLADQ2_5 - HLADQ8

Risk / Response Variant(s) Presence

YES

PAY ATTENTION!

Gluten is a known pro-inflammatory substance present in wheat, barley and malt. Gluten has been reported to accelerate the process of inflammation. Such inflammation can further weaken and lead to damage of the pigment producing cells of the skin. Some individuals are born with a genetic make up that makes them more sensitive to gluten as compared to the others. Gluten elimination can become an effective tool not just in avoiding direct gluten induced damage to the cells, but also avoiding in-direct damage caused due to the digestive issues such as acidity, bloating, abdominal pain etc, arising from gluten consumption

RESEARCH RECOMMENDATIONS

- As per your genotype, ability to produce inflammation in body due to gluten is increased as compared to other individuals. Though there is no tendency of gluten induced Celiac Diseases.
- There is increased risk of damage of the pigment producing cells of the skin. Ensure the following for better inflammation control.
- Eliminate consumption of gluten containing products such as barley, malt etc.
- Avoid the consumption of bakery products.
- Avoid consumption of gluten especially during travel and incase of females during the initial days of menstrual cycle.
- Consider consumption of anti-inflammatory foods / supplements and probiotics based on the suggestions from the relevant medical/diet expert.

GENOMAX
GENE BASED WELLNESS PROGRAM

121. Pemphigus Folaceous

Your Genetic Result

Your Risk / Response

LOW RISK

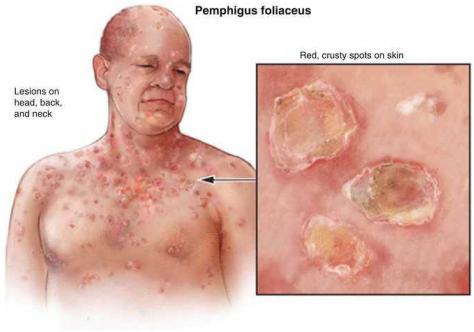
Gene(s) Analysed

TNFA

Risk / Response Variant(s) Presence

NO

GIFTED!



Pemphigus foliaceus is an autoimmune disease that causes itchy blisters to form on your skin. It's part of a family of rare skin conditions called pemphigus that produce blisters or sores on the skin, in the mouth, or on the genitals. Pemphigus can occur at any age, but it's most often seen in people who are middle-aged or older. It tends to be a long-lasting (chronic) condition, and some types can be life threatening without treatment. Treatment with medicationusually controls it.

RESEARCH RECOMMENDATIONS

- As per your genotype, there is low risk of Pemphigus foliaceus.
- Routine anti inflammatory support will help in better management.
- Incase of onset of the condition, exclude substances such as gluten, lactose for better relief.
- Routine antioxidants in diet such as Vit E, Vit C will help manage better.

GENOMAX
GENE BASED WELLNESS PROGRAM

122. Time of Exercise

Your Genetic Result

Your Risk / Response

MODERATE RISK

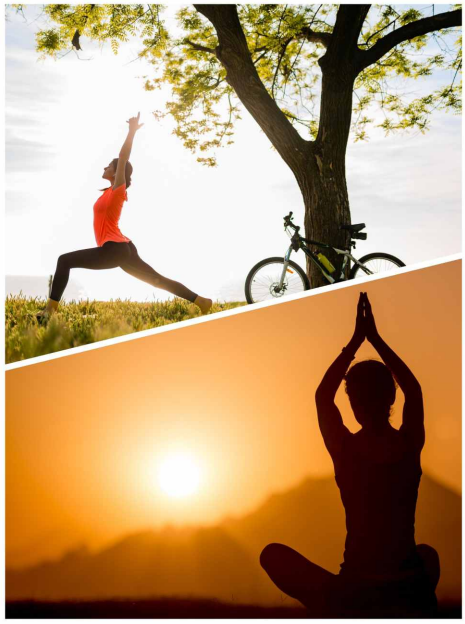
Gene(s) Analysed

CLOCK

Risk / Response Variant(s) Presence

YES

PAY ATTENTION!



Circadian rhythm is an essential el ement of the human biological clock, and is involved in metabolic regulation. Carriers of the C allele are less successful losing weight than the TT genotype. In addition, those with the C allele have reduced sleep, report morning fatigue and show an evening preference for activities. They also have higher ghrelin levels which regulates appetite, potentially altering eating behavior and weight loss. Sleep disorders are conditions that result in changes in the way of sleep. The sleep-wake cycle is under the control of the circadian clock. A sleep disorder can affect overall health, safety and quality of life. Some of the signs and symptoms of sleep disorders include excessive daytime sleepiness, irregular breathing or increased movement during sleep. Other signs and symptoms include an irregular sleep and wake cycle and difficulty falling asleep. Some common types of sleep disorder include insomnia, sleep apnea, restless leg syndrome (RLS) andnarcolepsy.

RESEARCH RECOMMENDATIONS

- As per your genotype, you have an evening clock
- Hence, you need to carry out your exercise towards the evening time as your metabolic rate will be betterin evening

GENOMAX GENE BASED WELLNESS PROGRAM

123. Time of Metabolism

Your Genetic Result

Your Risk / Response

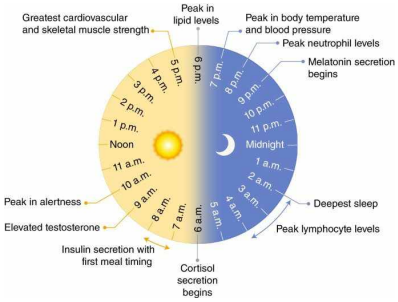
MODERATE RISK

Gene(s) Analysed

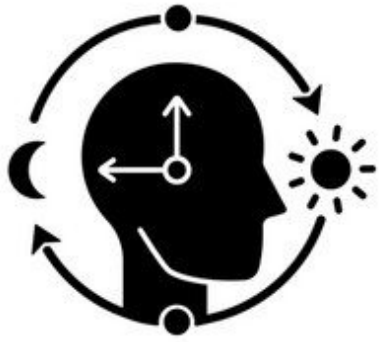
CLOCK

Risk / Response Variant(s) Presence

YES



PAY ATTENTION!



It is an essential element of the human biological clock, and is involved in metabolic regulation. Carriers of the C allele are less successful losing weight than the TT genotype. In addition, those with the C allele have reduced sleep, report morning fatigue and show an evening preference for activities. They also have higher ghrelin levels which regulates appetite, potentially altering eating behavior and weight loss. Sleep disorders are conditions that result in changes in the way of sleep. The sleep-wake cycle is under the control of the circadian clock. A sleep disorder can affect overall health, safety and quality of life. Some of the signs and symptoms of sleep disorders include excessive daytime sleepiness, irregular breathing or increased movement during sleep. Other signs and symptoms include an irregular sleep and wake cycle and difficulty falling asleep. Some common types of sleep disorder include insomnia, sleep apnea, restless leg syndrome (RLS) andnarcolepsy.

RESEARCH RECOMMENDATIONS

- As per your genotype, you have an evening clock and better metabolism in the evening time ofthe day.
- As per your genotype, you also have higher ghrelin levels which regulates appetite, potentially altering eating behavior and weight loss.

GENOMAX GENE BASED WELLNESS PROGRAM

124. Time of Carbohydrate Intake

Your Genetic Result

Your Risk / Response

MODERATE RISK

Gene(s) Analysed

CLOCK

Risk / Response Variant(s) Presence

YES

PAY ATTENTION!

It is an essential element of the human biological clock, and is involved in metabolic regulation. Carriers of the C allele are less successful losing weight than the TT genotype. In addition, those with the C allele have reduced sleep, report morning fatigue and show an evening preference for activities. They also have higher ghrelin levels which regulates appetite, potentially altering eating behavior and weightloss. Sleep disorders are conditions that result in changes in the way of sleep. The sleep-wake cycle is under the control of the circadian clock. A sleep disorder can affect overall health, safety and quality of life. Some of the signs and symptoms of sleep disorders include excessive daytime sleepiness, irregular breathing or increased movement during sleep. Other signs and symptoms include an irregular sleep and wake cycle and difficulty falling asleep. Some common types of sleep disorder include insomnia, sleep apnea, restless leg syndrome (RLS) and narcolepsy.
CLOCK

RESEARCH RECOMMENDATIONS

- As per your genotype, you have an evening clock
- As per your genotype, you also have higher ghrelin levels which regulates appetite, potentially altering eating behavior and weight loss
- Hence major carbs intake should be towards the second half of the day
- Consume protein rich breakfast

GENOMAX GENE BASED WELLNESS PROGRAM

125. Tendency of Morning Fatigue

Your Genetic Result

Your Risk / Response

MODERATE RISK

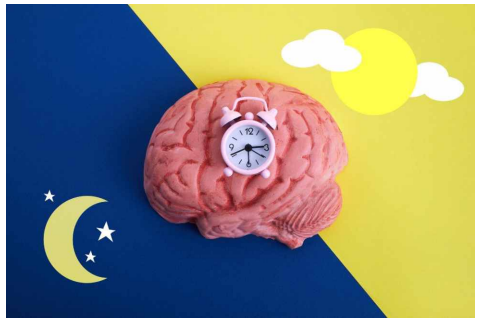
Gene(s) Analysed

CLOCK

Risk / Response Variant(s) Presence

YES

PAY ATTENTION!



Fatigue is characterized by profound fatigue, sleep abnormalities, pain and other symptoms that are made worse by exertion. Those with the C allele have reduced sleep, report morning fatigue and show an evening preference for activities. They also have higher ghrelin levels which regulates appetite, potentially altering eating behavior and weight loss. Sleep disorders are conditions that result in changes in the way of sleep. The sleep-wake cycle is under the control of the circadian clock. A sleep disorder can affect overall health, safety and quality of life. Some of the signs and symptoms of sleep disorders include excessive daytime sleepiness, irregular breathing or increased movement during sleep. Other signs and symptoms include an irregular sleep and wake cycle and difficulty falling asleep. Some common types of sleep disorder include insomnia, sleep apnea, restless leg syndrome (RLS) and narcolepsy.

RESEARCH RECOMMENDATIONS

- These individuals compared to other genotypes: Have slightly altered sleep cycles, tendency to sleep late.
- As you have reduced sleep it can report morning fatigue and show an evening preference for activities.

GENOMAX
GENE BASED WELLNESS PROGRAM

126. Tendency of Sleep Disorder

Your Genetic Result

Your Risk / Response

MODERATE RISK

Gene(s) Analysed

CLOCK

Risk / Response Variant(s) Presence

YES

PAY ATTENTION!

Circadian rhythm is an essential el ement of the human biological clock, and is involved in metabolic regulation. Carriers of the C allele are less successful losing weight than the TT genotype. In addition, those with the C allele have reduced sleep, report morning fatigue and show an evening preference for activities. They also have higher ghrelin levels which regulates appetite, potentially altering eating behavior and weight loss. Variation in this gene causes changes in sleep cycle and patterns. C allele individual's sleep late and get up late, hence less carbs suggested to them in the morning. Individuals not complying to the same may get limited success in loss.

RESEARCH RECOMMENDATIONS

- As per your genotype, These individuals compared to other genotypes: Have increased risk of sleep disorder, tendency to sleep late.
- There is a slight weight loss resistance on indiscipline lifestyle. When there is sleep irregularity, delayed breakfast time than evening should be given preference time for exercise.
- Change of routine and irregularity in eating habits should be minimized as there is a tendency of weight gain.
- Your exercise responsiveness may be better in the evening

GENOMAX GENE BASED WELLNESS PROGRAM

127. Metformin Response

Your Genetic Result

Your Risk / Response

REDUCED METHYLATION

Gene(s) Analysed

MTHFR

Risk / Response Variant(s) Presence

YES

PAY ATTENTION!

Metformin is a diabetes medication known as Biguanide. The drug works in several ways. For example, it decreases the amount of sugar (glucose) made by the liver. It can also decrease the amount of sugar absorbed into the body (from the diet) and can make insulin receptors more sensitive, helping the body respond better to its own insulin. All of these effects cause a decrease in blood sugar levels. Because the medication does not increase the amount of insulin produced by the body, it is less likely to cause dangerously low blood sugar (hypoglycaemia). The drug has been shown to decrease fasting blood sugar and to decrease haemoglobin A1c (HbA1c). Studies have shown that the higher the HbA1c, the greater the chance for developing long-term problems related to diabetes. This includes problems such as heart disease, diabetic retinopathy, diabetic neuropathy, and diabetic nephropathy.

RESEARCH RECOMMENDATIONS

- Supplement with active B12 (methylcobalamin) metylfolate and calcium.
- It may be beneficial to substitute metformin with insulin injections.
- Consider taking calcium supplements as increased intake of calcium reverses vitamin B12 malabsorption induced by metformin. Supplement with active B12 (methyl cobalamin) and metylfolate. Begin by taking half tablet of methylfolate and work up the dosage to suit your ideal requirement.
- It may be beneficial to substitute metformin with insulin injections.

128. Response to Pioglitazone Treatment in Type 2 Diabetes

Your Genetic Result

Your Risk / Response

HIGHER RESPONDER TO PIOGLITAZONE TREATMENT

Gene(s) Analysed

ADIPOQ

Risk / Response Variant(s) Presence

NO

GIFTED!

Diabetes is a life - long disease in which blood glucose levels are above normal. If you have T2D your body does not use insulin properly. This is called insulin resistance. Usually a combination of things cause T2D, including genes, being overweight and metabolic syndrome. The symptoms of T2D can range from being very thirsty, blurry vision, being irritable to tingling or numbness in your hands or feet. Management of T2D includes diabetes medication or insulin therapy. The decision about which medications are best depends on many factors, including your blood sugar level, your genes and any other health problems you have. Your doctor might even combine drugs from different classes to help you control your blood sugar in several different ways.

RESEARCH RECOMMENDATIONS

- Since you carry the favourable genotype, pioglitazone treatment is recommended.

GENOMAX GENE BASED WELLNESS PROGRAM

129. Response to Sulfonylureas treatment in Type 2 Diabetes

Your Genetic Result

Your Risk / Response

TYPICAL EFFICACY

Gene(s) Analysed

CYP2C9

Risk / Response Variant(s) Presence

NO

Impact of Genotype(s)

Normal enzymatic activity

NEUTRAL

Many anti-diabetic drugs with different mechanisms of action are now available to treat type 2 Diabetes mellitus which includes sulfonylureas. Sulfonylureas were discovered in 1942. Sulfonylureas acts through increasing plasma insulin concentrations consequently they are effective only when residual pancreatic beta-cells are present. It is suggested that differential response to sulfonylureas from T2DM patients is under influence of single nucleotide polymorphisms in some of the target genes. In spite of favorable therapeutic effects, sulfonylureas are associated with some adverse side effects such as microvascular complications and stroke, especially in older patients. It was observed that polymorphism in TCF7L2 gene has been associated with reduced efficacy of Sulfonylureas treatment in Type 2 Diabetic individuals.

Sulfonylureas are a group of medicines used to treat type 2 diabetes. With type 2 diabetes, the body doesn't use the hormone insulin properly, leading to elevated levels of blood sugar (glucose). The first sulfonylureas were developed in the 1950s. The drugs work by increasing the release of insulin from the pancreas. Sulfonylureas are only one part of a treatment plan for type 2 diabetes, which should also include diet and exercise to help control blood sugar levels. Taking sulfonylureas, along with adopting a healthy lifestyle, can reduce your risk of developing serious or life-threatening complications of diabetes, which may include heart disease, stroke, nerve damage, kidney problems, or eye problems.

Side effects of sulfonylureas may include:

Signs of low blood sugar, such as sweating, dizziness, confusion, or nervousness, Hunger, Weight gain, Skin reactions, Upset stomach, Dark-colored urine.

RESEARCH RECOMMENDATIONS

- Since you carry the favorable genotype, Sulfonylureas treatment for Diabetes Mellitus is recommended.
- Since you do not carry the favorable genotype, Sulfonylureas treatment may not work in lowering the blood sugar levels. Hence, it is recommended to consider other drugs for improving insulin sensitivity.
- Normal response to sulfonamides, urea derivatives.

GENOMAX GENE BASED WELLNESS PROGRAM

130. Response to Statin Use

Your Genetic Result

Your Risk / Response

WEAKER RESPONSE TO ATORVASTATIN

Gene(s) Analysed

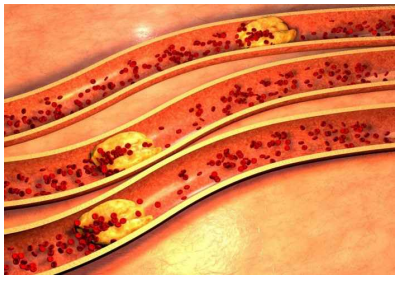
MTHFR

Risk / Response Variant(s) Presence

YES

Impact of Genotype(s)

Weaker response to ATV.



PAY ATTENTION!

Statin is a class of drugs that lowers the level of cholesterol in the blood by reducing the production of cholesterol by the liver.Statins block the enzyme in the liver that is responsible for making cholesterol. Studies show that, in certain people, statins reduce the risk of heart attack, stroke, and even death from heart disease by about 25% to 35%. Researchers found that the drugs simvastatin, atorvastatin and pravastatin had the fewest side effects in this class of medications.

GENOMAX GENE BASED WELLNESS PROGRAM

131. Warfarin response

Your Genetic Result

Your Risk / Response

NORMAL WARFARIN METABOLISM

Gene(s) Analysed

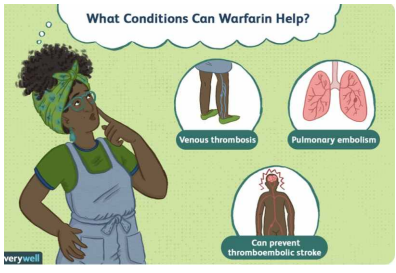
CYP2C9

Risk / Response Variant(s) Presence

NO

Impact of Genotype(s)

Normal metabolism warfarin



NEUTRAL

Warfarin is a blood thinner used to treat or prevent blood clots in veins or arteries, which can reduce the risk of stroke, heart attack, or other serious conditions. It works by interfering with the production of vitamin K and other proteins required for blood clotting. Thus, with less blood clotting proteins, the ability of the blood to clot is reduced. A genetic polymorphism in the CYP2C9 gene affects the sensitivity of a person to breakdown warfarin in the body, and thus making them slow metabolizers of Warfarin.

Warfarin is an anticoagulant (blood thinner). Warfarin reduces the formation of blood clots. It is used to treat or prevent blood clots in veins or arteries, which can reduce the risk of stroke, heart attack, or other serious conditions. CYP2C9, a member of the cytochrome P450 superfamily of enzymes, is responsible for the hydroxylation of S-warfarin, leading to its rapid removal from the circulation. CYP2C9*3 variant metabolise warfarin more slowly than those with the wildtype, which leads to raised plasma warfarin concentrations and a potentially increased risk of bleeding.

What are the side effects of taking warfarin?

Most Common : Tingling, headache, chest, abdomen, joint, muscle pain, dizziness, shortness of breath, difficulty in breathing or swallowing, unexplained swelling, weakness, low blood pressure and shock.

Hypersensitivity : Hives, itching, fever, rash and hair loss.

Gastrointestinal : Nausea, vomiting, diarrhea and abdominal pain.

Central Nervous System : Fatigue, tiredness, uneasiness, weakness, headache, dizziness, loss of consciousness, fainting, coma and taste perversion.

Associated Symptoms

- Possible sideffects: If people with warfarin sensitivity take the average dose (or more) of warfarin, they are at risk of an overdose, which can cause abnormal bleeding in the brain, gastrointestinal tract, or other tissues, and may lead to serious health problems or death.

132. Response to Antidepression Medication (Paroxetine)

Your Genetic Result

Your Risk / Response

TYPICAL EFFICACY

Gene(s) Analysed

MTHFR

Risk / Response Variant(s) Presence

NO

Impact of Genotype(s)

Requires a normal maintenance dose of paroxetine.

NEUTRAL

Paroxetine is an antidepressant that belongs to group of drugs called selective serotonin reuptake inhibitors (SSRIs). Paroxetine affects chemicals in the brain that may be unbalanced in people with depression, anxiety, or other disorders.Most antidepressants are metabolized by CYP2D6. The variant allele CYP2D6*4 is the main polymorphism resulting in reduced enzyme activity in Caucasians. Genomics studies revealed that poor metabolizers require a lower maintenance dose of antidepressants (Paroxetine)compared with extensive metabolizers (EMs).

RESEARCH RECOMMENDATIONS

- Your genotype is associated with a normal maintenance dose of paroxetine in people with Depression.

GENOMAX
GENE BASED WELLNESS PROGRAM

133. Therapeutic Response to Rheumatoid Arthritis Medication

Your Genetic Result

Your Risk / Response

INCREASED RESPONSE AND LOWER RISK OF SIDE EFFECTS TO METHOTREXATE.

Gene(s) Analysed

MTHFR

Risk / Response Variant(s) Presence

NO

Impact of Genotype(s)

Increased response to methotrexate and lower risk of side effects when treated with methotrexate in people with Arthritis Rheumatoid.

Rheumatoid Arthritis in Hand

GIFTED!

Methotrexate belongs to a class of drugs known as antimetabolites. It may also be used to control juvenile rheumatoid arthritis.Early treatment of rheumatoid arthritis with more aggressive therapy such as methotrexate helps to reduce further joint damage and to preserve joint function. Side effects of the treatment includes nausea, vomiting, stomach pain, drowsiness, or dizziness. Temporary hair loss may occur. Normal hair growth should return after treatment has ended.

Side Effects Of Methotrexate:

- Dizziness
- Drowsiness
- Headache
- Swollen, tender gums
- Decreased appetite
- Reddened eyes
- Hair loss

GENOMAX GENE BASED WELLNESS PROGRAM

134. Dopamine Metabolism

Your Genetic Result

Your Risk / Response

GREATER BREAKDOWN

Gene(s) Analysed

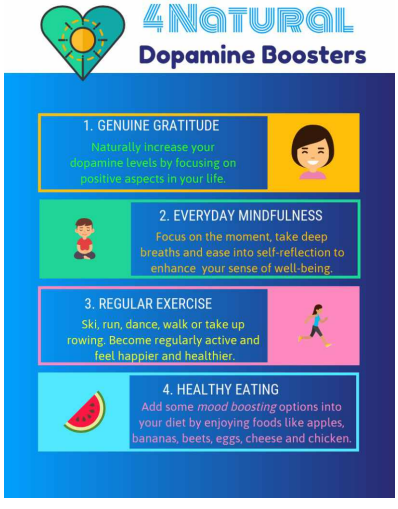
COMT

Risk / Response Variant(s) Presence

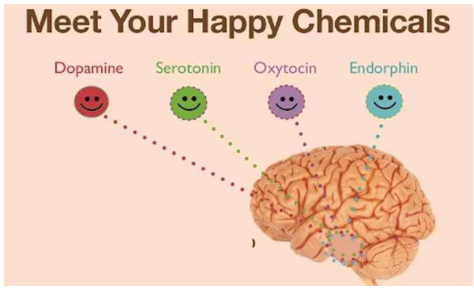
YES

Impact of Genotype(s)

Greater breakdown of dopamine and thus lower levels of dopamine in the blood.



PAY ATTENTION!



Dopamine is an organic chemical of the catecholamine and phenethylamine families. It functions both as a hormone and a neurotransmitter, and plays several important roles in the brain and body. A variant in DRD2 gene has been associated with improper metabolism of dopamine, thus reducing its functioning. A poor Dopamine functioning is linked to several behavioral disorders like Schizophrenia, Bipolar and Parkinson's Disease to name a few.

Dopamine is a substance that often comes up in the press, it's the pleasurable (feel-good) chemical that gets released by the brain in response to food, drugs, sex and rewarding social interactions. Far from solely being involved in reward and addiction, however, dopamine (DA) is both an important hormone and neurotransmitter that plays a variety of roles. Within the brain and central nervous system, dopamine is mainly made by nerve cells (neurons). Outside of the brain, dopamine is made by the adrenal glands. Dopamine works by binding to specialized dopamine receptors on the surfaces of nerves and other cells. Dopamine in body is broken down by different enzymes such as COMT, MAO, ALDH. The activity of these enzymes influences both your levels of dopamine circulating in the bloodstream and levels of dopamine within synapses between nerves.

Associated Diseases

- Depression
- Schizophrenia
- Psychosis, including hallucinations or delusions
- Parkinson's disease

RESEARCH RECOMMENDATIONS

- You are likely to have lower levels of Dopamine

GENOMAX GENE BASED WELLNESS PROGRAM

135. Depression risk

Your Genetic Result

Your Risk / Response

TYPICAL RISK

Gene(s) Analysed

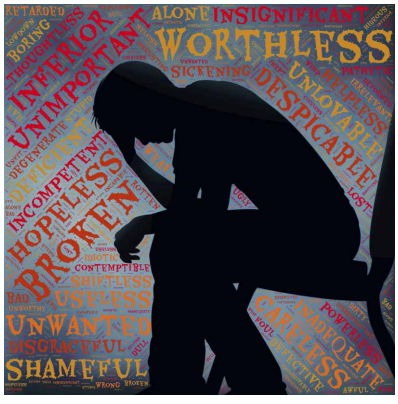
ANKK1

Risk / Response Variant(s) Presence

NO

Impact of Genotype(s)

Your genotype predisposes to depression via its effect on the post-synaptic D2 receptor.



NEUTRAL

Depression is a mental health disorder characterized by persistently depressed mood or loss of interest in activities, causing significant impairment in daily life. Variants in MTHFR gene have been associated with depression.
Depression is a mental health disorder characterized by persistently depressed mood or loss of interest in activities, causing significant impairment in daily life. Variants in DRD2 gene have been significantly associated with depression.

Associated Symptoms	Associated Diseases
• Anxiety	• Anxiety
• Behavioral problem	• Behavioral problem
• Mood disorder	• Mood disorder
• Irritability	• Irritability
• Weight gain or loss	• Weight gain or loss
• Decision making ability	• Decision making ability
• Fatigue	• Fatigue
• Insomnia	• Insomnia
• Loss of appetite	• Loss of appetite

RESEARCH RECOMMENDATIONS

- Consume a diet that includes folate-rich foods. Leafy greens, broccoli, lentils, and many beans are great sources of folate, fiber, and other nutrients.
- Consider antidepressants, antianxiety, antipsychotic medications after speaking to your doctor.
- Try light therapy. Exposure to doses of white light can help regulate your mood and improve symptoms of depression.
- Ask your healthcare provider about acupuncture or meditation. Some herbal supplements are also used to treat depression, like St. John's wort, SAMe, and fish oil.
- Speaking with a therapist can help you learn skills to cope with negative feelings. You may also benefit from family or group therapy sessions.

GENOMAX
GENE BASED WELLNESS PROGRAM

136. Impact of Alcohol on Depression

Your Genetic Result

Your Risk / Response

LOW RISK

Gene(s) Analysed

ALDH2

Risk / Response Variant(s) Presence

NO

GIFTED!

Depression or major depressive disorder is a serious mood disorder. People may experience sadness, anger, sleep disturbance, and loss of interest. The symptoms should be present for a minimum of two weeks to be diagnosed with depression; depression may further lead to various emotional and physical problems. Major depressive disorder, persistent depressive disorder, postpartum/peripartum depression, psychotic depression, seasonal affective disorder, bipolar disorder, and atypical depression or situational depression are types of depression. Excessive consumption of alcohol can lead to alcohol use disorder (AUD). Alcohol use disorder is defined as problem drinking, and it can cover a large spectrum of people withalcohol issues.

RESEARCH RECOMMENDATIONS

- As per your genotype, you have a low risk of developing depression with alcohol intake.
- Avoid over indulging in alcohol and recreational drugs for better mental health.
- Stress, trauma, major life changes, personal or family history of depression, certain illnesses, and some medications may increase the risk of developing depression.
- Seek help from a qualified counselor, if any symptoms of depression are observed.
- Follow a healthy diet, get enough sleep, and indulge in regular physical exercises/activities.
- Reaching out to assistance programs, support groups, or other resources can help some people in dealing with depression

GENOMAX
GENE BASED WELLNESS PROGRAM

137. Requirement of Sleep (Depression)

Your Genetic Result

Your Risk / Response

LOW RISK

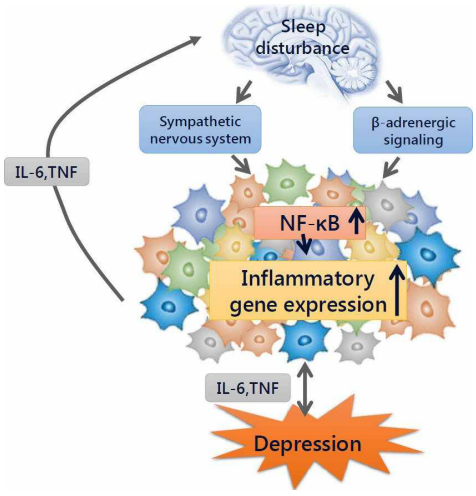
Gene(s) Analysed

COMT

Risk / Response Variant(s) Presence

NO

GIFTED!



Depression or major depressive disorder is a serious mood disorder. People may experience sadness, anger, sleep disturbance, and loss of interest. The symptoms should be present for a minimum of two weeks to be diagnosed with depression; depression may further lead to various emotional and physical problems. Major depressive disorder, persistent depressive disorder, postpartum/peripartum depression, psychotic depression, seasonal affective disorder, bipolar disorder, and atypical depression or situational depression are types of depression. People with depression commonly experience disturbed sleep patterns, but the way depression affects sleep varies widely. Changes in sleep patterns can be an effect of depression or an early warning signof it.

RESEARCH RECOMMENDATIONS

- As per your genotype, you have normal requirement of sleep to deal with depression. However, stress, trauma, major life changes, personal or family history of depression, certain illnesses, and some medications may increase the risk of developing depression.
- Seek help from a qualified counselor, if any symptoms of depression are observed.
- Avoid overindulging in alcohol and recreational drugs.
- Follow a healthy diet, get enough sleep, and indulge in regular physical exercises/activities.
- Take at least 7-8 hours of sleep.
- Take food high in melatonin like-Fruits and vegetables (cherries, corn, asparagus, tomatoes, pomegranate, olives, grapes, broccoli, cucumber)
- Nuts and Seeds (walnuts, peanuts, sunflower seeds, mustard seeds, flax seed).

GENOMAX
GENE BASED WELLNESS PROGRAM

138. Requirement of Exercise (Depression)

Your Genetic Result

Your Risk / Response

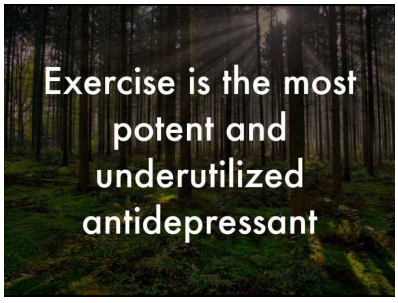
LOW RISK

Gene(s) Analysed

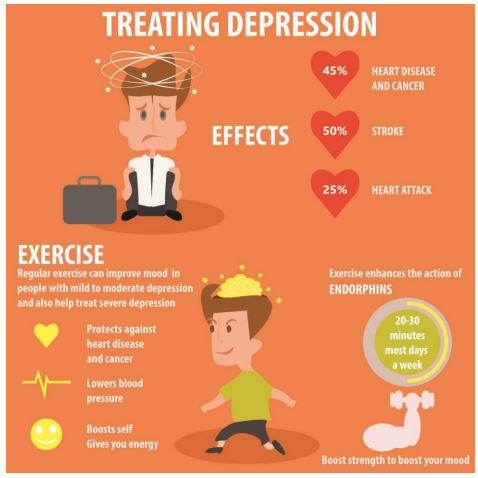
COMT

Risk / Response Variant(s) Presence

NO



GIFTED!



Depression or major depressive disorder is a serious mood disorder. People may experience sadness, anger, sleep disturbance, and loss of interest. The symptoms should be present for a minimum of two weeks to be diagnosed with depression; depression may further lead to various emotional and physical problems. Major depressive disorder, persistent depressive disorder, postpartum/peripartum depression, psychotic depression, seasonal affective disorder, bipolar disorder, and atypical depression or situational depression are types of depression. Exercise is also considered vital for maintaining mental fitness, and it can reduce stress. Exercise and other physical activity produce endorphins - chemicals in the brain that act as natural painkillers - and also improve the ability to sleep, which in turn reduces stress.

RESEARCH RECOMMENDATIONS

- As per your genotype, you have routine requirement of exercise to deal with depression.
- Regular exercise is proven to increase dopamine and serotonin secretion which are hormones that give feel good factor.
- Seek help from a qualified counselor, if any symptoms of depression are observed.

GENOMAX
GENE BASED WELLNESS PROGRAM

139. Anxiety Disorder Risk

Your Genetic Result

Your Risk / Response

LOWER RISK OF INCREASED NERVOUSNESS / ANXIETY AFTER CAFFEINE INTAKE

Gene(s) Analysed

CYP1A2

Risk / Response Variant(s) Presence

NO

GIFTED!

Anxiety is your body's natural response to stress. Ordinary anxiety is a feeling that comes and goes, but does not interfere with your everyday life. In the case of an anxiety disorder, the feeling of fear may be with you all the time. This type of anxiety may cause you to stop doing things you enjoy. In extreme cases, it may prevent you from entering an elevator, crossing the street, or even leaving your home. If left untreated, the anxiety will keep getting worse. Researchers think that genetics, traumatic events and brain structure may influence whether you develop an anxiety disorder. Symptoms of anxiety include increased heart rate, rapid breathing, tightness in chest, and restlessness. Anxiety disorders are treated through medication and therapy.

RESEARCH RECOMMENDATIONS

- You can enjoy up to ~400mg (~4 cups) of coffee a day.

GENOMAX
GENE BASED WELLNESS PROGRAM

140. Alcohol Dependency

Your Genetic Result

Your Risk / Response

LOWER RISK FOR ALCOHOL DEPENDENCE

Gene(s) Analysed

DRD2

Risk / Response Variant(s) Presence

NO

GIFTED!

Do you want to know if you are more susceptible to become an alcoholic compared from others? Do you find yourself drinking alcohol regularly, but find it difficult to stop? Do you want to find out why? Do you want to know if you are more dependent on alcohol compared to others? Find out if your child is at a greater risk for addiction. Addiction is a condition that results when a person either ingests a substance or engages in an activity that can be pleasurable but the continued use/ act of which becomes compulsive and interferes with ordinary life responsibilities, such as work, relationships and health. Users may not be aware that their behavior is out of control and causing problems for themselves and others. This is a biological state in which the body adapts to the presence of a drug so that the drug no longer has the same effect, otherwise known as tolerance. Addictions change the way the brain functions. Addictions can cause problems like mood swings, memory loss, lack of clarity in making decisions etc.

RESEARCH RECOMMENDATIONS

- Even though you have a lower risk, you should still limit your intake of alcohol due to its ill effects with over consumption.

GENOMAX GENE BASED WELLNESS PROGRAM

141. Addiction Towards Drugs

Your Genetic Result

Your Risk / Response

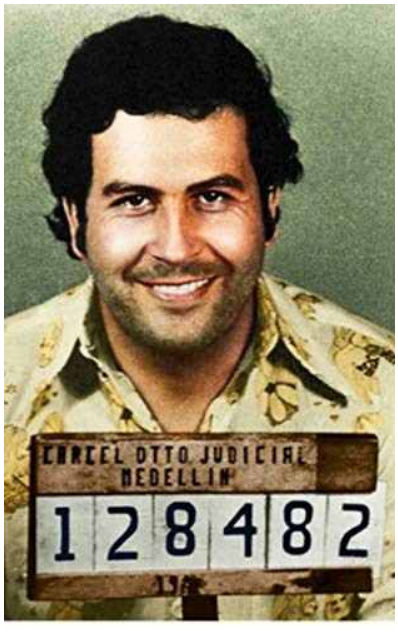
LOWER RISK FOR COCAINE ADDICTION

Gene(s) Analysed

DRD2

Risk / Response Variant(s) Presence

NO



GIFTED!

Cocaine is a type of drug that functions to increase the availability of the neurotransmitter dopamine in the brain. Dopamine is associated with the generation of 'euphoric' emotions, the regulation of movement, and the processing of reward cues. However, it is also associated with a considerable potential for dependence and abuse. Cocaine is attractive as a recreational substance due to the perceived positive effects on mood, motivation, and energy. Someone abusing cocaine may smoke, snort, or take it via injection. Cocaine is a stimulant, therefore it causes your heart to beat faster and your blood vessels to constrict, which can lead to high blood pressure, heart attacks, and strokes.

RESEARCH RECOMMENDATIONS

- Follow natural fixes to increase DRD2 like activities includes calorie restriction/fasting, exercise, choline, blueberry, spirulina etc.
- Consume foods that increase dopamine levels and its activity. Examples include beets, banana, sunflower seeds etc.
- Take supplements like methyl folate or methyl B12, in case of higher homocysteine levels, as higher homocysteine can further reduce the DRD2 receptor function.

GENOMAX GENE BASED WELLNESS PROGRAM

142. Addiction towards smoking

Your Genetic Result

Your Risk / Response

LOWER RISK

Gene(s) Analysed

DRD2

Risk / Response Variant(s) Presence

NO

Impact of Genotype(s)

Lower risk for smoking addiction

GIFTED

Smoking is a hard habit to break because tobacco contains the very addictive chemical nicotine. Smokers are more likely than nonsmokers to develop heart disease, stroke, and lung cancer. There's no safe way to smoke. Replacing your cigarette with a cigar, pipe, or hookah won't help you avoid the health risks. A model that links D2 dopamine receptor (DRD2)gene, and substance abuse is the "reward deficiency syndrome" (RDS) model by Blum and Colleagues. In the RDS model, individuals with deficits in DRD2 receptor genes experience less reward and enjoyment from day-to-day activities and are prone to substance dependence to increase Dopamine levels. In terms of the brain's reward system, the A alelle carrier are found to be related to smoking enjoyment and to smoking with the intent of reducing negative affect, suggesting that it directly affects nicotine reinforcement and are at increased risk for smoking addiction.

Associated Symptoms

- Bad breath and yellowing of the teeth
- Cold hands and feet.
- Frequent or recurrent lung infections and other diseases, such as
- influenza, common colds, bronchitis, and pneumonia.
- Hypertension (high blood pressure) and rapid heart rate.
- Loss of taste and smell

RESEARCH RECOMMENDATIONS

- Even though you have a lower risk for smoking addiction, its best to avoid trying it even once.

GENOMAX GENE BASED WELLNESS PROGRAM

143. Vitamin A Deficiency

Your Genetic Result

Your Risk / Response

ELEVATED RISK

Gene(s) Analysed

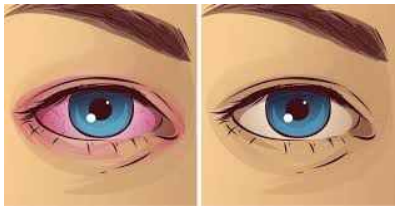
BCO1

Risk / Response Variant(s) Presence

YES

Impact of Genotype(s)

Reduced the catalytic activity of BCMO1 by 48%



PAY ATTENTION!

Vitamin A is a fat-soluble vitamin that is important for vision, a strong immune system and healthy reproduction. Beta-carotene is a precursor of active vitamin A and is an antioxidant found in certain fruits and vegetables that are orange-red in color. Beta-carotene can be converted to pre-formed vitamin A (retinol) in the body to exert its biological functions. Research shows that individuals with the risk version of the BCO1 gene are inefficient at converting beta-carotene to active vitamin A. These individuals are considered low responders to dietary beta-carotene so consuming enough active vitamin A can help ensure circulating levels of active vitamin A are adequate to support vision, immunity and reproductive functions.

Associated Symptoms	Associated Diseases	Food Sources
• Dry skin, eyes • Frequent Infections • Poor wound healing • night blindness • infertility issues • problems in conceiving • mouth ulcers	• Skin diseases • Vision problem • Liver disorders • Obesity • Hypothyroidism • Inflammation • Frequent infections • Immunological problems	• Cod liver oil • Eggs • Fortified breakfast cereals • Fortified skim milk • Orange and yellow vegetables and fruits • Other sources of beta-carotene such as broccoli, spinach, and most dark green, leafy vegetables

RESEARCH RECOMMENDATIONS

- Consume ~900 mcg Vitamin A RAE (retinol activity equivalents) daily.
- As vitamin A is fat-soluble include some fat content while having these sources. For example eat these raw vegetables with minimal oil and dressing.
- Include egg yolk in your diet since its the best source of retinol. (Which is the active form of Vitamin A)
- Vegetarians can consider taking retinol supplements in cases where it is difficult to meet up the requirements. Retinol supplements: Fish oil supplements (cod-liver oil) as per recommendation by the doctor/ health professional
- Your genotype may affect health negatively by reducing the availability of vitamin A (retinol) but also positively by increasing the plasma concentration of powerful antioxidant molecules.

GENOMAX GENE BASED WELLNESS PROGRAM

144. Vitamin B2 Deficiency

Your Genetic Result

Your Risk / Response

MODERATE RISK

Gene(s) Analysed

MTHFR

Risk / Response Variant(s) Presence

YES

Impact of Genotype(s)

Change in the shape of the MTHFR enzyme decreases its ability to bind to FAD (precursor of Vitamin B2)

PARTIALLY BAD!

Vitamin B2:
Vitamin B2 (riboflavin) is a water-soluble vitamin that is a cofactor for many enzymes in the body. Vitamin B2 is involved in vital metabolic processes in the body, and is necessary for energy production and normal cell function and growth. It is also crucial in helping other B vitamins undergo the chemical changes that make them useful and plays an important role in iron absorption. Emerging research shows that riboflavin may play a role in cancer prevention as well as helping with migraine headaches.
Riboflavin is a ribose sugar bound to a flavin molecule. It is the precursor to FMN (flavin mononucleotide) and FAD (flavin adenine dinucleotide), which are coenzymes involved in numerous vital functions in our bodies. FAD is essential to the electron transport chain which is how your body produces energy in the mitochondria. FAD is also involved in detoxification as a cofactor for some CYP450 enzymes as well as for glutathione recycling.

Associated Symptoms	Food Sources
• Weakness, throat swelling/soreness • a swollen tongue, skin cracking (including cracked corners of the mouth) • hair loss • dermatitis, and anemia, including blurred vision and burning • itching • watering • sore, or bloodshot eyes	• Milk, cheese and yogurt • eggs • enriched or fortified cereals • grains • nuts • lean meats • liver • asparagus • broccoli • spinach and turnip greens • fish and poultry

RESEARCH RECOMMENDATIONS

- You may want to consider extra intake of this essential vitamin, compared to the average population. Dietary sources of riboflavin include: dairy products (such as milk, cheese and yogurt), eggs, enriched or fortified cereals and grains, nuts, lean meats, liver, dark green vegetables (such as asparagus, broccoli, spinach and turnip greens), fish and poultry.
- Additional risk factors for vitamin B2 imbalances include gluten free diet, and pregnancy. Consult a registered dietitian or physician to make sure you are meeting your daily requirements for vitamin B2 intake.

GENOMAX GENE BASED WELLNESS PROGRAM

145. Vitamin B6 Deficiency

Your Genetic Result

Your Risk / Response

MODERATE RISK

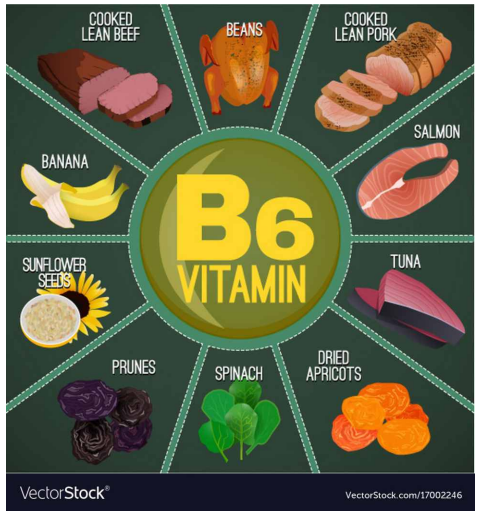
Gene(s) Analysed

MTHFR

Risk / Response Variant(s) Presence

YES

PARTIALLY BAD!



Vitamin B-6 (pyridoxine) is important for normal brain development and for keeping the nervous system and immune system healthy. Vitamin B6 deficiency can be due to end-stage renal diseases, chronic renal insufficiency, and other kidney diseases, genetic factors and some medications, such as antiepileptic drugs, can also lead to deficiency over time. Inadequate vitamin B6 status is usually associated with low concentrations of other B-complex vitamins, such as vitamin B12 and folic acid. Vitamin B6 deficiency is associated with microcytic anaemia, electroencephalographic abnormalities, dermatitis with cheilosis (scaling on the lips and cracks at the corners of the mouth) and glossitis (swollen tongue), depression and confusion, and weakened immune function. In infants, vitamin B6 deficiency causes irritability, abnormally acute hearing, and convulsive seizures.

Associated Symptoms	Associated Diseases
• Skin Rashes	• High levels of homocysteine
• Cracked and Sore Lips	• Cardiac disease risk
• Sore, Glossy Tongue	• Peripheral neuropathy
• Weakened Immune Function	• Dermatitis
• Tiredness and Low Energy	• Glossitis, and cheilosis
• Seizures	• Epilepsy
	• Pellagra-like syndrome
	• Depression

RESEARCH RECOMMENDATIONS

- You need to consume more than the RDA for Vitamin B6.
- Increase intake of foods such as fruits and vegetables with edible skin that includes apple, pear, sweet potato, carrot, beans, sunflower seeds, brown rice, fish etc.
- Regularly get a blood test of to check your levels of Vitamin B6.

GENOMAX GENE BASED WELLNESS PROGRAM

146. Vitamin B9 Deficiency

Your Genetic Result

Your Risk / Response

MODERATE RISK

Gene(s) Analysed

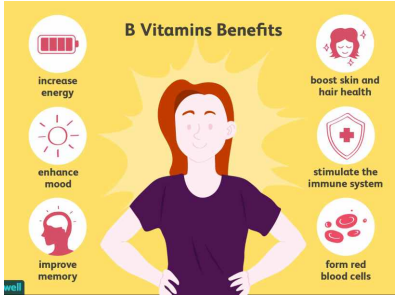
MTHFR

Risk / Response Variant(s) Presence

YES

Impact of Genotype(s)

30% reduction in enzyme activity which converts folate and folic acid to its active form.



PARTIALLY BAD!

Vitamin B9 (Folate):
Vitamin B9 (Folate) is a water-soluble B vitamin that is necessary for cell growth and development. Low blood levels of folate have been associated with increased risk of heart disease and stroke. Research has shown that the amount of folate absorbed into the blood can differ between individuals even when the same amount of folate is consumed. Some people do not utilize dietary folate as efficiently as others and are consequently at a greater risk of folate deficiency. Multiple studies have shown that an individual's ability to process dietary folate efficiently depends on a gene called MTHFR.

MTHFR:
The MTHFR gene produces methylenetetrahydrofolate reductase (MTHFR), which is a vital enzyme for folate usage in the body. MTHFR converts folate obtained from the diet to an active form of the nutrient that can be used by the body at the cellular level. Variations in the MTHFR gene determine the way individuals can utilize dietary folate. Those people who have the risk variant of the gene have reduced MTHFR enzyme activity and are at greater risk of vitamin B9 deficiency when Vitamin B9 intake is low, compared to those with the non risk variant.

Associated Symptoms	Associated Diseases
• Tiredness • Weakness • Shortness of breath • Heart palpitations • Difficulty concentrating	• Anemia • Cardiac disease • Neural tube defects

RESEARCH RECOMMENDATIONS

- Strictly avoid ingestion of folic acid containing fortified foods, supplements and drugs.
- Check your homocysteine levels. If high, then consider supplementation with L-methylfolate and methyl B12 (active form).
- Take L-methylfolate and methyl Vitamin B12 supplements.
- Reduce intake of methionine-rich foods like skim milk, walnuts, pistachio, soybean, tofu, beans, oatmeal etc. Supplement with active B12 (methyl cobalamin), metylfolate and B2.
- We estimate your daily requirement for natural folate is ~520mcg.

GENOMAX GENE BASED WELLNESS PROGRAM

147. Vitamin B12 Deficiency

Your Genetic Result

Your Risk / Response

HIGH RISK

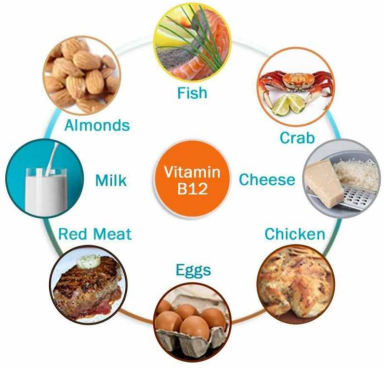
Gene(s) Analysed

FUT2

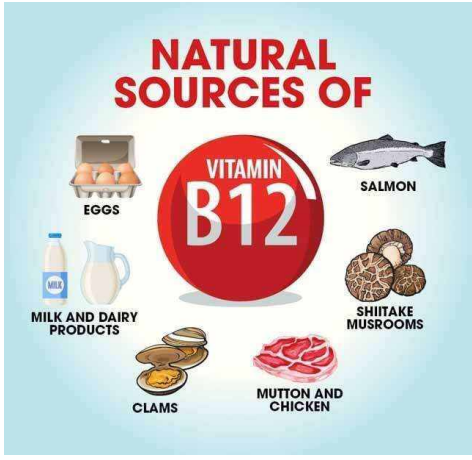
Risk / Response Variant(s) Presence

YES

Vitamin B12 Rich Foods



PAY ATTENTION!



Also known as cobalamin, Vit.B12 is produced by bacteria and then acquired by animals. In this way, this nutrient is only found naturally-occurring as an animal by-product. Vitamin B-12 plays an important role in how your brain and nervous system function. It helps to keep red blood cells healthy and is a critical component for synthesis and regulation of your DNA. Symptoms of vitamin B-12 deficiency can vary, but may include fatigue, weakness, bloating, or numbness and tingling in limbs.

Associated Symptoms	Associated Diseases	Food Sources
• Fatigue • Breathlessness • Numbness • Poor balance and memory trouble	• Cardiovascular Disease • Autoimmune disorder • Learning disability in children • Alzheimer's Disease • Cancer	• Milk(1cup) - 1.2-1.4 • Cottage cheese(1 cup) - 1.5 • Yogurt(175g)- 1 • Fortified Soya(1cup) - 1 • Almond, oat fortified(1 cup) • Oyster(75g) - 18.2 • Salmon(75g) - 4.4 • Egg(2 large) - 1.51.6

RESEARCH RECOMMENDATIONS

- You may consider consuming more than the RDA (2.4 mcg/day) by focusing on consuming foods that contain a high bioavailability of Vitamin B12 (foods with a form of vitamin B12 that your body uses more efficiently).
- Meat and fish (if non-vegetarian) products have higher bioavailability than eggs or plant sources.
- You may consider consuming more than the RDA (2.4 mcg/day). If you are on a vegetarian diet or have acute deficiency then supplementation is recommended.
- Consume cranberry juice, black pepper, foods rich in calcium such as rage, broccoli, soybean and milk as it can increase absorption of vitamin B12.

GENOMAX
GENE BASED WELLNESS PROGRAM

148. Vitamin C Deficiency

Your Genetic Result

Your Risk / Response

LOWER RISK

Gene(s) Analysed

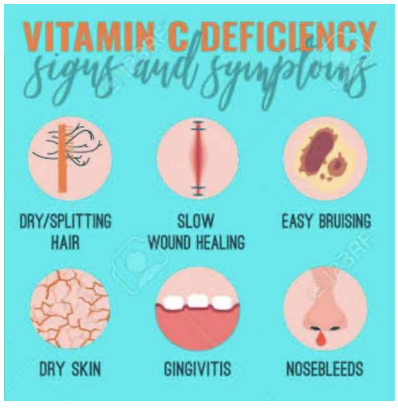
SLC23A1

Risk / Response Variant(s) Presence

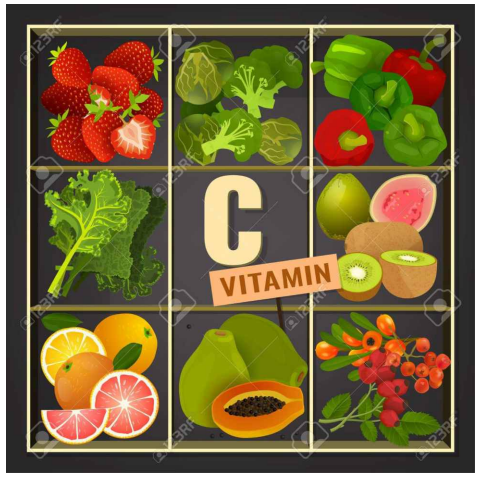
NO

Impact of Genotype(s)

Normal transport of vitamin C thus low risk for vitamin C deficiency



GIFTED!



Vitamin C (ascorbic acid) is essential for collagen, catecholamine, and carnitine biosynthesis; absorption of non-heme iron; and anti-oxidant protection and hence plays a critical role in normal functioning of the body and optimum health. Evidences suggest that regulation of vitamin C status has varied based on human genetic variations. It was observed that polymorphism in SLC23A1 gene has been associated with decreased transporter activity which subsequently lead to vitamin C deficiency among individuals.

Vitamin C is an essential nutrient that must be obtained from dietary sources. Low blood levels of vitamin C have been associated with an elevated risk of cardiovascular disease, type 2 diabetes and cancer. Research has shown that the amount of vitamin C absorbed into the blood can differ between people even when the same amount of vitamin C is consumed. Some people do not process vitamin C from the diet as efficiently as others and are at a greater risk of vitamin C deficiency. Research studies have shown that the SLC23A1 gene plays a role transport of Vitamin C.

Associated Symptoms	Associated Diseases
• Fatigue • chronic pain • swelling • weakened bones • poor immune function • weight gain • rough skin • shortness of breath • bleeding gums	• Anaemia • Scurvy • Muscle pain

RESEARCH RECOMMENDATIONS

- Maintain intake of foods rich in vitamin C such as black currant, red pepper, kiwi fruit, guava, green bell pepper, orange, strawberries, papaya, broccoli, kale, raspberries, blueberries, cranberries, watermelon, sweet potatoes, tomatoes etc.

GENOMAX GENE BASED WELLNESS PROGRAM

149. Vitamin D Deficiency

Your Genetic Result

Your Risk / Response

HIGH RISK

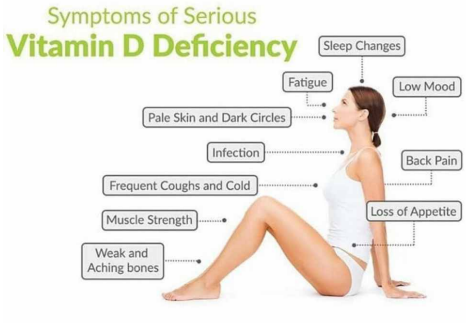
Gene(s) Analysed

GC

Risk / Response Variant(s) Presence

YES

PAY ATTENTION!



Vitamin D is the sunshine vitamin. The human body can synthesize sufficient vitamin D from cholesterol when the skin is exposed to adequate amounts of sunlight. Vitamin D helps maintain normal levels of calcium and phosphorus in the blood by controlling their absorption and release from the bones. Sufficient vitamin D in the human body helps prevent many chronic diseases such as osteoporosis, rheumatoid arthritis, high blood pressure, depression, and certain cancers.

Associated Symptoms	Associated Diseases	Food Sources
• Muscle weakness • Brittle bones • Fatigue	• Gut problems • Head sweating • Overweight • Hypertension • Heart diseases • Osteoporosis • Asthma • Autoimmune diseases • Neurological diseases	• Orange juice fortified 125ml - 50 • Milk 250ml- 105 • Soy beverages 250ml - 123 • Egg yolk 2 large - 88 • Salmon 75g - 699 • Cod liver oil 5ml - 427

RESEARCH RECOMMENDATIONS

- Regular exercise also helps to improve synthesis of vitamin D and reduce calcium loss from bones, thus maintaining level of vitamin D.
- Target early morning (8 to 11am) exposure to direct sunlight for at least 15-20 min every day for enhanced synthesis of vitamin D and also increase intake of soymilk, cheese, eggs (if non-vegetarian), milk and mushrooms to meet your recommended daily amount of 1000 IU per day.

GENOMAX GENE BASED WELLNESS PROGRAM

150. Response to Vitamin E Deficiency

Your Genetic Result

Your Risk / Response

INCREASED RISK FOR ABDOMINAL OBESITY WITH LOW VIT.E LEVELS

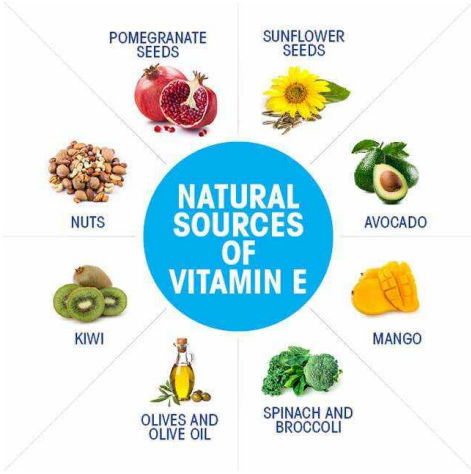
Gene(s) Analysed

COMT

Risk / Response Variant(s) Presence

YES

PAY ATTENTION!



Vitamin E is a fat-soluble antioxidant that helps protect cell membranes against damage caused by free radicals and prevents the oxidation of LDL cholesterol. Vitamin E encompasses a group of eight compounds called tocopherols and tocotrienols. alpha-tocopherol, the most biologically active form of vitamin E, is the one of the most common forms of vitamin E in the diet. As a fat-soluble antioxidant, it stops the production of reactive oxygen species formed when fat undergoes oxidation.

Associated Symptoms	Associated Diseases
• Difficulty with walking or coordination • Muscle pain or weakness • Visual disturbances • Increase in waist circumference	• Chronic pancreatitis • Cholestasis • Cystic fibrosis • Primary biliary cirrhosis • Crohn's disease • Short bowel syndrome • Abdominal obesity

RESEARCH RECOMMENDATIONS

- Consume more than 9mg/day of Vitamin E to loose inches on your waist; if you are deficient, and consume less than 9 mg/day of Vitamin E you are likely to show an increase in abdominal obesity.
- Examples of vitamin E rich foods include avocados, wheat germ, nuts like almonds, hazelnuts, peanuts, pine nuts, eggs, red and yellow bell peppers, sunflower oil etc.
- Include foods rich in selenium, ubiquinol and vitamin C, as they help in the regeneration of Vitamin E after its interaction with free radicals.
- Include foods rich in soluble fiber as it improves vitamin E uptake and utilization by your cell.
- Regular exercise is recommended.

GENOMAX GENE BASED WELLNESS PROGRAM

151. Calcium Requirement

Your Genetic Result

Your Risk / Response

HIGHER RISK

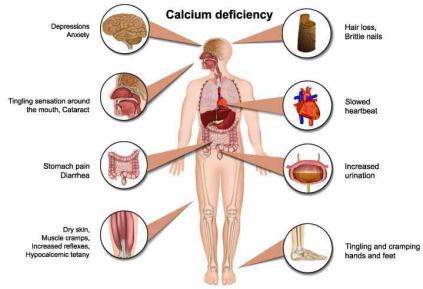
Gene(s) Analysed

LCT

Risk / Response Variant(s) Presence

YES

PAY ATTENTION!



Calcium is a vital mineral. However, in addition to its key role in imparting strength to bones and teeth, calcium plays a critical role as a messenger in cell-signalling pathways throughout the body and is necessary for normal cell function, transmission of nerve signals, and secretion of hormones, blood coagulation, muscle contraction, and muscle relaxation. Some of the calcium-rich foods include collard greens, edamame, tofu, and salmon. Vitamin D plays an important role in calcium absorption into your blood. When you don't get enough calcium, you increase your risk of developing disorders like osteoporosis, osteopenia, and calcium deficiency disease (hypocalcaemia). Children who don't get enough calcium may not grow to their full potential height as adults.

Associated Symptoms	Associated Diseases
• Fatigue	• Osteoporosis • Dental problems • Cataracts • Depression

RESEARCH RECOMMENDATIONS

- You may want to ensure you are getting sufficient calcium in your diet, if not, you may want to consider taking supplements after consulting with your dietitian or doctor.

GENOMAX GENE BASED WELLNESS PROGRAM

152. Iron Deficiency

Your Genetic Result

Your Risk / Response

ELEVATED RISK

Gene(s) Analysed

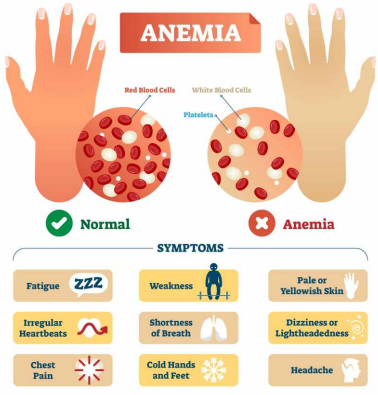
TRF2

Risk / Response Variant(s) Presence

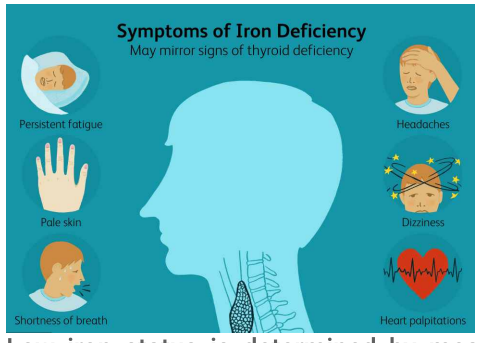
YES

Impact of Genotype(s)

Associated with low levels iron levels



PAY ATTENTION!



Iron is an essential mineral that plays an important role in cellular process closely related to physical exercise and immune function. It's most important function being transport of oxygen in the blood to different tissues, building a strong immune system. It is also a component of certain enzymes and proteins, which are essential for energy production and optimizing physical performance. Low iron status is determined by measuring certain blood markers such as ferritin, hepcidin or transferrin. Low iron status can lead to anemia.

Research studies have found that TFR2 can impact the risk of low Iron status. The transferrin receptor 2 (TFR2) gene codes for the TFR2 protein, which helps iron to enter into cells.

Associated Symptoms

- Recurring illness
- shortness of breath
- irritability
- poor appetite
- pale skin
- shortness of breath
- dizziness
- loss of endurance
- low aerobic capacity
- frequent injury

Food Sources

- Chicken liver(75mg) - 9.8mg
- White beans(175ml) - 5.8mg
- Pumpkin seeds(2 Tbsp) - 5.2mg
- Spinach, boiled(1/2 cup) - 3.4mg
- Tahini(2 Tbsp) - 2.7mg
- Chickpeas(3/4 cup) - 2.4mg
- Extra lean ground beef(75g) - 2.1mg
- Almonds(1/4 cup) - 1.5mg
- Tofu(150g) - 1.2mg
- Lean ground chicken(75g) - 1.2mg

RESEARCH RECOMMENDATIONS

- To minimize your risk for low iron, meet the RDA for iron and consume food sources of vitamin C with non-heme iron-containing foods to increase iron absorption. Eating vitamin C-rich foods during meals helps to increase the absorption of non-heme iron.
- Focus on foods with a high bioavailability of iron such as animal products (heme iron) and cooked spinach.
- Men aged 19 years and older and women over 50 should aim for 8 mg/day. Women 19- 50 years old should aim for 18 mg/day.
- Polyphenols (coffee, tea and wine), phytates (grains and vegetables) and phosphoproteins (egg yolk and dairy products) inhibit iron absorption. Hence avoid consuming these foods in combination with iron rich foods.
- Individuals with your genotype are associated with low levels of iron in blood. This is thus related to decreased Hb and ferritin levels.

GENOMAX
GENE BASED WELLNESS PROGRAM

153. Tendency of Magnesium Metabolism

Your Genetic Result

Your Risk / Response

MODERATE RISK

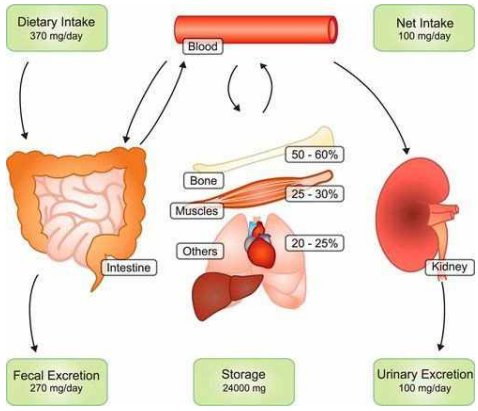
Gene(s) Analysed

MDS1

Risk / Response Variant(s) Presence

YES

PARTIALLY BAD!



Magnesium is the major intracellular divalent action and plays an essential physiological role in many functions of the body. Magnesium is essential for the synthesis of nucleic acids and proteins, and is an important cofactor for a wide range of enzymes, transporters. Magnesium has important effects on the cardiovascular system. Intracellular magnesium forms a key complex with ATP and has a key role in many other important biological processes such as protein synthesis, cell replication, and energy metabolism.

RESEARCH RECOMMENDATIONS

- As per your genotype, there is decreased absorption of magnesium.
- Increase intake of dietary magnesium support will suffice the need.
- Increase intake of food such as, legumes, pulses, nuts, seeds, whole grains etc, should be included for better management.

GENOMAX GENE BASED WELLNESS PROGRAM

154. Requirement of Magnesium Nutrient

Your Genetic Result

Your Risk / Response

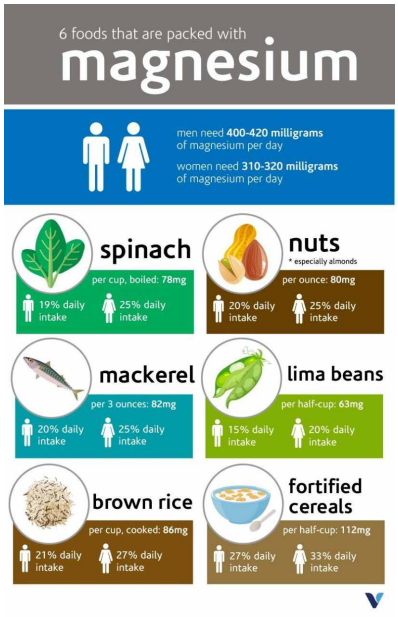
MODERATE RISK

Gene(s) Analysed

MDS1

Risk / Response Variant(s) Presence

YES



PARTIALLY BAD!

The recommended daily allowance (RDA) for magnesium in adults is 4.5 mg/kg/day. The daily requirement is higher in pregnancy, lactation and following debilitating illness. Recent dietary surveys show that the average intake in many western countries is less thanthe RDA. Magnesium intake depends on the magnesium concentration in drinking water and food composition. Magnesium is plentiful in green leafy vegetables such as spinach and broccoli (which are rich in magnesium-containing chlorophyll), cereal, grain, nuts, banana, and legumes. Fruits, meats, chocolates, and fish haveintermediate values, and dairy products are poor in magnesium, illustrates the metabolismof magnesiumin a healthy adult.

RESEARCH RECOMMENDATIONS

- As per your genotype, you have decreased absorption of magnesium and hence, increased requirement of magnesium advised.
- Magnesium requirement as per the RDA is advised.
- The sources include green leafy vegetables such as spinach and broccoli (which are rich in magnesium-containing chlorophyll), cereal, grain, nuts, banana, and legumes.

GENOMAX GENE BASED WELLNESS PROGRAM

155. Risk of Magnesium Deficiencies

Your Genetic Result

Your Risk / Response

MODERATE RISK

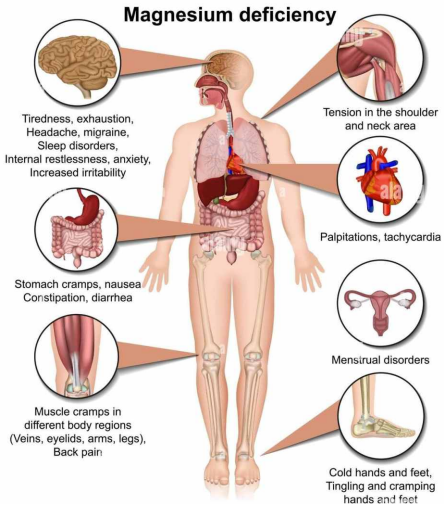
Gene(s) Analysed

MDS1

Risk / Response Variant(s) Presence

YES

PARTIALLY BAD!



Magnesium is an essential mineral and electrolyte that plays a role in many bodily processes, including energy production, bone and teeth structure, muscle function, nerve function, DNA replication, RNA and protein synthesis. Long-term magnesium deficiency may have adverse effects on bone density, brain function, nerve and muscle function, digestive system. Loss of bone density can be of particular concern. Low magnesium can weaken your bones, give you bad headaches, make you feel nervous, and even hurt your heart. It can also lead to low levels of other important minerals like calcium and potassium.

RESEARCH RECOMMENDATIONS

- As per your genotype you have increased risk for developing magnesium deficiencies.
- There is high risk for developing bone related issues, poor digestion, and poor bone density.
- As per your genotype, you tend to have inefficient at magnesium metabolism, thereby leading to increased dietary requirement.

156. Tendency of Vitamin K Metabolism

Your Genetic Result

Your Risk / Response

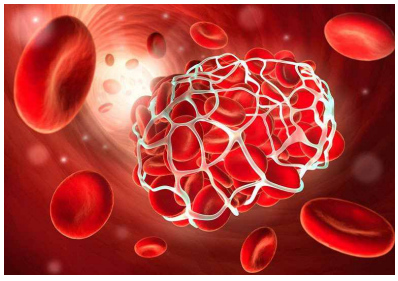
HIGH RISK

Gene(s) Analysed

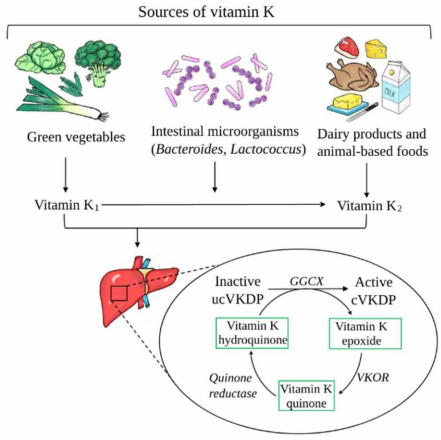
VKORC1

Risk / Response Variant(s) Presence

YES



PAY ATTENTION!



Vitamin K is a group of fat-soluble organic compounds. Vitamin K is crucial in important processes such as blood clotting and bone mineralization. Therefore, deficiency of vitamin K can cause symptoms like excessive bleeding, easy bruising, and increased predisposition for osteoporosis. Genetic variations can influence the processes which may ultimately affect dietary vitamin K requirements. Two active forms of vitamin K are phylloquinone and menaquinone. Food sources that are rich in phylloquinone include green vegetables such as spinach, broccoli, and iceberg lettuce. Meat, dairy products, and fermented foods contain larger amounts of menaquinone.

RESEARCH RECOMMENDATIONS

- As per your genotype, your vitamin K metabolism is poor, hence you have high risk of developing vitamin K deficiencies.
- People with such a genotype tend to have inefficiency for vitamin K metabolism.
- Include vitamin K rich foods in your diet such as green leafy vegetables, such as kale, spinach, mustard greens, parsley and green leaf lettuce.

GENOMAX
GENE BASED WELLNESS PROGRAM

157. Requirement of Vitamin K Nutrient

Your Genetic Result

Your Risk / Response

HIGH RISK

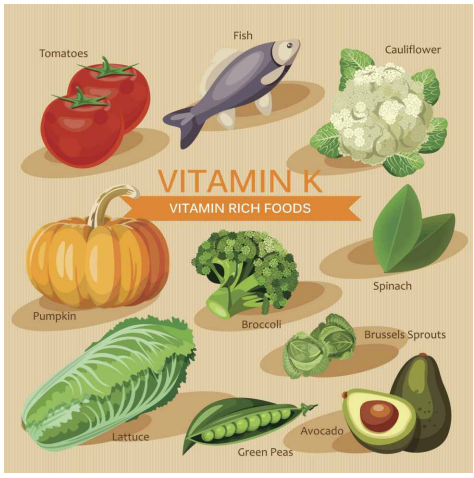
Gene(s) Analysed

VKORC1

Risk / Response Variant(s) Presence

YES

PAY ATTENTION!



Vitamin K is rapidly metabolized and excreted. Based on phylloquinone measurements, the body retains only about 30% to 40% of an oral physiological dose, while about 20% is excreted in the urine and 40% to 50% in the feces via bile. Vitamin K functions as a coenzyme for vitamin K-dependent carboxylase, an enzyme required for the synthesis of proteins involved in hemostasis (blood clotting) and bone metabolism, and other diverse physiological functions. Prothrombin (clotting factor II) is a vitamin K-dependent protein in plasma that is directly involved in blood clotting. Warfarin and some anticoagulants used primarily in Europe antagonize the activity of vitamin K and, in turn, prothrombin. For this reason, individuals who are taking these anticoagulants need to maintain consistent vitamin K intakes. Recommended Dietary Allowance|(RDA): Average daily level of intake sufficient to meet the nutrient requirements of nearly all (97%-98%) healthy individuals; often used to plan nutritionally adequate diets for individuals.|Adequate Intake (AI): Intake at this level is assumed to ensure nutritional adequacy; established when evidence is insufficient to develop an RDA.|Estimated Average Requirement (EAR): Average daily level of intake estimated to meet the requirements of 50% of healthy individuals; usually used to assess the nutrient intakes of groups of people and to plan nutritionally adequate diets for them; can also be used to assess the nutrient intakes of individuals. Tolerable Upper Intake Level|(UL): Maximum daily intake unlikely to cause adverse health effects.

RESEARCH RECOMMENDATIONS

- As per your genotype vitamin K metabolism is poor.
- Hence, increased intake of vitamin K suggested.
- Food sources of phylloquinone include vegetables, especially green leafy vegetables, vegetable oils, and some fruits. meat, dairy foods, and eggs contain low levels of phylloquinone but modest amounts of menaquinones

GENOMAX
GENE BASED WELLNESS PROGRAM

158. Risk of Vitamin K Deficiencies

Your Genetic Result

Your Risk / Response

HIGH RISK

Gene(s) Analysed

VKORC1

Risk / Response Variant(s) Presence

YES

PAY ATTENTION!

Vitamin K deficiency is only considered clinically relevant when prothrombin time increases significantly due to a decrease in the prothrombin activity of blood. Thus, bleeding and hemorrhage are the classic signs of vitamin K deficiency, although these effects occur only in severe cases. Because vitamin K is required for the carboxylation of osteocalcin in bone, vitamin K deficiency could also reduce bone mineralization and contribute to osteoporosis. Vitamin K deficiency can occur during the first few weeks of infancy due to low placental transfer of phylloquinone, low clotting factor levels, and low vitamin K content of breast milk . Clinically significant vitamin K deficiency in adults is very rare and is usually limited to people with malabsorption disorders or those taking drugs that interfere with vitamin K metabolism . In healthy people consuming a varied diet, achieving a vitamin K intake low enough to alter standard clinical measures of blood coagulation is almost impossible.

RESEARCH RECOMMENDATIONS

- As per your genotype, you have high risk of developing vitamin K deficiencies.
- You have high risk of developing osteoporosis.
- Include vitamin K rich foods in your diet such as Green leafy vegetables, such as kale, spinach, mustard greens, parsley and green leaf lettuce.

GENOMAX
GENE BASED WELLNESS PROGRAM

159. Tendency of Selenium Metabolism

Your Genetic Result

Your Risk / Response

LOW RISK

Gene(s) Analysed

DMGDH

Risk / Response Variant(s) Presence

NO

GIFTED!

Selenium is a trace mineral that naturally occurs in several foods; it is also added as a fortified component in supplements. Selenium plays a significant role in many body processes such as protection from oxidative stress, thyroid hormone metabolism, DNA synthesis, and reproductive processes. Symptoms of selenium deficiency include infertility, muscle weakness, fatigue, and weakened immune system, while an excess of selenium can cause gastroi ntesti nal distress and hair loss. Dietary sources of selenium include brazil nuts, seafood like tuna and oysters, mushrooms, and eggs. Genetic variations can have an influence on the serum selenium levels thereby influencing dietary requirements.

RESEARCH RECOMMENDATIONS

- As per your genotype, your selenium metabolism is normal.
- People with such a genotype tend to have a good ability to metabolise Selenium
- Routine intake of selenium rich foods such as poultry, eggs, seafood, beans, peas, and lentils, nuts and seeds, and soy products suggested

160. Requirement of Selenium Nutrient

Your Genetic Result

Your Risk / Response

LOW RISK

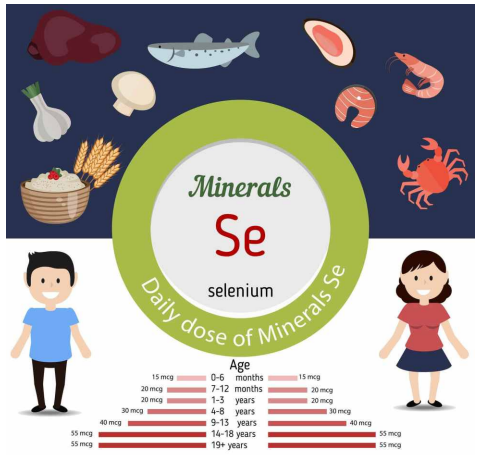
Gene(s) Analysed

DMGDH

Risk / Response Variant(s) Presence

NO

GIFTED!



Selenium is a mineral found in the soil. Selenium naturally appears in water and some foods. While you only need a very small amount, selenium plays a key role in their metabolism. Selenium has attracted attention because of its antioxidant properties. Antioxidants protect cells from damage. Evidence that selenium supplements may reduce the odds of prostate cancer has been mixed, but most studies suggest there is no real benefit.

RESEARCH RECOMMENDATIONS

- As per your genotype, you have normal absorption and metabolism of Selenium
- Hence you require routine intake of selenium, as per RDA.
- Sources of selenium are seafoods, and organ meats are the richest food sources of selenium
- Other sources include muscle meats, cereals and other grains, and dairy products.

GENOMAX
GENE BASED WELLNESS PROGRAM

161. Tendency of Antioxidant Metabolism

Your Genetic Result

Your Risk / Response

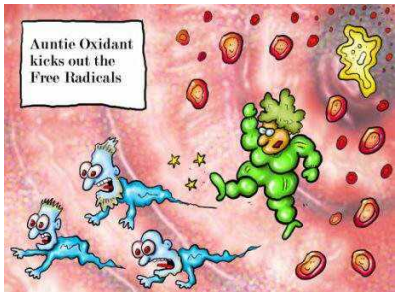
LOW RISK

Gene(s) Analysed

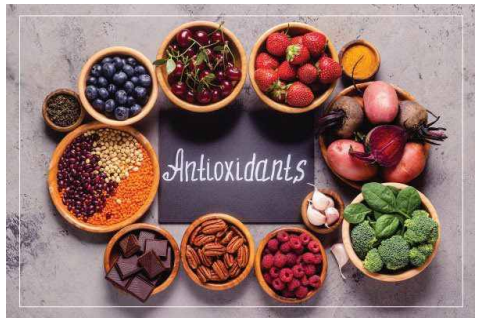
MNSOD

Risk / Response Variant(s) Presence

NO



GIFTED!



Antioxidants are compounds that inhibit the oxidation process in the body. Certain processes can lead to the formation of oxidative species in the body, which can damage the cells and DNA, leading to impaired cellular functions. The ability of antioxidants to destroy oxidative species protects the structural integrity of cells and tissues. Antioxidants also function in strengthening the immune response of the body. They have also been known to reduce the risk of cancer and neurodegenerative diseases such as Alzheimer's and Parkinson's. Sources rich in antioxidants include dark chocolate, spinach, green tea, and blueberries. Genetic variations can lead to altered functioning of the body's innate antioxidant defense system, thereby influencing the dietary requirement for antioxidants.

RESEARCH RECOMMENDATIONS

- As per your genotype, you have Good tendency of antioxidant metabolism. Hence, routine intakeof antioxidants suggested.
- Avoid usage of repeated heating of oil, as this process may increase the rancidity of the food.
- Avoid consuming excess of junk food, charcoal grilled foods, deep fried foods, and highly processed foods.

GENOMAX
GENE BASED WELLNESS PROGRAM

162. Requirement of Antioxidants

Your Genetic Result

Your Risk / Response

LOW RISK

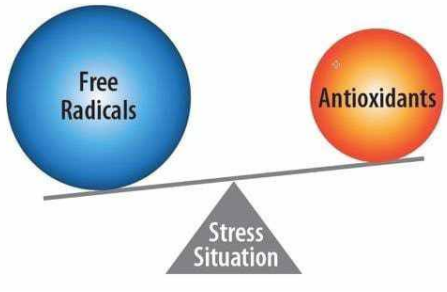
Gene(s) Analysed

MNSOD

Risk / Response Variant(s) Presence

NO

GIFTED!



Antioxidants are substances that may protect your cells against free radicals, which may play a role in heart disease, cancer and other diseases. Free radicals are molecules produced when your body breaks down food or when you're exposed to tobacco smoke or radiation.|Antioxidants, such as vitamins C and E and carotenoids, may help protect cells from damage caused by free radicals. Other naturally occurring antioxidants include flavonoids, tannins, phenols and lignans. Plant-based foods are the best sources. These include fruits, vegetables, whole grains, nuts, seeds, herbs and spices, and even cocoa.|As a bonus, fruits, vegetables and whole grains high in antioxidants are also typically high in fiber, low in saturated fat and cholesterol, and good sources of vitamins and minerals.

RESEARCH RECOMMENDATIONS

- As per your genotype, you have good tendency of antioxident Metabolism
- Routine intake of antioxidant is suggested.
- Routine consumption of vitamin E and vitamin C food sources.

GENOMAX GENE BASED WELLNESS PROGRAM

163. Tendency of Copper Metabolism

Your Genetic Result

Your Risk / Response

HIGH RISK

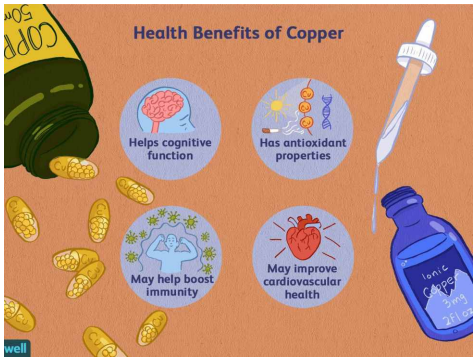
Gene(s) Analysed

SELENBP1

Risk / Response Variant(s) Presence

YES

PAY ATTENTION!



Copper is an essential mineral required for the production of red blood cells, maintaining the integrity of nerve cells, and regulating the immune system; it also plays a role in iron absorption and the formation of collagen. The main storage sites of copper in the body are the liver, brain, kidneys, and skeletal muscles. Excess, as well as deficiency of copper, have been linked with impairments to the nervous system, damage to the liver, and cardiovascular system. Genetics is a crucial factor in determining an individual's innate ability to metabolize and absorb copper in the body.

RESEARCH RECOMMENDATIONS

- As per your genotype, your copper metabolism is poor.
- Hence, high risk of developing copper deficiencies.
- People with such a genotype tend to have a poor efficiency for copper metabolism.
- Increased intake of copper rich food such as nuts and seeds and dark chocolate suggested.

GENOMAX
GENE BASED WELLNESS PROGRAM

164. Requirement of Copper

Your Genetic Result

Your Risk / Response

HIGH RISK

Gene(s) Analysed

SELENBP1

Risk / Response Variant(s) Presence

YES

PAY ATTENTION!

Copper is an essential nutrient for the body. Together with iron, it enables the body to form red blood cells. It helps maintain healthy bones, blood vessels, nerves, and immune function, and it contributes to iron absorption. Sufficient copper in the diet may help prevent cardiovascular disease and osteoporosis, too.

RESEARCH RECOMMENDATIONS

- As per your genotype you have poor copper metabolism, hence high risk for developing copper deficiencies.
- Increase intake of copper suggested.
- Copper sources include whole grains, beans, potatoes, yeast, dark leafy greens, cocoa, dried fruits, black pepper, organ meats, such as kidneys and liver, nuts, such as cashews and almonds.

GENOMAX GENE BASED WELLNESS PROGRAM

165. Tendency of Zinc Metabolism

Your Genetic Result

Your Risk / Response

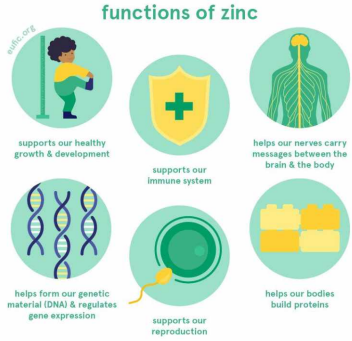
MODERATE RISK

Gene(s) Analysed

PPCDC

Risk / Response Variant(s) Presence

YES



PARTIALLY BAD!

Zinc is an essential mineral having a vital role in cellular metabolism, DNA synthesis, regulation of immune function, wound healing, and protein synthesis. In the body, there is no storage system of zinc, therefore, requiring adequate dietary zinc intake. Deficiency of zinc can cause impaired immune function, growth retardation, and loss of appetite; excess zinc intake may cause toxicity and symptoms such as nausea, loss of appetite, and abdominal cramps. Zinc-rich foods include oysters, eggs, crab, whole grains, beans, and nuts. Genetic variations in genes encoding zinc transporters influence the absorption and serumlevels of zinc in the body.

RESEARCH RECOMMENDATIONS

- As per your genotype, you have decreased Zinc metabolism.
- You have high risk of developing zinc deficiency.
- You have high risk of developing impaired immune function, hence increased zinc intake suggested.

GENOMAX
GENE BASED WELLNESS PROGRAM

166. Requirement of Zinc

Your Genetic Result

Your Risk / Response

MODERATE RISK

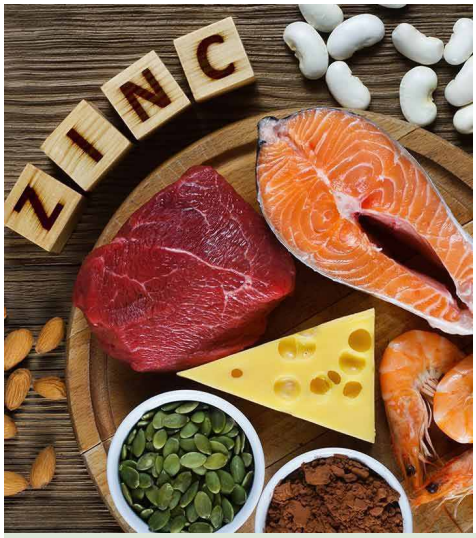
Gene(s) Analysed

PPCDC

Risk / Response Variant(s) Presence

YES

PARTIALLY BAD!



Zinc is an essential mineral that your body does not make on its own. It aids growth, DNA synthesis, immune function and more. Zinc is essential for cell growth and division, immune function, enzyme reactions, DNA synthesis and protein production. Zinc helps keep your immune systemstrong. Because it is necessary for immune cell function and cell signaling, a deficiency can lead to a weakened immune response. Zinc supplements stimulate particular immune cells and reduce oxidative stress.

RESEARCH RECOMMENDATIONS

- As per your genotype you have decreased zinc metabolism and hence high intake of zinc is suggested.
- Consume a balance diet.
- Include variety of protein foods such as legumes , poultry, eggs, lean meat, lentils, nuts etc
- Avoid self -medicating with supplements without consulting a physician.

GENOMAX GENE BASED WELLNESS PROGRAM

167. Gluten Intolerance

Your Genetic Result

Your Risk / Response

HIGH RISK

Gene(s) Analysed

HLADQ2_5 - HLADQ8

Risk / Response Variant(s) Presence

YES

PAY ATTENTION!

Gluten is a protein present in wheat, barley & rye that gives a chewy texture to many of our favourite foods. It is composed of two building blocks, gliadin and glutenin. When we digest gluten, the gliadin portion is broken down into small peptides that can form a complex with a structure called the HLA DQ complex. In celiac disease patients, the HLA DQ-gliadin complexes are pro-inflammatory, leading to an autoimmune reaction that damages cells of the small intestine.

Associated Symptoms	Associated Diseases	Food Sources
• Abdominal bloating and pain • Chronic diarrhea • Vomiting • Constipation • Pale, foul-smelling, or fatty stool • Weight loss • Fatigue • Short stature • Attention Deficit Hyperactivity Disorder (ADHD)	• Anemia • Loss of bone density (osteoporosis) • Itchy, Blistery skin rash • Damage to dental enamel • Mouth ulcers • Joint pain • Eye Irritation	• Wheat, Rye, Barley, spelt

RESEARCH RECOMMENDATIONS

- Go on a gluten free diet by stopping consumption of wheat, barley and rye in order to prevent inflammation, associated symptoms and diseases and to promote intestinal healing.

GENOMAX
GENE BASED WELLNESS PROGRAM

168. Impact of Gluten Products

Your Genetic Result

Your Risk / Response

MODERATE RISK

Gene(s) Analysed

HLADQ2.5 - HLADQ8

Risk / Response Variant(s) Presence

YES

PAY ATTENTION!

Gluten intolerance is an autoimmune disorder which causes inflammation of the smal l bowel and villous damage when a genetically susceptible individual ingests gluten containing grains (wheat, rye, or barley). Glutensensitivity (alsoglutenintolerance) In Gluten Intolerance, gluten causes a reaction that destroys the lining of the small intestines. This reduces the area for absorbing virtually all nutrients. A gluten intolerance can cause problems with your digestive system, but it won't cause permanent damage to your stomach, intestine, or other organs. Gluten intolerance can trigger insulin sensitivity, individuals with mutations in the following may experience discomfort with intake of gluten, controlled intake or rather consider eliminating gluten to manage or avoid concern of Ulcerative colitis and gastric inflammation.

RESEARCH RECOMMENDATIONS

- Your genotype is associated with increased risk of gluten intolerance.
- Gluten rich foods such as wheat, barley, malt etc. to be strictly avoided.
- Inclusion of probiotic sources such as home made curds , butter milk etc. should be done in the routine diet.
- In case of any inflammation it is suggested to avoid gluten for faster recover.
- There is increased tendency to gastric inflammation and Ulcerative colitis.
- There is High tendency of Celiac disease, on consumption of gluten intake based on the genotype.

169. Risk for Developing Celiac Disease

Your Genetic Result

Your Risk / Response

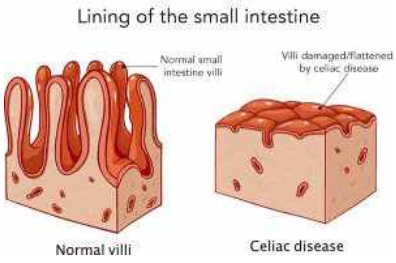
MODERATE RISK

Gene(s) Analysed

HLADQ2.5 - HLADQ8

Risk / Response Variant(s) Presence

YES



PAY ATTENTION!

Celiac disease is an autoimmune condition. It can cause damage to the small intestine in response to gluten ingestion, which is a protein found in grains like wheat, barley, and rye. The immune system of individuals with celiac disease attacks the villi, which are hair-like projections present on the inner lining of the small intestine. The damage to the villi hampers the absorption of nutrients. Celiac disease can develop at any age upon consumption of gluten- containing foods or substances. Early intervention can help in managing the disease and may help to prevent further health problems. Celiac disease is hereditary.

RESEARCH RECOMMENDATIONS

- As per your genotype, you have a elevated risk of developing celiac disease.
- Other factors like a family history of celiac disease or dermatitisherpetiformis, autoi mmune thyroid disease, Collagenous colitis, Addison's disease, Down syndrome or Turner syndrome, or type I diabetes mayincrease your risk of developing celiac disease.
- The result shows intake of gluten may cause celiac disease. Thus in this case routine intake of gluten has to be limited.

170. Lactose Intolerance

Your Genetic Result

Your Risk / Response

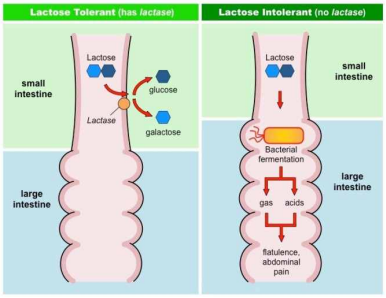
HIGHER RISK

Gene(s) Analysed

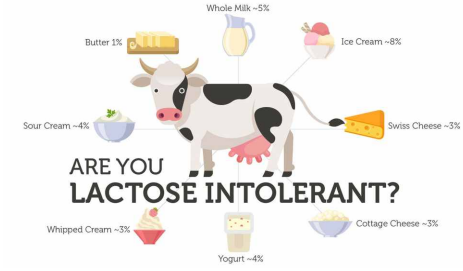
LCT

Risk / Response Variant(s) Presence

YES



PAY ATTENTION!



Lactose is a naturally occurring disaccharide in milk, that has to be broken down into small simple sugar molecules like glucose and galactose before it can get readily absorbed by the body. This conversion of lactose takes place in the small intestine by an enzyme called Lactase Phlorizin Hydrolase (LPH), commonly called lactase.

Associated Symptoms	Associated Diseases	Food Sources
• Bloating • Pain or cramps in the lower belly • Gurgling or rumbling sounds in the lower belly • Loose stools or diarrhoea • Irritable bowel syndrome • Inflammatory bowel disease • Reduced functioning of the spleen (hyposplenism) • Feeling sick	• Irritable Bowel Syndrome • Inflammatory Bowel Disease • Hyposlenism • Can lead to Osteoporosis, Osteopenia • Poor nutritional status	• Foods with lactose: Milk Certain milk products Bakery Products Biscuits and Cakes Processed food Certain medication

RESEARCH RECOMMENDATIONS

- Avoid dairy by going on a lactose free diet.

GENOMAX
GENE BASED WELLNESS PROGRAM

171. Blood Pressure and Heart Attack Response to Caffeine

Your Genetic Result

Your Risk / Response

LOW RISK

Gene(s) Analysed

CYP1A2

Risk / Response Variant(s) Presence

NO

GIFTED!

Caffeine is the most common stimulant and drug in use. Caffeine affects the secretion of adrenaline, acts as a stimulant and increases energy. Small caffeine molecules get absorbed into the bloodstream and cross the blood/brain barrier to act on the central nervous system. Caffeine acts as a receptor in the central nervous system and is a source for overall stimulation effects. It makes a person feel alert, awake and energetic. At the same time too much caffeine can result in unpleasant symptoms like heart palpitations, anxiety, insomnia, headaches, etc. Caffeine also acts as a weak diuretic, speeding up the excretion of urine.

Food Sources

- Coffee - brewed 250ml 80 - 180
- Coffee - instant 250ml 76 - 106
- Decaffeinated coffee 250ml 3 - 15
- Green tea 250ml 25-45
- Decaffeinated tea 250ml 0 - 5
- Energy drink 250ml 80 - 125
- Diet coke (1can) 25 - 43
- Dark chocolate (1 bar) 27
- Milk chocolate bar (1bar) 8 - 12 Sources

RESEARCH RECOMMENDATIONS

- You can enjoy up to ~400mg (~4 cups) of coffee a day.
- For improved performance consume caffeine as a pre workout and also during a sporting event.
- Consume coffee between 10:00 to 11:30 or between 1:00 to 3:00 pm to maximize the caffeine boost and reduce the risk of building a partial tolerance to its effects.

172. Tendency of Caffeine Induced Obesity

Your Genetic Result

Your Risk / Response

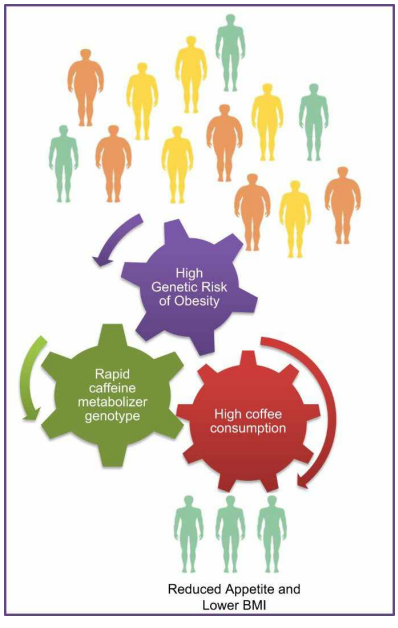
LOW RISK

Gene(s) Analysed

CYP1A2

Risk / Response Variant(s) Presence

NO



GIFTED!

Caffeine acts as a stimulant by blocking the effects of adenosine, a chemical in your brain that makes you sleepy.This may be helpful if you need an extra jolt of energy. However, if consumed later in the day, coffee may interfere with your sleep patterns.|In turn, this can lead to weight gain. Poor sleep is associ ated with higher body weight, increased appetite, and more cravings for processed food.

RESEARCH RECOMMENDATIONS

- You have good caffeine metabolism resulting in decreased chances of residual caffeine in your body/blood due to good clearance.
- Caffeine might not have a negative impact on your sleep causing to weight gain.
- Caffeine may not have a negative impact on your cardiac health if consumed moderately.
- 2-3 cups of coffee can be consumed per day.

173. Tendency of Salt Metabolism

Your Genetic Result

Your Risk / Response

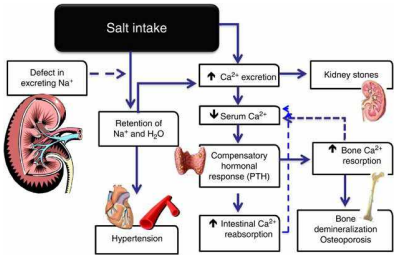
HIGH RISK

Gene(s) Analysed

AGT

Risk / Response Variant(s) Presence

YES



PAY ATTENTION!

Angiotensinogen - precursor of angiotensin which causes salt sensitivity, vasoconstriction, increased BP & aldosterone release from adrenal cortex. Angiotensinogen is a protein that is produced mainly by the liver. Plasma angiotensinogen levels are increased by corticosteroids, oestrogen, thyroid hormone, and angiotensin II. Allele C encodes for a threonine instead of methionine in codon 235 of the gene. Presence of C allele is associated with higher plasma angiotensin levels and ultimately elevated blood pressure, leading to increased risk for hypertension associated disorders. Presence of C allele is also associated with increased risk of hypertension

RESEARCH RECOMMENDATIONS

- As per your genotype, your metabolism to salt is poor which indicates high salt sensitivity.
- However, it is necessary to limit consumption of excess salt in the diet.
- Avoid intake of foods products such as bakery, pickles and other processed food to maintainevery day's salt intake
- Sodium intake in every day's meals should not exceed more than 2 gms/day

GENOMAX GENE BASED WELLNESS PROGRAM

174. Blood Pressure Response to Sodium (Salt Sensitivity)

Your Genetic Result

Your Risk / Response

INCREASED SENSITIVITY TO SALT AND HIGHER RISK FOR HIGH BLOOD PRESSURE WITH TOO MUCH SALT INTAKE.

Gene(s) Analysed

ACE

Risk / Response Variant(s) Presence

YES

PAY ATTENTION!

Sodium is an essential micronutrient that regulates blood pressure and blood volume. Most people consume more sodium than the body requires. The major adverse effect of excess sodium intake is elevated blood pressure, which predisposes to hypertension and heart disease. However, some individuals do not experience as great an increase in blood pressure in response to excess sodium intake as others. Research* now shows that the effect of sodium intake on blood pressure is influenced by variations in a gene called ACE. The ACE gene directs the body to produce the angiotensin-converting enzyme (ACE), which is known to play a role in regulating the response of blood pressure to sodium intake. It is now known that a person's specific blood pressure response to excess sodium intake is dependent on which variant of the ACE gene they possess.

Associated Symptoms	Associated Diseases
• Feeling the need to increase the salt intake in food due to decreased salt sensitivity	• Cardiac disease such as Hypertension • stroke • vascular diseases • anxiety

RESEARCH RECOMMENDATIONS

- Limiting sodium consumption to the Adequate Intake (AI) level of 1500 mg per day should help to reduce the risk. The AI is equivalent to 3/4 teaspoon of salt per day, which includes sodium that is found naturally in food as well as salt that is added during processing and preparation. Foods that are high in sodium include canned soups and canned vegetables, potato chips, processed meats, soy sauce, ketchup and processed cheeses.
- Potassium is important for controlling blood pressure. Include foods rich in potassium such as guava, broccoli, celery, lady finger, radish, cherries, pista & pepper. Potassium consumption has been shown to reduce blood pressure and reduce negative health effect of sodium.
- Salt preference is an acquired taste that can be unlearned. It takes about 6-8 weeks to get used to eating food with much lower quantities of salt.

GENOMAX GENE BASED WELLNESS PROGRAM

175. Ideal Exercise Strategy

Your Genetic Result

Your Risk / Response

HIGH INTENSITY EXERCISE

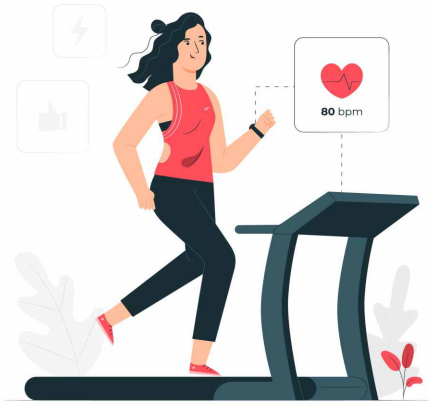
Gene(s) Analysed

ADRB2(1) - ADRB2(2) - ADRB3

Risk / Response Variant(s) Presence

YES

PAY ATTENTION!



Exercise is any bodily activity that enhances or maintains physical fitness, overall health and wellness. It is performed for various reasons, including increasing growth and development, preventing aging, strengthening muscles and the cardiovascular system, weight loss or maintenance, and enjoyment. Frequent and regular physical exercise boosts the immune system and helps prevent diseases such as cardiovascular disease, type 2 diabetes and obesity. It also prevents stress and depression, increases quality of sleep, helps promote or maintain positive self-esteem, improves mental health, maintains a steady digestion and treats constipation and gas, regulates fertility health etc. Exercise and physical activity fall into four basic categories - endurance, strength, balance, and flexibility.

RESEARCH RECOMMENDATIONS

- High intensity workouts will be more effective for you.

GENOMAX
GENE BASED WELLNESS PROGRAM

176. Power / Endurance Athlete

Your Genetic Result

Your Risk / Response

ADVANTAGE IN ENDURANCE ORIENTED SPORTS.

Gene(s) Analysed

ACE

Risk / Response Variant(s) Presence

NO

Impact of Genotype(s)

You are likely to perform best in endurance-oriented sports. If you choose to engage in strength/power sports, you may need to train more consistently to achieve a high level of performance.

YOUR GIFTED

Multiple studies have found that human physical performance is influenced by genetic factors. A variation in the human angiotensin Iconverting enzyme (ACE) gene has been identified, in which a certain variant may be associated with elite endurance performance, and the other variant seems overrepresented amongst elite sprinters and short-distance swimmer status.

RESEARCH RECOMMENDATIONS

- Your genotype was more common amongst elite long-distance runners, rowers, mountaineers and long distance swimmers compared to short distance swimmers

GENOMAX
GENE BASED WELLNESS PROGRAM

177. Requirement of Training Session for Improving Lactate Threshold

Your Genetic Result

Your Risk / Response

HIGH RISK

Gene(s) Analysed

ACTN3

Risk / Response Variant(s) Presence

YES

PAY ATTENTION!

Lactate is produced by the body during anaerobic glycolysis. his lactate is further used as a fuel by the aerobic metabolism pathway for energy generation. However, during intense exercise, the aerobic system is not able to use up all the lactate produced by the anaerobic system which results in an increase in the concentration of lactate. This directly correlates with muscle fatigue. Therefore, lactate threshold is denied as the intensity of exercise at which the concentration of lactate begins to exponentially increase, thereby setting in fatigue. Intensity of exercise below the lactate threshold can be done without any apparent feeling of uneasiness and fatigue. Therefore, a higher lactate threshold leads to an improved performance since higher intensity of exercise can be achieved.

RESEARCH RECOMMENDATIONS

- As per your genotype, the genetic component of your Lactate Threshold is very poor.
- People with such a genotype tend to have very low lactate clearance and utilization. This can possibly result in less than optimal performance in endurance activities since they tend to be able to sustain a higher intensity of effort without fatigue.
- Undertake fartlek sessions and sprint training as they improve lactate threshold.
- Undertake high intensity training as this is optimal for increasing lactate threshold; the intensity of workout should be above the lactate threshold, corresponding to around 85%-95% of maximal heart rate.

GENOMAX GENE BASED WELLNESS PROGRAM

178. Requirement of HIIT (High Intensity Interval Training)

Your Genetic Result

Your Risk / Response

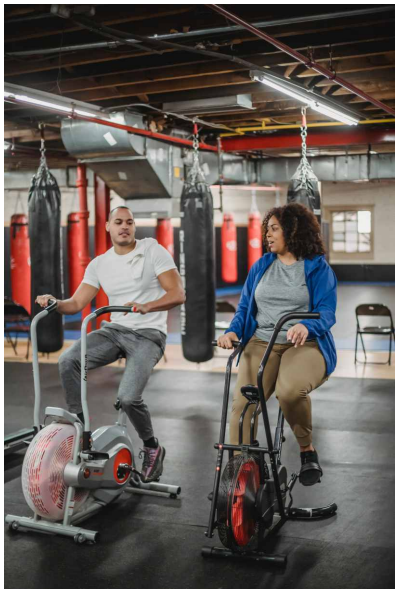
HIGH RISK

Gene(s) Analysed

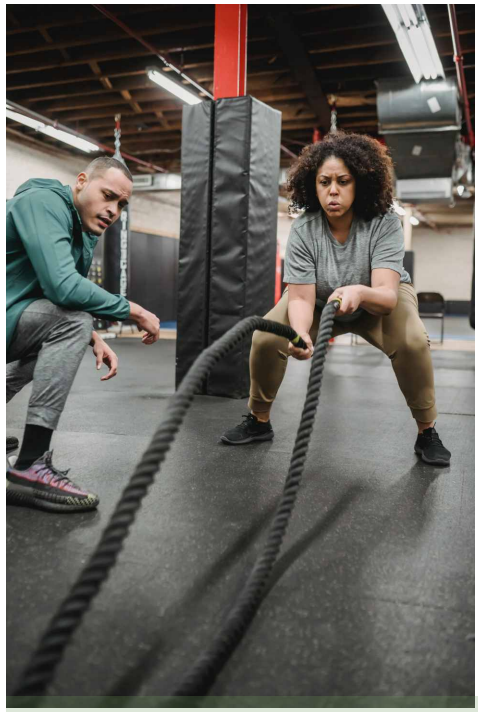
ACTN3

Risk / Response Variant(s) Presence

YES



PAY ATTENTION!



High-intensity intermittent exercise which is often termed interval or HIIT training involves performing repeated bouts of exercise at an intense effort interspersed by low intensity exercise or periods of rest with varied recovery times. The exercise periods may range from 5 min to 8 min long with recovery periods varying in length and with total exercise duration lasting between 20 and 60 min.

RESEARCH RECOMMENDATIONS

- As per your genotype your body may give poor response to High Intensity Interval Training.
- Limit High Intensity Interval Training (HIIT) workouts, as they are not effective in increasing aerobic capacity for you.
- Avoid keeping more than one HIIT session a week.

179. Requirement of Foods to Improve Aerobic Capacity

Your Genetic Result

Your Risk / Response

LOW RISK

Gene(s) Analysed

MNSOD

Risk / Response Variant(s) Presence

NO

GIFTED!

Aerobic capacity, also known as VO2Max, is a measurement of maximum capacity of our body to transport and use oxygen during exercise. During aerobic exercises, oxygen is used to break down the fuel stores for energy production and its demand increases with increase in the intensity of exercise.|Appropriate training leads to an improvement in the aerobic capacity which directly translates to improved performance. However, the extent and the ease at which these improvements are made is governed by genetics. People with favorable genetics and it very easy to improve their aerobic capacity, while others can and it very difficult. vari ous genes that are involved in cellular oxygen supply and utilization regulate the trainability of aerobic capacity.

RESEARCH RECOMMENDATIONS

- As per your genotype, your Aerobic Capacity Trainability is good
- Normal Consumption of foods rich in iron and vitamin B complex, as these can be helpful.
- Avoid the use of nicotine and tobacco containing products such as cigarettes

GENOMAX GENE BASED WELLNESS PROGRAM

180. Body Odor (Axillary Osmidrosis)

Your Genetic Result

Your Risk / Response

MODERATE RISK

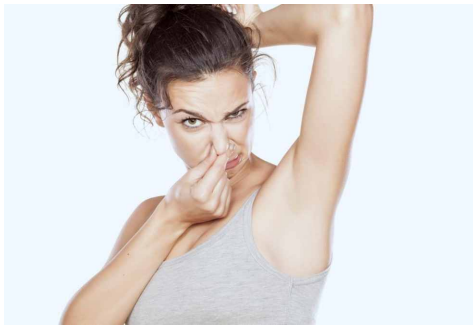
Gene(s) Analysed

ABCC11

Risk / Response Variant(s) Presence

YES

PARTIALLY BAD!



Axillary osmidrosis, which is exemplified by unpleasant odors, sweating and staining of clothes, is often perceived, especially by young women, as a distressing and troublesome problem (Wu et al., 1994). Axillary osmidrosis is a chronic skin condition characterized by an excessive, axillary malodor resulting from apocrine gland dysfunction (Hess et al., 2008). Certain people display an excessive fear, aversion or psychological hypersensitivity to unpleasant smells or odors. They tend to opt for aggressive surgical treatments and are sometimes categorized as having osmophobia. Sweat produced by the axillary apocrine glands is odorless. Secretions from the apocrine glands, however, can be converted to odoriferous compounds by bacteria (Corynebacteria), which results in the formation of the unique "human axillary odor" (Shehadeh and Kligman, 1963).

RESEARCH RECOMMENDATIONS

- Use of deodrant is recommended as you have significantly more numerous and larger-sized axillary apocrine glands compared to people carrying another genotype

GENOMAX
GENE BASED WELLNESS PROGRAM

181. Training Required to Improve Endurance

Your Genetic Result

Your Risk / Response

LOW RISK

Gene(s) Analysed

ACE

Risk / Response Variant(s) Presence

NO

GIFTED!

Endurance is the ability of the body to sustain a physical activity for a prolonged period of time.|A high endurance capacity indicates that an individual can take up mild to moderate intensity activities for a prolonged duration with minimal discomforts like breathlessness and fatigue. Endurance performance is dictated by factors such as the aerobic capacity, fat oxidation, aerobic metabolism, lactate threshold, exercise economy, and percentage of slow twitch muscle fibers. Genetics play a big role in these factors, and hence dictate whether an individual is suited for endurance activities or not.

RESEARCH RECOMMENDATIONS

- As per your genotype, You have a good genetic profile for Endurance
- People with such a genetic profile usually tend to have a good ability for endurance activities and find it easy to reach very high levels of performance in endurance events. However, following a strict training regimen could offset the disadvantage provided by genetics.
- Give emphasis to all the trainable factors of endurance performance such as aerobic capacity, lactate threshold, mental endurance, resistance to fatigue, and exercise economy
- Increase mileage and intensity progressively so as to not get injured.
- Consider the use of supplements as they may improve endurance performance, e.g. caffeine, beta-alanine
- Take adequate rest after high intensity or high volume workouts

GENOMAX
GENE BASED WELLNESS PROGRAM

182. Endurance Response to Caffeine and Other Supplements

Your Genetic Result

Your Risk / Response

LOW RISK

Gene(s) Analysed

CYP1A2

Risk / Response Variant(s) Presence

NO

GIFTED!

The CYP1A2 gene encodes a member of the cytochrome p450 family of proteins, which metabolize nutrients and drugs. One well known substrate of CYP1A2 is caffeine; individuals who are carry one or more CYP1A2*1C alleles are "slow" caffeine metabolizers, whereas carriers of the variant CYP1A2*1F are "fast" caffeine metabolizers. The same amount of caffeine will therefore tend to have more stimulating effect on CYP1A2 slow metabolizers than on CYP1A2 fast metabolizers. Individuals having higher caffeine intake and are slow metabolizers, tend to accumulate more caffeine and hence would be prone to toxic effect of caffeine. Individuals having mutations are required to maintain caffeine intake in order to avoid the toxic effects.

RESEARCH RECOMMENDATIONS

- You are a fast metabolizer of Caffeine.
- Consider the use of caffeine to improve endurance performance.
- Consume adequate amount of water to prevent dehydration caused by the diuretic effect of caffeine.
- Take adequate rest after high intensity or high volume workouts.

GENOMAX
GENE BASED WELLNESS PROGRAM

183. Ideal Weight Maintenance Strategy

Your Genetic Result

Your Risk / Response

LOW PROTEIN AND LOW CALORIE DIET

Gene(s) Analysed

TFAP2B - ADIPOQ

Risk / Response Variant(s) Presence

NO

NEUTRAL

A large percentage of obese people who undergo a weight loss program begin regaining their weight soon after. Scientists have been trying to find a solution to this long term weight loss problem for years. However recent breakthrough studies have not only found the genetic causes for weight regain but also diet and lifestyle interventions that can prevent the regain by countering the expression of these genes.

Food Sources

- Pea(1cup) - 8g
- Salmon(3oz) - 17g
- Turkey(1patty) - 16g
- Chicken(3oz) - 26g
- Eggs(1whole) - 7g
- Beans(half cup) - 10g
- Lentils(1cup) - 18g
- Milk(8oz) - 8g

RESEARCH RECOMMENDATIONS

- A low calorie diet aiming at reducing 600 kcal from your current daily energy intake can show short term weight maintenance for 32 weeks.
- Strictly avoid a high protein diet as it can lead to weight gain for people carrying your genetic profile.
- A low calorie diet aiming at reducing 600 kcal from your current daily energy intake can show short term weight maintenance for 32 weeks.
- Strictly avoid a high protein diet as it can lead to weight gain for people carrying your genetic profile.

GENOMAX GENE BASED WELLNESS PROGRAM

184. Cold Tolerance

Your Genetic Result

Your Risk / Response

HIGH TOLERANCE

Gene(s) Analysed

ACTN3

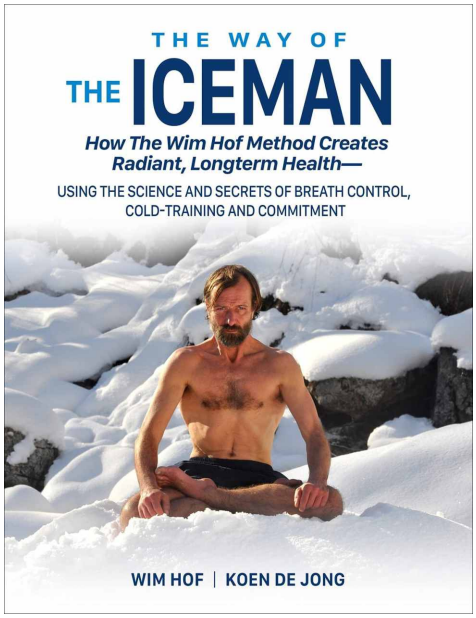
Risk / Response Variant(s) Presence

NO

Impact of Genotype(s)

ACTN3 plays a key thermogenic role of skeletal muscle during cold exposure.

GIFTED!



The ?-actinin-3 is absent in 1.5 billion people worldwide due to homozygosity for a nonsense polymorphism in ACTN3. The prevalence of the non functional genotype increased as modern humans moved to colder climates, suggesting a link between ?-actinin-3 deficiency and improved cold tolerance. A recent study in 2021 showed that humans lacking ?-actinin-3 are superior in maintaining core body temperature during cold-water immersion due to changes in skeletal muscle thermogenesis. Muscles of the ACTN3 deficient individuals displayed a shift toward more slow-twitch isoforms of myosin heavy chain (MyHC) and sarcoplasmic reticulum (SR) proteins, accompanied by altered neuronal muscle activation resulting in increased tone rather than overt shivering.

RESEARCH RECOMMENDATIONS

- Based on a recent study people with your genotype are twice as likely to maintain a core body temperature at 35.5 degrees celcius for 2 hours of cold water immersion compared to people carrying the other genotypes.
- Take advantage and jump in the cold plunge pool after a sauna session to boost circulation.
- You may workout outdoors in a cold climate and still maintain a high core body temperature.

GENOMAX
GENE BASED WELLNESS PROGRAM

185. Requirement of Training to Improve Power

Your Genetic Result

Your Risk / Response

HIGH RISK

Gene(s) Analysed

ACTN3

Risk / Response Variant(s) Presence

YES

PAY ATTENTION

Power is the ability of the muscles to generate large forces at a rapid rate, as observed during high intensity activities of shorter duration. Activities such as jumping, powerlifting, sprinting, bodybuilding, and short-distance swimming utilize the power generation capabilities of the muscle.|Generally, a greater power output directly translates into improved performance in such activities. Genetics play a big role in the power generation capabilities of an individual, and hence dictate whether an individual is suited for power activities or not.

RESEARCH RECOMMENDATIONS

- You have a high requirement of training to improve power as you have poor genetic profile for Power generation.
- People with such a genotype tend to have low ability for power strength activities. People with such genetics usually find it difficult to reach very high levels of performance in strength and power events. However, following a strict training regimen can possibly offset the disadvantage provided by genetics.
- Engage in plyometric training to improve muscular power output.
- Add muscle building cycles to your training program since muscle building will directly lead to greater power/strength.
- Train with less exercise volume but heavy weights/intensity since high power output can be achieved by enhanced neuromuscular coordination and output.

GENOMAX
GENE BASED WELLNESS PROGRAM

186. Requirement of Nutritional Supplements

Your Genetic Result

Your Risk / Response

MODERATE RISK

Gene(s) Analysed

MTHFR

Risk / Response Variant(s) Presence

YES

PAY ATTENTION!

Supplementation is intended to bridge the nutritional gap, so that we maintain the proper balance of nutrients from food and supplementation. This will enhance the nutrient density of your diet and make sure you are obtaining the right amount of nutrients tailored to your dietary needs. Dietary supplements include such ingredients as vitamins, minerals, herbs, aminoacids, and enzymes.

RESEARCH RECOMMENDATIONS

- As per your genotype your requirement of supplementation is moderate, you might need methylation support with vitamin D and omega 3 supplementation
- Consume a balanced diet
- Avoid self-medicating with supplements without consulting a physician

GENOMAX GENE BASED WELLNESS PROGRAM

187. Avoiding Inflammatory Foods

Your Genetic Result

Your Risk / Response

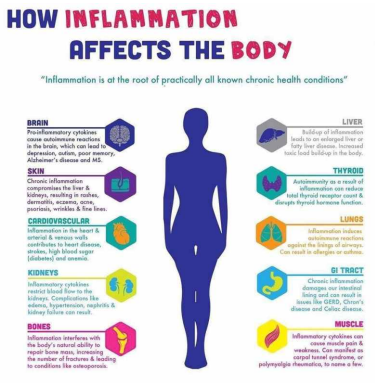
HIGH RISK

Gene(s) Analysed

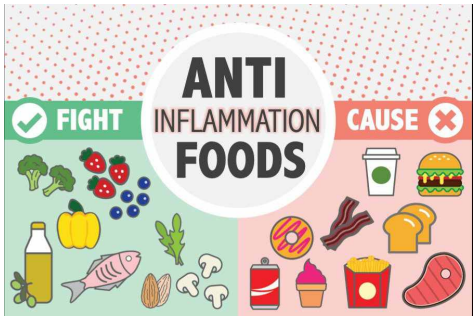
IL6

Risk / Response Variant(s) Presence

YES



PAY ATTENTION!



Inflammation is a complex biological response of body tissues to harmful stimuli, such as pathogens, damaged cells, or irritants. It involves a whole array of immune cells and molecular mediators which provide a protective effect. Exerci se tends to damage muscle cells, thereby eliciting an inflammatory response. This inflammatory response repairs the muscle and aids in its growth and adaptation. However, the severity of this inflammation manifests itself as muscle soreness. If there is an upregulation of the body's inflammatory enzymes, it can possibly lead to greater inflammation and hence greater muscle soreness.

RESEARCH RECOMMENDATIONS

- As per your genotype, Your need to avoid inflammatory foods is very high.
- Your body shows very high inflammatory response post an exercise session compared to other genotype
- This can possibly increase muscle soreness post an exercise session
- Healthy diet with good omega 3 and antioxidants should help in inflammation. Omega 3 supplements can be advised if diet does not support and if there is inflammation in body
- Avoiding pro-inflammatory substances in diet (gluten, lactose etc) can help in management

GENOMAX
GENE BASED WELLNESS PROGRAM

188. Motivation to Exercise

Your Genetic Result

Your Risk / Response

ENHANCED MOTIVATION

Gene(s) Analysed

BDNF

Risk / Response Variant(s) Presence

NO

GIFTED!

The (BDNF) brain-derived neurotrophic factor is a protein that is encoded by the BDNF gene. This protein works in regions of the brain to influence the nervous system, musculature, and blood vessels, all of which are important to exercise. Because of the complexity of mental stamina and the psychological response to exercise, the BDNF gene is only one of many possible genetic factors that may influence responses to exercise and future exercise behavior. Nevertheless, research shows that those with your variant of the BDNF gene derive greater enjoyment or pleasure and improvements in mood from exercise and a lower perception of effort during exercise compared to those without this variant.

Your attitude toward exercise and the effect it has on your mood can greatly impact your likelihood of starting or maintaining a physically active lifestyle. Research shows that individuals who possess the response variants of the BDNF gene are more likely to experience positive mood changes and exercise for enjoyment. They also perceive their effort and exertion level as lower during exercise compared

RESEARCH RECOMMENDATIONS

- Take advantage of your gifts and plan workout schedules knowing that you are likely to follow through.
- Planning for an ambitious scheduled workout routine may be recommended to take advantage of this gift.

GENOMAX GENE BASED WELLNESS PROGRAM

189. Exercise Associated Inflammation risk

Your Genetic Result

Your Risk / Response

LOW RISK

Gene(s) Analysed

IL6 - TNFA

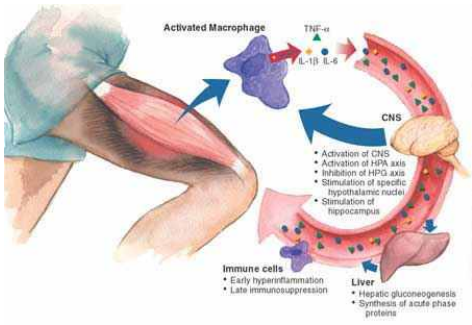
Risk / Response Variant(s) Presence

NO

Impact of Genotype(s)

Low risk of inflammation

GIFTED!



Inflammation is a normal immune response and an essential part of tissue healing following exercise. The release of inflammatory cytokines is controlled by various genes, however when there is a greater than normal increase in inflammatory cytokines following exercise, or a prolonged increase in these cytokines, increased recovery time is required between hard sessions in order to avoid tissue damage.

IL6 is an inflammatory cytokine that stimulates an immune response to strenuous exercise. Excess release of this cytokine can lead to a chronic inflammatory state. Individuals with the risk allele have increased levels of IL6 as well as the inflammatory marker CRP and are likely to require more recovery. TNFA, like IL6, is a pro-inflammatory cytokine that stimulates the acute phase reaction of inflammation. Levels of TNFA increase after intensive exercise. The A allele is linked to higher levels of TNFA as well as CRP. Individuals with the A allele are likely to experience fatigue and somewhat delayed recovery times with exercise training.

RESEARCH RECOMMENDATIONS

- Smaller recovery time between set and days of exercise.
- You may have improved muscle repair after eccentric exercise and have advantage to do strength and power training.
- carrier of non risk allele for IL6 and non risk allele for TNFA are likely to be at lower risk for inflammation after exercise.

GENOMAX GENE BASED WELLNESS PROGRAM

190. Exercise Recovery Time

Your Genetic Result

Your Risk / Response

TYPICAL RECOVERY TIME

Gene(s) Analysed

IL6

Risk / Response Variant(s) Presence

NO

Impact of Genotype(s)

Your genotype is not sssociated with a lower expression of IL6 and relatively slower recovery after muscle damage from eccentric exercise.

NEUTRAL

Exercise induced muscle damage in humans occurs particularly after performing large amount of eccentric contraction. Absence of alpha-actinin-3 has been associated with loss of muscle power and strength reduction of bone and muscle mass, as well as susceptibility to injury. Get to know your risk of exercise-induced muscle damage and ways to reduce the risk by incorporating the ideal breaks required by your muscles between consecutive sets of exercises and between sessions of exercises.

When exercising, some people are lucky enough to recover very quickly - ready to exert themselves again after very little rest, whereas others don't seem to bounce back quite as fast, needing a longer break between hard training bouts. Research has shown that certain genetic variations infer a delayed recovery from hard exercise training, those with these variations should take extra care with their training plan and nutrition strategy.

Cytokine Interleukin 6, more commonly referred to as IL6, is a signalling molecule that helps nutrient mobilisation and delivery during exercise. This makes it a key factor in both performance, and post exercise recovery. Increased expression of IL6 has also been linked to lower levels of muscle damage following powerful contractions. This protective role of IL6, combined with improved muscle recovery, makes high expression of IL6 beneficial for power-based athletes. However, higher IL6 expression can also result in adverse health effects, such as cardiovascular disease, due to an increased risk of inflammation in other tissues.

Associated Symptoms

- Swelling bruising or redness at the site of injury
- Pain at rest or when using the specific muscle
- Weakness of the muscle or the tendons

RESEARCH RECOMMENDATIONS

- Smaller recovery period between bouts of high intensity exercise (i.e. eccentric exercise) and progressively increasing the density of training will help further reduce the risk of muscle damage.
- You can keep shorter resting periods between training session to negate high level of inflammation after exercise session.
- Produced the highest levels of IL6

GENOMAX
GENE BASED WELLNESS PROGRAM

191. Acl Injury

Your Genetic Result

Your Risk / Response

LOWER RISK

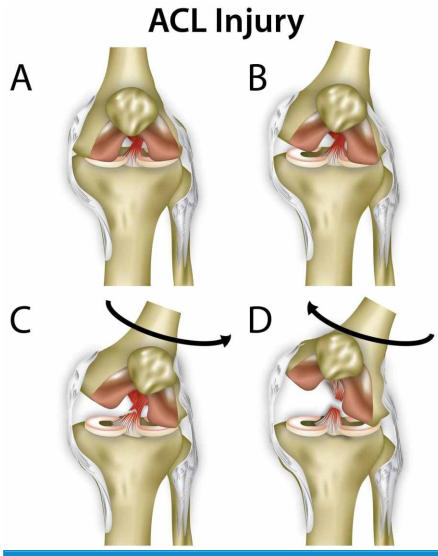
Gene(s) Analysed

COL5A1

Risk / Response Variant(s) Presence

NO

GIFTED!



ACL is an important internal stabilizer of the knee joint, restraining hyperextension. An ACL injury is the over-stretching or tearing of this ligament in the knees. A tear is either partial or complete based on the intensity of the injury. Consequence of the injury depends on intensity of stability affected and the extent to which other structures are involved. Causes of ACL injury vary from being suddenly hit on the side of the knee, overextending the knee joint, landing from jumps, or turning while playing sports like basketball, football, soccer, skiing etc.

Associated Symptoms

- A popping sound at the time of injury as the ligament breaks Knew swelling occurs within an hour or two as blood from ruptured ligament fills the knee joint Walking is difficult and knee feels unstable,Due to the fluid filled up within the joint, it's difficult to fully extend or straighten the knee. Pain is almost immediate especially when you try to put weight on injured leg

RESEARCH RECOMMENDATIONS

- Building muscle memory.
- Work on balance and agility.
- Practice exercises designed to strengthen hips and relieve knee pain for Example hip flexor stretches, forward lunges, planks, clams etc.
- Building muscle memory.

GENOMAX
GENE BASED WELLNESS PROGRAM

192. Risk of Muscle Injury

Your Genetic Result

Your Risk / Response

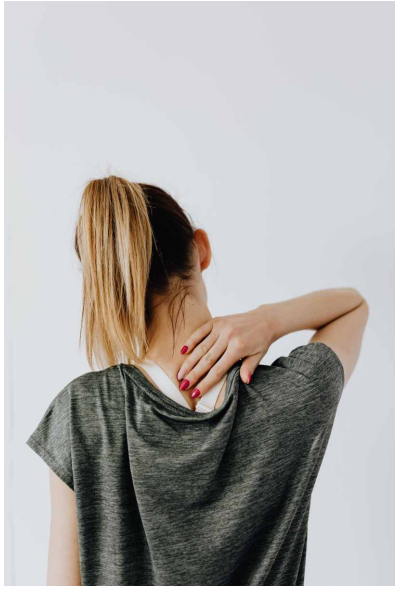
LOW RISK

Gene(s) Analysed

COL5A1

Risk / Response Variant(s) Presence

NO



GIFTED!

There are four main ligaments which Exercise puts stress on the muscles, which leads to damage.|Low level damage is essential for the muscles to grow and adapt to the exercise stimuli. However, if a muscle gets excessively damaged, it can lead to muscle strains. A strain is a contraction-induced injury in which muscle fibers tear due to extensive mechanical stress. Other muscle injuries include bruises, neuromuscular disorders, and cramps. Muscle injuries result in pain, functional loss of the involved muscle, and hence an inability to perform the particular exercise/sport. An individual's genetic profile can dictate their propensity for muscle injuries.

RESEARCH RECOMMENDATIONS

- You have a low genetic propensity for Muscle Injury
- Your genetics are such that they neither elevate the risk for muscle injury, nor do they provide a protective effect
- Follow Rest, Ice, Compression, Elevation (RICE), as it is the most effective treatment post injury
- Ensure pain free movement throughout the physical activity
- Undertake resistance training to make the muscles stronger

GENOMAX
GENE BASED WELLNESS PROGRAM

193. Risk for Tennis Elbow

Your Genetic Result

Your Risk / Response

LOW RISK

Gene(s) Analysed

COL5A1

Risk / Response Variant(s) Presence

NO

GIFTED!

Tennis Elbow, also known as lateral elbow tendinopathy, is a condition in which the outer part of the elbow becomes painful and tender. It occurs when tendons in the elbow are overloaded, usually by repetitive motions of the wrist and arms. It is commonly observed in people undertaking racquet sports. However, other activities eliciting such repetitive motions can also cause tennis elbow. A repetitive motion like gripping a racket during a swing can strain the muscles and put too much stress on the tendons. This constant tugging can eventually cause small tears in the tissue, leading to injury.

RESEARCH RECOMMENDATIONS

- As per your genotype, you have low risk for Tennis Elbow
- People with such genetics do not tend to have tendons in the outer part of their elbows that are not predisposed to withstand large physical trauma

GENOMAX GENE BASED WELLNESS PROGRAM

194. Achilles Tendinopathy

Your Genetic Result

Your Risk / Response

NORMAL

Gene(s) Analysed

COL5A1

Risk / Response Variant(s) Presence

NO

NEUTRAL

Achilles tendinopathy is a condition that causes pain, swelling, stiffness and weakness of the Achilles tendon that joins your heel bone to your calf muscles. It is thought to be caused by repeated tiny injuries to the Achilles tendon. These may occur for a number of reasons, including overuse of the tendon - for example, in runners, football players etc.

Associated Symptoms

- Main symptom for Achilles tendinopathy is feeling pain and swelling in the posterior part of the heel during walking or running,Feeling of stiffness and tightening in the calf muscles,Limited range of motion when the foot is flexed

RESEARCH RECOMMENDATIONS

- Follow normal guidelines for preventing injuries such as warming up, stretching of calves and legs before exercising.

GENOMAX GENE BASED WELLNESS PROGRAM

195. Acute Ankle Sprain

Your Genetic Result

Your Risk / Response

INCREASED RISK

Gene(s) Analysed

ACTN3

Risk / Response Variant(s) Presence

YES

Impact of Genotype(s)

Absence of the functional protein ACTN3 in Z line of muscle cells.

PAY ATTENTION!

Ankle sprains are one of the most severe musculoskeletal soft tissue injuries during physical activity. Although many risk factors have been offered, it is unclear why some individuals develop noncontact ankle sprains when participating in comparable levels of physical exertion under identical environmental conditions and others do not. The ACTN3 gene that encodes the ?-actinin-3 protein, which is, only expressed in the Z line of fast glycolytic muscle fibres was found to play an important role in non contact acute ankle sprains. Across 13 scientific studies and examining the results of 1093 participants across 6 different countries the findings supported that people carrying the non functional variant of the ACTN3 predisposes people to a higher probability of non contact ankle injuries.

RESEARCH RECOMMENDATIONS

- As per your genotype, you have a high risk for acute ankle sprains
- Your muscles are not predisposed to withstand great physical trauma.
- Always warm up and cool down before exercising.

GENOMAX
GENE BASED WELLNESS PROGRAM

196. Requirement of Antioxidants to Prevent Injury

Your Genetic Result

Your Risk / Response

LOW RISK

Gene(s) Analysed

MNSOD

Risk / Response Variant(s) Presence

NO

PAY ATTENTION!

Antioxidants are compounds that inhibit the oxidation process in the body. Certain processes can lead to the formation of oxidative species in the body, which can damage the cells and DNA, leading to impaired cellular functions. The ability of antioxidants to destroy oxidative species protects the structural integrity of cells and tissues. Antioxidants also function in strengthening the immune response of the body.The essential vitamins and minerals that have been identified as having anti-oxidant properties include: vitamins A, C and E, Co Q10, zinc, selenium, manganese and copper. In addition, the amino acid l-glutamine supports production of the important glutathione anti-oxidant enzyme and alpha-lipoic acid is a powerful antioxidant involved in energy metabolism.

RESEARCH RECOMMENDATIONS

- As per your genotype, you requirement of anti oxidants is very low as your antioxidant metabolism is good
- People with such a genotype tend to have an efficient antioxidant defense system, which reduces their risk for oxidative stress induced health complications
- Increase consumption of vitamin E and vitamin C food sources
- Along with exercise take anti -oxidant support

GENOMAX
GENE BASED WELLNESS PROGRAM

197. Prevalence of falls in elderly people

Your Genetic Result

Your Risk / Response

HIGH RISK

Gene(s) Analysed

ACTN3

Risk / Response Variant(s) Presence

YES

Impact of Genotype(s)

Absence of the functional protein ACTN3 in Z line of muscle cells.

PAY ATTENTION!

As we age, we tend to lose muscle mass, starting around age 25. This muscle loss due to aging is called sarcopenia. In recent years, studies that address the aging process have been highlighted, especially due to the rapid growth in life expectancy of the world population and the constant concern with providing healthy aging. It is known that old age is not synonymous with disease, but it is associated with potential risks for the onset of disabilities and physical and cognitive dependence. Around 60 years of age, the loss of muscle strength related to the selective atrophy of type II muscle fibers begins to become apparent, bringing serious limitations to the daily lives of the elderly. In addition, there are several factors that can contribute to the magnitude of the decline in physical fitness during the natural aging process, which differ between individuals, which are related to environmental and genetic factors.

RESEARCH RECOMMENDATIONS

- Based on a research study of people during late adulthood (~over 60) , the fall prevalence with people carrying your genotype in one year was 42% versus the 21% in the people carrying the other genotypes.
- Hence be careful and avoid being completely alone.
- Let your family and close friends know about this condition so that they can be more attentive when around you,

GENOMAX GENE BASED WELLNESS PROGRAM

198. Risk of Intervertebral Disc Degeneration

Your Genetic Result

Your Risk / Response

INCREASED (OR: 1.31)

Gene(s) Analysed

IL1A

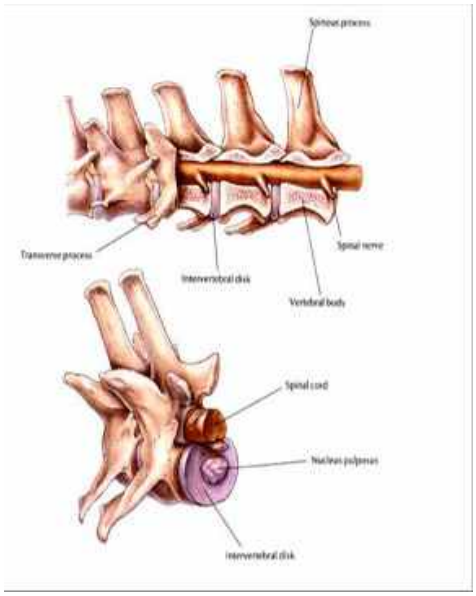
Risk / Response Variant(s) Presence

YES

Impact of Genotype(s)

Increased risk for degenerative disc disease

PAY ATTENTION!



Intervertebral disc disease (IDD), also known as degenerative disc disease(DDD), characterized by intervertebral disc herniation and/or sciatic pain, is a common musculoskeletal disorder. Risk factors include environmental and constitutional factors such as occupational load, occupational driving, mental stress, smoking, height, and weight. Even though the contribution of environmental risk factors to IDD is well established, more recent epidemiologic studies suggest that genetic factors may primarily explain disc degeneration. The pathogenesis of IDD also involves an inflammatory component in addition to structural components of the intervertebral disc, research studies have now shown that inflammatory mediators are partially responsible for lower back pain and sciatica. (Sciatica refers to pain that radiates along the path of the sciatic nerve.

Associated Symptoms

- Increased pain with activities that involve bending or twisting the spine, as well as lifting something heavy, A "giving out" sensation caused by spinal instability, in which the neck or back feels as if it is unable to provide basic support
- Muscle tension or muscle spasms
- no pain but muscle spasms
- Increased pain when holding certain positions, such as sitting or standing for exte

RESEARCH RECOMMENDATIONS

- Stop smoking, or better yet, don't start smoking increases the rate of desiccation. Degenerative disc disease is a chronic condition and often a slow process. You likely will have some time between your first tinge of back pain and very dried out discs. Many things can be done to lower the risk or progression of DDD.
- Limit Alcohol Intake
- Be active - regular exercise to increase the strength and flexibility of muscles that surround and support the spine
- Lift with proper body mechanics to avoid stressing your spine and herniating your discs
- Maintain a healthy body weight - a high BMI places additional stressors on the spine
- Use vitamins and supplements, such as calcium, iron, and zinc to help maintain healthy bone structure (check with your nutrigenomic counsellor or doctor first)

GENOMAX GENE BASED WELLNESS PROGRAM

199. Susceptibility to knee injury

Your Genetic Result

Your Risk / Response

LOWER SUSCEPTIBILITY

Gene(s) Analysed

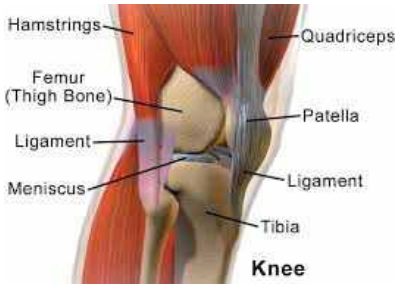
COL12A1

Risk / Response Variant(s) Presence

NO

Impact of Genotype(s)

Significantly underrepresented in participants with ACL Rupture. Likely to have a protective effect to ACL Rupture.



GIFTED!

ACL is an important internal stabilizer of the knee joint, restraining hyperextension. An ACL injury is the over-stretching or tearing of this ligament in the knees. A tear is either partial or complete based on the intensity of the injury. Consequence of the injury depends on intensity of stability affected and the extent to which other structures are involved. Causes of ACL injury vary from being suddenly hit on the side of the knee, overextending the knee joint, landing from jumps, or turning while playing sports like basketball, football, soccer, skiing etc.
Injury to the anterior cruciate ligament (ACL) has been described as one of the most severe injuries sustained in a sporting population. Participants in sports that involve sudden deceleration or change in direction are particularly at risk of rupturing the ACL. Although the incidence of this injury is low in the general population (1 per 10 000 athletehours), regular participation in organised sports may place an individual at up to 10 times greater risk of ACL rupture. COL12A1 has been studied in the indian population to be associated with ACL injury.

Associated Symptoms

- A loud "pop" or a "popping" sensation in the knee
- Severe pain and inability to continue activity
- Rapid swelling
- Loss of range of motion
- A feeling of instability or "giving way" with weight bearing

RESEARCH RECOMMENDATIONS

- Implement Targeted Strength Training.
- Focus on Balance.
- Don't Forget to Warm Up and Stretch.
- Use Proper Footwear, Practice Proper Technique.
- Meet With A Sports Medicine Specialist.
- Likely to have a protective effect to ACL ruptures.

GENOMAX GENE BASED WELLNESS PROGRAM

200. Osteoporosis (Bone Mineral Density)

Your Genetic Result

Your Risk / Response

NEUTRAL RISK

Gene(s) Analysed

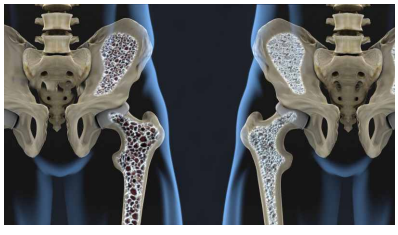
COL1A1

Risk / Response Variant(s) Presence

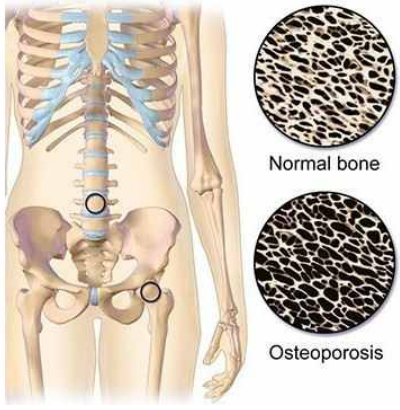
NO

Impact of Genotype(s)

No Increased risk of fractures and normal BMD.



NEUTRAL



Osteoporosis:
Osteoporosis is a bone disease that occurs when the body loses too much bone, makes too little bone, or both. As a result, bones become weak and may break from a fall or, in serious cases, from sneezing or minor bumps. Osteoporosis means "porous bone". Viewed under a microscope, healthy bone looks like a honeycomb.
It is now well established that genetic factors play a major role in regulating bone mineral density (BMD) other determinants of fracture risk and fracture itself. Recently, genome-wide association studies (GWAS) have been successful in identifying several common variants that are significantly associated with BMD and with fracture risk. Candidate gene association studies have also been used to identify genetic variants that are associated with BMD and fractures. Five meta-analyses of the COL1A1 gene have been conducted so far in relation to BMD or fracture.

Associated Symptoms	Associated Diseases
• Brittle bones • Back pain, caused by a fractured or collapsed vertebra • Loss of height over time • A stooped posture • A bone that breaks much more easily than expected	• Diabetes Mellitus • Lupus and Rheumatoid Arthritis • Hyperthyroidism • Celiac Disease • Asthma • Multiple Sclerosis

DISCLAIMER

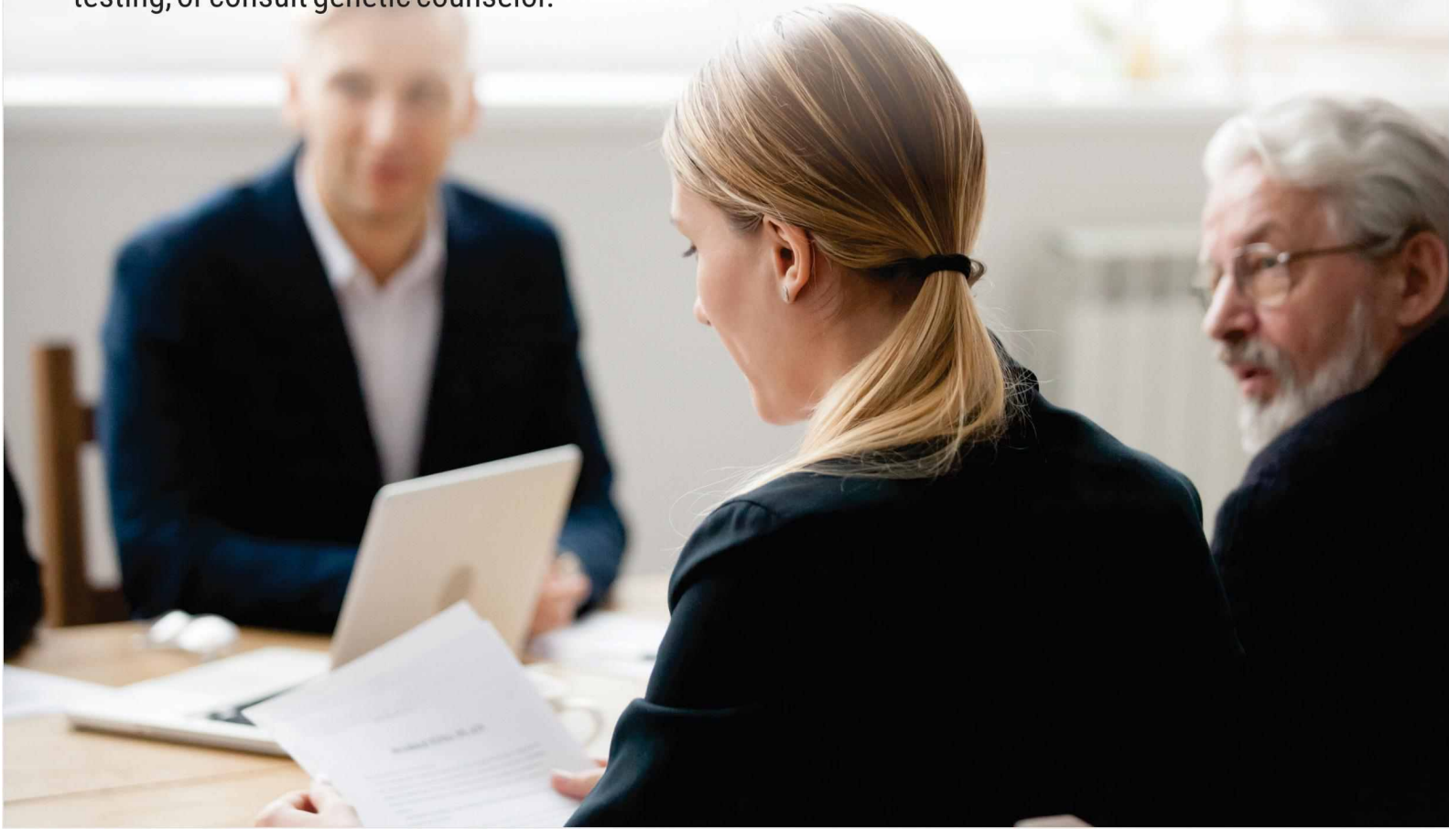
GENOMAX
GENE BASED WELLNESS PROGRAM

The purpose of this DNA test conducted as a part of SHPL Genomax is to provide information about how tested individual's genes affect their lifestyle, metabolism, weight and exercise, energy use, eating behavior, diet and nutritional choices. Tested individuals should not change their diet, physical activity or any medical treatments they are currently undergoing based on genetic testing results without consulting their personal health care provider. The science in this area is still developing and multiple personal health factors affect diet and health. Since subjects in the scientific studies referenced in this report may have had personal health and other factors different from those of tested individuals, hence, results from these studies may not be representative of the results experienced by tested individuals. Further, some recommendations may or may not be attainable, depending on the tested individual's physical ability or other personal health factors.

A limitation of this testing is that most scientific studies have been performed in Caucasian populations only. The interpretations and recommendations are done in the context of Caucasian studies, but the results may or may not be relevant to tested individuals of different or mixed ethnicities.

Many of the conditions and drug responses that are tested are dependent on genetic factors as well as non-genetic factors such as age, personal health and family health history, diet, and ethnicity. As such, an individual may not exhibit the specific drug response, disease, or diet, nutrition and exercise response consistent with the genetic test results.

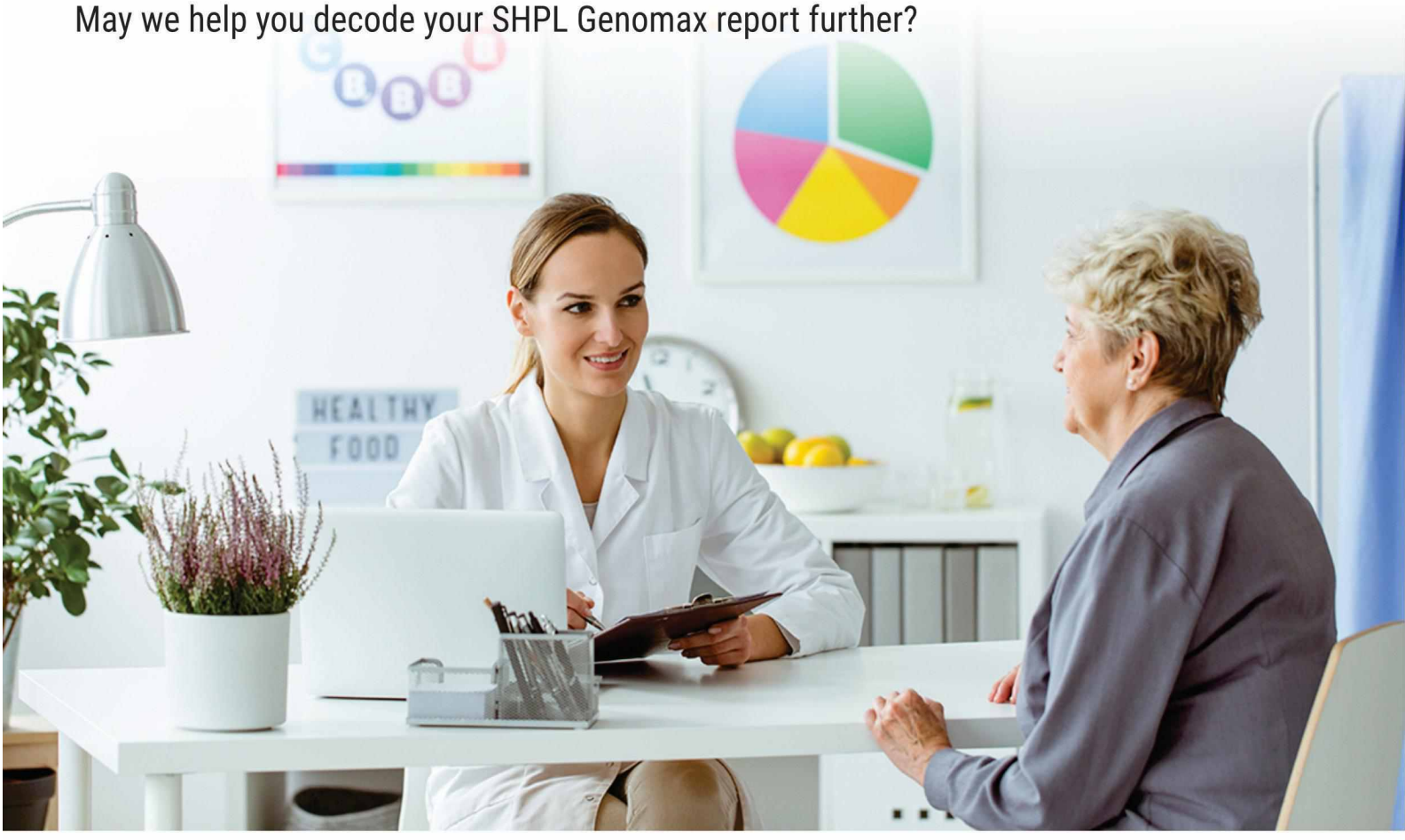
The association between genetic mutations and the information within this report is an active area of scientific research, and future scientific discoveries might alter our understanding of how this information is related to your diet, nutrition and exercise. Based on test results and other medical knowledge of the tested individual, health care providers might consider additional independent testing, or consult genetic counselor.



YOUR GENETIC COUNSELLING

GENOMAX
GENE BASED WELLNESS PROGRAM

May we help you decode your SHPL Genomax report further?



Know Your Genetic Blue Print

What you have in your hands is an extremely valuable document that scientifically outlines your genetic profile. Congratulations on taking the first step towards knowing your genetic blue print. This information will be extremely useful for you to adopt healthier lifestyle and make informed lifestyle choices. However, interpreting it correctly is crucial.

Finding it Difficult to Understand the Jargon?

We believe, you must have already gone through your report and have understood a great deal. However, it is quite possible that you may find it difficult to understand certain technical terms and make the right interpretation. Isn't it wise to let the experts do this job for you and offer you value for your money? Well, your obvious next step is to take your genetic counselling from our well-qualified and experienced Nutrigenomics Counsellors-cum-Nutritionists (NGCs) either on Voice Call or Video Call,as per your choice.

Your Genetic Counselling

Our NGCs will simplify your report and explain the health risk associated with each Phenotypefor about 60 minutes in multiple Indian languages. However, understanding your diet and lifestyle is equally important. Hence, our NGCs will recall your current eating patterns and lifestyle, which they will use while offering personalized recommendations for preventing the risks that you could be exposed to. We, at Saarvasri Herbs Pvt Ltd, firmly believe that it is not only the diet that can help prevent diseases but also smart lifestyle changes that prove to be rewarding enough and creating sustainable results!

YOUR GENETIC COUNSELLING

GENOMAX
GENE BASED WELLNESS PROGRAM

Your Personalized Action Plan

After your genetic counselling, Our NGCs will create your gene-based Action Plan PDF within 7 working days, which will be sent to you via email or WhatsApp. What's more, you may access our Wellness Help Desk, for the next 12 months, a fantastic facility given to you for getting your queries addressed with your NGC.

SCHEDULE YOUR GENETIC COUNSELING RIGHT NOW

8104 773613
8291 286618

MONDAY TO FRIDAY: FROM 10:00 AM TO 7:00 PM
SATURDAY: 10:00 AM TO 4:00 PM

SLOT 1	10:30 AM	SLOT 2	12:30 AM	SLOT 3	2:30 PM	SLOT 4	5:30 PM

CREATING MASSIVE GENETIC REVOLUTION FOR HEALTHY INDIA

GENOMAX
GENE BASED WELLNESS PROGRAM

Revolutionising Gene-Based Personalized Nutrition in India

SHPL

CORPORATE OFFICE DELHI

Saarvasri Herbs Pvt Ltd
Plot No.- A 236, Pocket-2,
Sector-17 Dwarka,
New Delhi 110078, India

CORPORATE OFFICE - KOLKATA
Saarvasri Herbs Pvt Ltd
8/286, Ground Floor, Block K10,
VIP Road, Kaikhali
Kolkata 700052, West Bengal

CORPORATE OFFICE - MUMBAI
Saarvasri Herbs Pvt Ltd
608, Corporate Annex, Behind Udyog Bhavan,
Sonawala Cross Road, Goregaon East,
Mumbai 400063, Maharashtra

CORPORATE OFFICE - GUWAHATI
Saarvasri Herbs Pvt Ltd
Laxmi Bhawan (East), House No 23
P.B. Road, Rehabari,
Guwahati 781008, Assam

CORPORATE OFFICE - BENGALURU
Saarvasri Herbs Pvt Ltd
CS Tower 46/47, Thimmaiah Road st Stage
5th Phase, Woc Road, Shivanagar, Rajajinagar
Bangalore 560010, Karnataka

www.myshpl.com