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#	Trait name	Your result
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Tendency To Overeat

Average: Moderately likely to overeat

People with certain genetic types have an increased tendency to over-consume foods. We analyze genes known to influence various hunger and satiety hormones such as Leptin, Ghrelin, and Neuropeptides. These hormones influence the neurological aspects of feeding, producing effects such as persistent hunger, excessive snacking, preference for high calorific food, and emotional eating.

[Learn more about Tendency To Overeat](#)

Genes Analyzed:

BDNF

CLOCK

DRD2

FTO

LMX1B

MC4R

Recommendations

- You may have a moderate genetic tendency to overeat.
- Practice mindful eating and eat high fiber or high protein snacks to increase the feeling of fullness.

Eating Between Meals Or Snacking

Higher: Likely to have increased snacking behavior

Snacking helps bridge the hunger gap between two meals. It helps curb your appetite and control your meal portion sizes. However, the wrong snack choices or snacking too frequently can lead to

overconsumption of calories during the day. This could lead to weight gain. Fiber-rich snacks twice or thrice a day are ideal. Foods rich in fat, sugar, and salt can lead to health problems like obesity if consumed regularly. MC4R is a gene that has been studied to modulate eating behavior. Certain variants of this gene can increase your risk of weight gain via frequent snacking. [Learn more about Eating Between Meals Or Snacking](#)

Genes Analyzed:

MC4R

Recommendations

- You may have a genetic tendency for increased snacking behavior (eating between meals). This means that you may tend to snack more and have higher chances of gaining weight.
- Try to implement mindful eating and recognize the difference between hunger and appetite.
- Try to manage the psychological triggers for snacking like emotional eating or eating under stress or eating for recreation.
- Divide your daily caloric and macronutrient needs into mini-meals and eat every 2-3 hours.
- Focus on healthy snacks such as a roasted mixture of seeds (like pumpkin seeds, sunflower seeds, flax seeds), makhana, and almonds or walnuts that not only taste good but also give great health benefits.

Emotional Eating

Higher: Likely to exhibit high emotional eating behavior

People don't always eat in response to hunger. Eating for comfort, pleasure, stress relief, etc., is known as emotional eating. People who eat emotionally usually go for high-sugar, high-fat, unhealthy junk foods. These are called trigger foods that can generate a temporary good feeling which makes you want to reach out for them again and again. Emotional eating has been associated with several weight-related health problems like diabetes, obesity, and hypertension. Some genes that are associated with the expression of neurotransmitter receptors in the brain influence emotional eating behavior. Certain variants of these genes can increase your risk for emotional eating. [Learn more about Emotional Eating](#)

Genes Analyzed:

ADIPOQ

DRD2

MC4R

Recommendations

- You may have a genetic tendency for increased emotional eating behavior. This means that you may tend to eat more and have higher chances of gaining weight.
- Try to manage the psychological triggers for emotional eating like stress eating, stocking calorie-laden foods in pantry, etc.
- Try to implement mindful eating and recognize the difference between emotional hunger and physical hunger.
- Keeping portion sizes under control is important, especially if you are also genetically predisposed to low satiety.
- Research shows that focusing on future goals rather than staying focused on an immediate urge can help combat emotional eating.

Carbohydrate Intake And Weight Gain Tendency

Lower: Less likely to gain weight on high carb intake

Carbohydrates are the main sources of energy, and they provide the kilocalories for weight maintenance. The Dietary Reference Intake suggests that carbohydrates make up 45 to 65 percent of your total daily calories. Corn, rice, potatoes, pasta, and bread are sources of starch. Fruits and fruit juices have natural sugars, while desserts, candies, and soft drinks have added sugar. Carbs are considered weight-increasing foods, but that may not be true for everyone. People with certain genetic types tend to gain more weight upon consuming carbohydrate-rich foods than others. These individuals can better maintain weight by reducing the amount of carbs in their diet. [Learn more about Carbohydrate Intake And Weight Gain Tendency](#)

Genes Analyzed:

AMY1

FTO

IRS1

TCF7L2

Recommendations

- You may have a low genetic risk for weight gain on a carbohydrate-rich diet.
- Eat a balanced diet.
- Choose complex carbohydrates such as fruits, vegetables, legumes, and whole grains.

Tendency To Regain Weight

Average: Moderately likely to regain weight after weight loss

People with certain genetic types tend to quickly regain weight after having been on a weight loss program. These individuals need to continue adherence to exercise and diet programs to maintain optimal weight. [Learn more about Tendency To Regain Weight](#)

Genes Analyzed:

ADIPOQ

BDNF

NEGR1

PPARG

Recommendations

- You may have a moderately increased genetic tendency for regaining weight after an interventional strategy.
- Follow a healthy lifestyle and eating pattern to ensure better weight maintenance.
- Do not skip breakfast as a good breakfast curbs hunger. Avoid processed food and sugar-sweetened beverages.
- Engage in 30-60 minutes of physical activity.
- Maintain a balanced diet and include more whole grains, nuts, fruits, and vegetables in your diet.
- Have a food journal and record your daily food habits, which will help you to monitor your food consumption.

Body Mass Index

Average: Likely to have moderately higher BMI

Body mass index (BMI) is an estimate of body fat based on height and weight. The BMI is a method used to broadly categorize a person as underweight, normal weight, overweight, or obese based on tissue mass and height. Several factors, such as age, sex, disease, genetics, and lifestyle, affect BMI measurements, and normative standards must be applied for specific groups and individuals. BDNF is one among several genes that are studied for obesity. It produces a growth factor in the brain. Certain variations of this gene promote excessive weight gain. In fact, some of these variants are used as markers for obesity [Learn more about Body Mass Index](#)

Genes Analyzed:

BDNF

CB1

CNR1

FTO

IL-6

MC4R

NPPA

OLR1

TCF7L2

Recommendations

- You may have a genetic tendency for an increased body mass index. This means that you may have to take more efforts to maintain an ideal weight.
- Maintain a healthy and balanced lifestyle with a proper diet and regular exercise program.
- Moderate your intake of foods rich in simple carbohydrates, saturated or trans-fats, diets rich in salts and sugars. Avoid consumption of cold drinks or sugar-sweetened juices, or other beverages.
- Try to get maximum required calories from plant-based sources like fruits and vegetables. Focus on lean sources of protein like beans and lentils, meat without fats, fish, eggs, and low-fat dairy products.
- Do not skip meals. Take smaller and frequent meals.

- Exercise regularly, as it helps in weight management. It is recommended to do at least 150 minutes of moderate to high-intensity exercises per week for a healthy weight.
- Follow a realistic and sustainable diet and exercise plan.

Adiponectin Levels

Higher: Likely to have high adiponectin levels

Adiponectin is a protein hormone secreted primarily by adipocytes or fat cells found in the adipose tissue. In rare cases, it is secreted by muscle and brain cells as well. During pregnancy, the placental cells also secrete adiponectin. This hormone plays a role in the metabolism of lipids and glucose. Reduced levels of adiponectin (hypoadiponectinemia) are associated with health conditions like hypertension, insulin resistance, elevated triglyceride levels, type 2 diabetes, stroke, and coronary artery disease. The ADIPOQ gene contains instructions for producing this hormone. Certain variants in CMIP, ADIPOQ genes can influence adiponectin levels. [Learn more about Adiponectin Levels](#)

Genes Analyzed:

ADIPOQ

CMIP

ARL15

CDH13

CLIP1

DALRD3

DNAH10

EIF4A

FAM13A

GIMAP7

GNL3

GPR109A

HIVEP2

IRS1

KIF9

LYPLAL1

OPLAH

OR8S1

LALBA

PDE3A

PEPD

PPARG

RIC8B

SLC38A8

SLC39A8

SNX13

STAB1

TRIB1

TSC22D2

VEGFA

WDR11

FGFR2

ZNF664

Recommendations

- You may have a genetic tendency for increased adiponectin levels.
- Try to maintain a healthy and balanced diet and exercise regularly to maintain a healthy weight and overall health.
- Maintain normal levels of adiponectin through a diet rich in fiber, zinc, and MUFA. Along with exercising, this diet boosts anti-inflammatory effects and also influences the body's response to insulin, thus regulating blood sugar levels.
- Try to use turmeric in your diet as it increases adiponectin production and improves

insulin sensitivity.

Fiber Intake And Weight Loss Tendency

Average: Likely to lose moderate weight on high fiber intake

Dietary fiber is found in whole grains, vegetables, fruits, and legumes. It helps relieve constipation or prevent it, while also helping in weight maintenance, reducing heart disease and diabetes risk. Unlike other food components, such as fats, proteins, or carbohydrates, fiber isn't digested by your body. Instead, it passes almost unchanged through your gastrointestinal tract and out of your body. People with certain genetic types tend to benefit more in terms of weight loss with high fiber intake than others. [Learn more about Fiber Intake And Weight Loss Tendency](#)

Genes Analyzed:

FTO

Recommendations

- You may have a genetic tendency to lose moderate weight on a high-fiber diet.
- Fiber-rich foods can result in weight loss by increasing the feeling of fullness, thus leading to reduced calorie intake.
- Pear, apple, banana, carrot, beetroot, broccoli, lentils, chickpeas, oats, and almonds are examples of fiber-rich foods.

Protein Intake And Weight Loss Tendency

Higher: Likely to lose more weight on high protein intake

Protein is an important building block for bones, cartilage, muscles, skin, and blood. It is known for supporting the building and repairing of muscle tissue and maintaining strength. Research has shown that a protein-rich diet may be effective for weight loss. Protein also plays an important role in increasing the impact of your training. High protein intake boosts metabolism, reduces food cravings, appetite, improves satiety, and control several weight-regulating hormones. Individuals with variations in certain genes like FTO tend to benefit more in terms of weight maintenance with high protein intake. [Learn more about Protein Intake And Weight Loss Tendency](#)

Genes Analyzed:

FTO

MTNR1B

TFAP2B

Recommendations

- You may have a higher genetic tendency to lose weight on a protein-rich diet .
- Consume a diet rich in proteins (such as eggs, chicken breast, tuna, cottage cheese, greek yogurt, almonds, oats, broccoli, quinoa) as they are highly satiating, and lead to reduced hunger and appetite.

Saturated Fats Intake And Weight Gain Tendency

Average: Moderately likely to gain weight on high SFA

Saturated fat is a type of fat that is largely solid at room temperature as it is saturated with hydrogen molecules. Meat and dairy products are rich sources of saturated fats. A high intake of saturated fats is associated with an increase in LDL cholesterol (the bad cholesterol) levels in the body. The American Heart Association recommends limiting saturated fats intake to 5-6% of your total daily calories. People with certain genetic types tend to gain more weight upon consuming saturated fat-rich foods than others. These individuals can maintain weight better by reducing the amount of saturated fats in their diets. [Learn more about Saturated Fats Intake And Weight Gain Tendency](#)

Genes Analyzed:

APOA2

FTO

STAT3

Recommendations

- You may have a genetic tendency to have a moderately higher BMI on a saturated fat-rich diet.
- Lowering fat in your diet can help with your weight loss goals.
- Try to lower your consumption of high-calorie, processed foods like pizzas, burgers, french fries, soda, pastries, cookies, candies, cream, and cheese sauces.
- Substitute recipes with low-fat milk and cheese.
- Eat seafood instead of meat.

- Choose healthy cooking options like cooking with herbs, spices, lemon juice instead of butter, margarine, or ghee

Response To Mufa Intake

Lower: Less likely to reduce BMI on high MUFA intake

Monounsaturated fatty acids (MUFAs) include omega-7 and omega-9 fatty acids. They are associated with anti-inflammatory properties, lowering blood pressure, and maintaining triglyceride levels. MUFAs are also found to benefit skin health as they balance water levels and provide ceramides for skin renewal. People with certain genetic types tend to lose weight upon consuming MUFA-rich foods than others. [Learn more about Response To Mufa Intake](#)

Genes Analyzed:

ADIPOQ

NR1D1

PPARG

Recommendations

- You may have a lower genetic tendency to lose weight on a MUFA-rich diet.
- Despite a lower tendency to lose weight on MUFA intake, it is recommended to include MUFA-rich foods in the diet to improve heart health.
- Olive oil, avocado, olives, almonds, peanuts are rich in MUFA.
- Increasing physical activity can also help prevent weight gain.

Response To Pufa Intake

Average: Moderately likely to reduce BMI on high PUFA intake

Polyunsaturated fatty acids (PUFAs) include omega-3 and omega-6 fatty acids, which are important for brain and heart health as they reduce blood pressure and triglyceride levels. They are also important for skin and vision health. Omega 6s help boost bone health and stimulate hair growth. People with certain genetic types tend to lose weight upon consuming PUFA-rich foods than others. [Learn more about Response To Pufa Intake](#)

Genes Analyzed:

PPARG

FABP2

LPL

Recommendations

- You may have a moderate genetic tendency to lose weight on a PUFA-rich diet.
- Include PUFA-rich food sources such as grapeseed oil, canola oil, soybean oil, chia seeds, tuna, and mackerel in your diet.

Mediterranean Diet Response

Higher: Highly likely to lose weight on Mediterranean diet

The Mediterranean diet typically involves daily intake of fruits, vegetables, healthy fats, occasional consumption of fish and poultry, and limited dairy and red meat intake. It is recognized by the WHO as a healthy and sustainable dietary pattern. Numerous studies have shown that the Mediterranean diet can help with weight loss and preventing heart attacks, stroke, type 2 diabetes, and premature death. FTO is one of the genes that has been extensively studied for its effects on obesity and weight gain/loss. People with certain variants of this gene may experience more weight loss on the Mediterranean diet than the others. [Learn more about Mediterranean Diet Response](#)

Genes Analyzed:

FTO

Recommendations

- You may have a genetic tendency to lose more weight on a Mediterranean diet. This means that the Mediterranean diet can help you achieve optimal body weight.
- The main features of the Mediterranean diet include: Daily consumption of vegetables, fruits, whole grains, and healthy fats; weekly intake of fish, poultry, beans, and eggs; moderate portions of dairy products (low-fat cheese, fat cheese, and yogurt); limited intake of red meat.
- Complementing the Mediterranean diet with regular exercise will give you the best results for desired weight loss.

Tendency To Prefer Bitter Foods

Lower: Less likely to prefer bitter vegetables

Bitter taste perception is due to genetic variations in taste receptors. Upon chewing food, molecules such as phenylthiocarbamide bind to the taste receptors present in the tongue, which gives rise to the bitter taste. People with certain genetic types tend to avoid bitter vegetables due to their higher sensitivity to bitter taste. Vegetables are low-calorie and high-fiber foods, which help in weight management and have several other health benefits. [Learn more about Tendency To Prefer Bitter Foods](#)

Genes Analyzed:

TAS2R38

Recommendations

- You may have a genetic tendency to dislike bitter vegetables, which could be due to increased sensitivity to bitter taste.
- Add natural sweeteners, lemon juice, or spices to flavor bitter-tasting green leafy vegetables.
- Be creative with vegetable preparations.
- Bitter foods help absorb nutrients, reduce sugar cravings, and balance appetite.
- Eat vegetables and fruits of different colors.

Cilantro Taste Aversion

Lower: Less likely to prefer cilantro

Cilantro or coriander is a herb commonly used in cooking. Most people like the taste of this herb, but it has been reported that for a certain group of people, it tastes like soap and dirt. This is due to the presence of several aldehydes in them. Cilantro preference seems to have a genetic component to it. Olfactory-receptor genes influence our sense of smell, which directly alters our taste perception. OR6A2 is one such gene that, in particular, seems to have a high binding affinity to the soapy-flavored aldehydes. People with certain variants of this gene may have an aversion to cilantro. [Learn more about Cilantro Taste Aversion](#)

Genes Analyzed:

OR6A2

Recommendations

- You may have a genetic tendency to dislike cilantro, which could be due to increased sensitivity to its soapy taste.

Tendency To Prefer Fatty Foods

Lower: Less likely to overconsume high-fat foods

People with certain genetic types tend to over-consume fatty foods due to a lower ability to perceive fats. In studies, people with lower fat perception ability were found to rate the fat content of food consistently lower than the actual fat content, thereby tending to over-consume fatty foods. Eating high quantities of fatty foods can lead to weight gain and other health conditions. [Learn more about Tendency To Prefer Fatty Foods](#)

Genes Analyzed:

CD36

Recommendations

- You may have an increased genetic ability to taste fats and are less likely to over-consume high-fat foods.
- You may have a natural genetic preference for low-fat foods, and increased intake could be due to other factors like access to high-fat food.
- Consciously reduce intake of fried and oily foods.
- Look for 0 g trans fat on the Nutrition Facts label and no hydrogenated oils in the ingredients list.

Tendency To Prefer Sweet Foods

Average: Moderately likely to overconsume sweet foods

People with certain genetic types tend to over-consume sweet foods due to low sensitivity to sweet taste, either due to a lesser number or reduced sensitivity of sweet taste receptors on their tongue. Sugary foods are rich in calories and can cause insulin resistance, leading to weight gain and other health conditions. [Learn more about Tendency To Prefer Sweet Foods](#)

Genes Analyzed:

FGF21

FTO

GLUT2

TAS1R2

TAS1R3

Recommendations

- You may have a genetic tendency for slightly decreased sweet taste sensitivity and are moderately likely to consume more sweet foods.
- Consciously reduce intake of sweets.
- High sugar intake increases the risk for obesity and diabetes.
- Snack on dry fruits, fruits, and green leafy vegetables to reduce sugar cravings.
- Drink plenty of water.

Vitamin A Levels

Normal: Maintain normal vitamin A intake

Vitamin A is required for clear vision, healthy skin, and enhanced immunity. Animal sources provide vitamin A in the form of retinol, while plant sources provide the precursor of vitamin A in the form of carotenes, which need to be converted into retinol. Research shows that vitamin A assists in the growth and repair of body tissues and muscles and is also needed for energy production. Variants in genes like BCMO1 play a role in the conversion of carotenes. People with certain genetic types need more vitamin A in their diet due to the less efficient conversion of carotenoids to retinol. [Learn more about Vitamin A Levels](#)

Genes Analyzed:

BCO1 (BCMO1)

CYP26B1

PKD1L2

PNPLA3

RBP4

TTR

Recommendations

- You may have a genetic tendency for normal vitamin A levels.
- Meet your daily requirements for vitamin A.
- Measure your serum vitamin A levels; if below normal even after meeting RDA requirements, consult a physician.
- Include carrots, sweet potato, pumpkin, green leafy vegetables, parsley, basil, coriander, milk, fish, and bell peppers in your daily diet.

Vitamin B12 Levels

Need more: Moderately increase vitamin B12 intake

Vitamin B12 is actively involved in red blood cell maturity, and its deficiency can lead to pernicious anemia and general fatigue. It also helps in the removal of homocysteine from the cells. Vitamin B12 is essential for energy production, muscle growth, and coordination. It helps the body meet the oxygen demands of muscles during training. Genes like CUBN can influence the amount of vitamin B12 absorbed by the body. People with certain genetic types need more vitamin B12 in their diet due to lesser absorption in the body. [Learn more about Vitamin B12 Levels](#)

Genes Analyzed:

CUBN

CLYBL

FUT2

FUT6

MS4A3

PRELID2

TCN1

TCN2

Recommendations

- You may have a genetic tendency for moderately lower vitamin B12 levels.
- Measure your serum vitamin B12 levels; if below normal even after meeting RDA requirements, consult a physician.
- Vitamin B12-rich foods include fish and seafood.
- Other sources of vitamin B12 include seaweed, eggs, poultry, meat, and dairy products.

Vitamin B6 Levels

Normal: Maintain normal vitamin B6 intake

Vitamin B6 is required for the proper utilization of sugars, fats, and proteins in the body. It also protects the cells against glycation-induced damage. People with certain genetic types need more vitamin B6 in their diet as they lack the ability to fully metabolize this vitamin, leading to its low levels in the body. [Learn more about Vitamin B6 Levels](#)

Genes Analyzed:

ADCYAP1R1

ALPL

NBPF3

Recommendations

- You may have a genetic tendency for normal vitamin B6 levels.
- Meet your daily requirements for vitamin B6.
- Measure your serum vitamin B6 levels; if below normal even after meeting RDA requirements, consult a physician.
- Vitamin B6-rich foods include whole grain products, nuts, seeds, fish, pork, and meat.

Vitamin B9 Levels

Need more: Moderately increase vitamin B9 intake

Vitamin B9 or folate plays a major role in DNA synthesis and repair. It is also essential for the

conversion of homocysteine to methionine. Excess accumulation of homocysteine can be harmful. People with certain genetic types need more vitamin B9 in their diet due to lower folate levels and inefficient enzymatic conversion of homocysteine to methionine. [Learn more about Vitamin B9 Levels](#)

Genes Analyzed:

MTHFR

MYT1L

Recommendations

- You may have a genetic tendency for moderately lower vitamin B9 levels.
- Meet your daily requirements for vitamin B9.
- Measure your serum vitamin B9 levels; if below normal even after meeting RDA requirements, consult a physician.
- Vitamin B9-rich foods include green leafy vegetables, oranges, peaches, broccoli, papaya, grapefruit, strawberries, beans, peas, lentils, avocados, okra, sunflower seeds, peanuts, flaxseeds, almonds, cauliflower, corn, celery, carrots, and fortified grains.

Vitamin C Levels

Need more: Moderately increase vitamin C intake

Vitamin C is a potent antioxidant and is essential for enhanced immunity. Vitamin C helps in reducing pain and speeding up muscle strength recovery after high-intensity exercises. It also plays a role in building bones and maintaining strong muscles. Research shows that it is involved in a number of biochemical pathways needed for exercise metabolism. Genes like SLC23A1 can influence the amount of vitamin C absorbed by the body. People with certain genetic types need more vitamin C in their diet due to inefficient absorption in the body. [Learn more about Vitamin C Levels](#)

Genes Analyzed:

SLC23A1

SLC23A2

Recommendations

- You may have a genetic tendency for moderately lower vitamin C levels.
- Meet your daily requirements for vitamin C.

- Measure your serum vitamin C levels; if below normal even after meeting RDA requirements, consult a physician.
- Vitamin C-rich foods include agathi, cabbage, coriander leaves, drumstick leaves, capsicum, guava, green chilies, orange, and broccoli.

Vitamin D Levels

Need more: [Moderately increase vitamin D intake](#)

Vitamin D, also called calciferol, is essential for the absorption of calcium from the intestine and enhanced immunity. Our body can synthesize sufficient vitamin D from cholesterol when the skin is exposed to adequate amounts of sunlight. Optimal levels of vitamin D can increase muscle protein, strength, and performance. Genes like VDR (vitamin D receptor) can influence the amount of vitamin D absorbed by the body. People with certain genetic types need more vitamin D in their diet due to inefficient absorption in the body. [Learn more about Vitamin D Levels](#)

Genes Analyzed:

VDR

ABO

AC007950.2

ADH1A

APOC1

ARNT

BCAR4

CADM2

CELSR2

CETP

COG5

CPS1

CYP27B1

CYP2R1

DNAH11

DOCK7

DOK7

DSG1

EBF2

FAM166AP9

FBXL19

FDPS

FLG

FLJ42102

FOXO6

GATA4

GC

GCKR

HAL

HSD17B11

HTR5BP

KLK10

LDLR

LINC00536

LINC01004

LIPC

MARC_1

MAT1A

MED23

MRPL3

NADSYN1

NPAS2

NPHS1

NRIP1

PADI1

PDILT

PEAK1

PLA2G3

PLEKHA7

RER1

RHOA

RP11-120M18.2

RP11-21L23.4

RP13-379L11.3

RP4-657M3.2

SCUBE1

SEC23A

SERPINB11

SLCO1B1

STAP2

SULT2A1

TDRD15

TFDP2

TM6SF2

TMEM151A

TNFAIP8

UGT1A4

UGT2B7

ZNF808

ZPR1

Recommendations

- You may have a genetic tendency for moderately lower vitamin D levels.
- Meet your daily requirements for vitamin D.
- Measure your serum vitamin D levels; if below normal even after meeting RDA requirements, consult a physician.
- Get adequate sunlight exposure as it helps in the synthesis of vitamin D inside the body.
- Include vitamin D-rich foods like cod liver oil, fish, eggs, mushrooms, and fortified dairy products in your diet.

Vitamin E Levels

Need more: Significantly increase vitamin E intake

Vitamin E, an antioxidant, defends the body against free radical damage and protects polyunsaturated fatty acids (PUFA) from oxidation. It has anti-inflammatory effects. Optimal levels of vitamin E are needed to prevent oxidative damage from aerobic exercises. It also helps build strong muscles. Variants of genes such as CD36 can influence the amount of vitamin E absorbed and utilized by the body. People with certain genetic types need more vitamin E in their diet due to inefficient transport and lower plasma levels of vitamin E. [Learn more about Vitamin E Levels](#)

Genes Analyzed:

CD36

CYP4F2

SCARB1

TTPA

Recommendations

- You may have a genetic tendency for low vitamin E levels.
- Meet your daily requirements for vitamin E.
- Measure your serum vitamin E levels; if below normal even after meeting RDA requirements, consult a physician.
- Sunflower seeds, olive oil, wheat germ oil, spinach, avocados, almonds, broccoli, and shrimps are rich in vitamin E.

Vitamin K Levels

Need more: Significantly increase vitamin K intake

Vitamin K plays an important role in helping the blood clotting process and in preventing excessive bleeding. People with certain genetic types may need enhanced vitamin K supplementation to maintain adequate levels in the blood. [Learn more about Vitamin K Levels](#)

Genes Analyzed:

GGCX

VKORC1

CYP4F2

Recommendations

- You may have a genetic tendency for low vitamin K levels.
- Meet your daily requirements for vitamin K.
- Measure your serum vitamin K levels; if below normal even after meeting RDA requirements, consult a physician.
- Vitamin K-rich foods include Brussel sprouts, cabbage, prunes, spring onions, and green leafy vegetables.

Calcium Levels

Need more: [Moderately increase calcium intake](#)

Calcium is the most abundant mineral in the body, essential for maintaining the strength and structure of bones and teeth and certain metabolic functions. It limits your risk of fracture. Both higher and lower calcium levels can have important consequences for health. Calcium plays an important role in muscle contraction, nervous system function, stabilization of blood pressure, and hormone secretion. The CASR gene variants can influence calcium levels in the body. People with certain genetic types tend to have higher serum calcium levels and may need to restrict their calcium intake. [Learn more about Calcium Levels](#)

Genes Analyzed:

CASR
CARS1
DGKD
DGKH
GATA3
GCKR

Recommendations

- You may have a genetic tendency for moderately lower calcium levels.
- Meet your daily requirements for calcium (1000mg per day for adults between 19-50 years of age). Measure your serum calcium levels; if below normal even after meeting RDA requirements, consult a physician.
- For adults between 19 and 50 years of age, calcium intake should not exceed 2500mg per day.
- For adults older than 50 years, calcium intake should not exceed 2000 mg per day.
- Include calcium-rich foods such as amaranth leaves, almonds, mustard seeds, sunflower seeds, finger millets, sesame seeds, broccoli, and dairy products (subject to lactose tolerance recommendation).

Choline Levels

Need more: [Moderately increase choline intake](#)

Choline is a micronutrient that plays an important role in liver function, nerve function, normal brain development, muscle movement, and regulating heartbeat. Choline regulates fat metabolism as well. Research shows that optimal levels of choline improve stamina and muscle performance during exercise and maintains muscle health. Even though the body makes choline, it needs to be supplemented through diet. People with variants in certain genes like the PEMT are likely to experience adverse health consequences when fed a low choline diet. Hence supplementation is recommended for such individuals. [Learn more about Choline Levels](#)

Genes Analyzed:

PEMT

CHDH

MTHFD1

Recommendations

- You may have a genetic tendency for moderately lower choline levels.
- Meet your daily requirements for choline.
- Measure your serum choline levels; if below normal even after meeting RDA requirements, consult a physician.
- Choline-rich foods include eggs, liver, meat, pasta, and shellfish.

Copper Levels

Need more: Moderately increase copper intake

Copper is an essential trace mineral. It is necessary for the absorption of iron, the synthesis of hemoglobin, and the maintenance of connective tissues, the brain, heart, and other organs. Maintaining optimal copper levels in your body can also help prevent cardiovascular diseases and osteoporosis. Copper also helps in collagen formation. People with certain genetic types need more copper due to certain genetic changes that affect copper metabolism. [Learn more about Copper Levels](#)

Genes Analyzed:

SELENBP1

SMIM1

Recommendations

- You may have a genetic tendency for moderately lower copper levels.
- Meet your daily requirements for copper.
- Measure your serum copper levels; if below normal even after meeting RDA requirements, consult a physician.
- Copper-rich foods include sunflower seeds, almonds, dried apricots, dark chocolates, and lentils.

Iron Levels

Need more: Moderately increase iron intake

Iron is an important component of hemoglobin, which is essential for oxygen transport through the blood. The deficiency of iron can lead to anemia. It is also needed for the synthesis of certain hormones. It is involved in immune functioning and gastrointestinal processes. Optimal levels of iron can increase energy production and lead to better athletic performance. Iron deficiency in athletes can lead to decreased performance and weakened immunity. Variations in genes such as TF, TMPRSS6, and HFE play a role in the utilization and absorption of iron from the diet. People with certain genetic types need more iron in their diet as they have a reduced ability to absorb iron from food. [Learn more about Iron Levels](#)

Genes Analyzed:

TF

TMPRSS6

HFE

CACNA2D3

HIST1H2B

LOC105378010

Recommendations

- You may have a genetic tendency for moderately lower iron levels.
- Meet your daily requirements for iron.
- Men should consume 8 mg per day, women between 19 and 50 years should consume 18 mg per day, and women over 50 years should consume 8 mg per day.

- Measure your serum iron levels; if below normal even after meeting RDA requirements, consult a physician.
- Iron-rich foods include amaranth leaves, spinach, beans, lentils, chickpeas, peas, soybeans, liver, turkey, pumpkin seeds, broccoli, tofu, and dark chocolate.

Magnesium Levels

Need more: Moderately increase magnesium intake

Magnesium is an abundant mineral in the body and is naturally present in many foods. Magnesium is a cofactor in more than 300 enzymatic reactions crucial for many functions in the body. It helps in maintaining normal nerve and muscle function and strong bones. It is also important for regulating blood glucose levels and in the production of energy and amino acids. Magnesium plays an important role in the transport of other nutrients like calcium and potassium. People with certain genetic types need more magnesium in their due to due to certain genetic changes that affect magnesium metabolism. [Learn more about Magnesium Levels](#)

Genes Analyzed:

ATP2B1

CASR

DCDC5

MDS1

MUC1

SHROOM3

TRPM6

Recommendations

- You may have a genetic tendency for moderately lower magnesium levels.
- Meet your daily requirements for magnesium.
- Measure your serum magnesium levels; if below normal even after meeting RDA requirements, consult a physician.
- Magnesium-rich foods include dark leafy greens, nuts, fish, whole grains, avocados, and yogurt.

Phosphate Levels

Need more: [Moderately increase phosphate intake](#)

Phosphate is necessary for the formation of bones and teeth and is also used as a building block for several important molecules, including DNA. 85% of the phosphorous in our body is present in bones and teeth. Along with calcium, phosphorous makes up hydroxyapatite, the main structural component in bones and tooth enamel. People with certain genetic types need more phosphate in their diet as they have decreased phosphate levels in the blood. [Learn more about Phosphate Levels](#)

Genes Analyzed:

CASR

Recommendations

- You may have a genetic tendency for moderately lower phosphate levels.
- Meet your daily requirements for phosphate.
- Measure serum phosphate levels; if below normal even after meeting RDA requirements; consult a physician.
- Phosphate-rich foods include pumpkin seeds, brazil nuts, salmons, and shellfish.

Lycopene Levels

Need more: [Significantly increase lycopene intake](#)

Lycopene is an antioxidant that belongs to the carotenoid family. It gives fruits and vegetables their red color. Interestingly, lycopene has sun protection effects! More importantly, it has also been studied to reduce certain cancer risks. Tomatoes are rich in lycopene. Observational studies have shown that a high intake of lycopene may lower the risk of certain types of cancer. People with certain genetic types need more lycopene in their diet as they have a reduced ability to absorb lycopene from the diet. [Learn more about Lycopene Levels](#)

Genes Analyzed:

BC039545

G6PC2

SCARB1

SETD7

Recommendations

- You may have a genetic tendency for low lycopene levels.
- Meet your daily requirements for lycopene.
- Measure your serum lycopene levels; if below normal even after meeting RDA requirements, consult a physician.
- Fruits and vegetables that are rich red or pink in color contain lycopene.
- Tomatoes are the best source of lycopene. Other foods rich in lycopene include guava, watermelon, papaya, grapefruit, and red peppers.

Selenium Levels

Need more: [Moderately increase selenium intake](#)

Selenium helps in the synthesis of antioxidant enzymes and in maintaining a healthy immune system. Selenium, by itself, is a very strong antioxidant. It plays an important role in reproduction and DNA synthesis. It is required only in small quantities; however, it is crucial for a lot of important functions in the body. Although selenium is necessary for good health, too much of it can be dangerous. People with certain genetic types may benefit from selenium supplementation. [Learn more about Selenium Levels](#)

Genes Analyzed:

ARSB

BHMT

BHMT2

CBS

DMGDH

HOMER1

SELENOF (SEP15)

Recommendations

- You may have a genetic tendency for moderately lower selenium levels.
- Meet your daily requirements for selenium.
- Measure your serum selenium levels; if below normal even after meeting RDA

requirements, consult a physician.

- Selenium-rich foods brazil nuts, yellowfin tuna, turkey, chicken, white button mushrooms, and brown rice.

Zinc Levels

Need more: Moderately increase zinc intake

Zinc is the second most abundant trace mineral in the body. It plays an important role in the proper functioning of the immune system, cell division and growth, and the breakdown of carbohydrates. Zinc is also important for the senses of taste and smell. Research shows that zinc helps repair muscles after exercise, increases protein synthesis, and helps you work out effectively. It also helps increase blood flow to the muscles during exercise. Variants of genes such as CA1 influence the amount of zinc in the body. People with certain genetic types need more zinc in their diet due to its inefficient transport & utilization. [Learn more about Zinc Levels](#)

Genes Analyzed:

CA1

IL6

MT1A

MT2A

NBDY

SLC30A3

Recommendations

- You may have a genetic tendency for moderately lower zinc levels.
- Meet your daily requirements for zinc.
- Measure your serum zinc levels; if below normal even after meeting RDA requirements, consult a physician.
- Zinc-rich foods include flax seeds, kidney beans, pumpkin seeds, watermelon seeds, and beef.

Antioxidant Levels

Normal: Maintain normal antioxidant intake

Antioxidants are natural substances that protect the body against the unstable molecules (reactive oxygen species or ROS) generated inside the body either as a by-product of cellular metabolism or certain environmental stresses. Increased ROS or reduced antioxidants activity in the body results in a state of oxidative stress. This leads to an increased requirement of antioxidants to protect the body from the detrimental effects of ROS. Exercise can help decrease oxidative stress as well as induce it. Certain genes like CAT (catalase) have an influence on oxidative stress. People with certain genetic types are more prone to oxidative stress than others. [Learn more about Antioxidant Levels](#)

Genes Analyzed:

CAT

SOD2

PON1

Recommendations

- You may have a genetic tendency for normal antioxidant levels.
- Include foods rich in antioxidants.
- Low antioxidant level increases the risk for cardiomyopathy.
- Foods rich in antioxidants are purple, red, and blue grapes, blueberries, nuts, green leafy vegetables, sweet potato, carrots, whole grains, and beans

Coenzyme Q10 Levels

Need more: Significantly increase coenzyme Q10 intake

Coenzyme Q10 (CoQ10) is a type of coenzyme and natural antioxidant found in all cells of the body. It aids enzymes in various body functions, from food digestion to muscle repair and more. It plays a major role in mitochondrial bioenergetics and is responsible for generating more than 95% of the body's energy. Research shows that CoQ10 supplementation can improve power, recovery after exercise, reduce oxidative damage, and increase energy. Variants in the NQO1 gene influence the amount of CoQ10 produced and utilized by the body. [Learn more about Coenzyme Q10 Levels](#)

Genes Analyzed:

NQO1

Recommendations

- You may have a genetic tendency for low coenzyme Q10 levels.
- Consider doing moderate exercises regularly, as it boosts active antioxidant production in the body.
- Consume fish (particularly sardines and mackerel), meats (especially beef and organ meats), spinach, broccoli, other leafy vegetables, soy oil, and peanuts.
- Include salads (romaine lettuce, diced tomato, sliced cucumber with balsamic vinegar, and CoQ10-rich olive oil) in your regular diet.
- Consume maximum antioxidants from your diet and take supplements only when required or prescribed by physicians as supplements often have higher amounts of nutrients than your optimal requirement and may be harmful.

Lactose Intolerance

Lactose intolerant: Likely to be lactose intolerant

Lactose is a naturally-occurring sugar found in dairy products. It must be split into glucose and galactose in order to be absorbed from the intestine and into the body. An enzyme called lactase is needed for the breakdown of lactose. Individuals with lactose intolerance do not make enough lactase as adults and hence do not respond well to lactose. Undigested lactose leads to several gastrointestinal symptoms. Lactose intolerant people can switch to other sources of protein instead of dairy to build and strengthen muscles and bones. Variations in the MCM6 gene, which is needed for lactase production, can increase one's risk of lactose intolerance. [Learn more about Lactose Intolerance](#)

Genes Analyzed:

MCM6

Recommendations

- You have a higher genetic tendency for lactose intolerance.
- Restrict dairy products in your diet.
- Limit consumption of whole milk to 1 cup per day and distribute the intake throughout the day.
- Lactose-free milk can be consumed instead of regular milk.
- Consume milk along with meals.
- Include fermented milk products such as yogurt that contain lactic acid.

- Include non-dairy calcium & vitamin D-rich foods in your diet to meet your calcium and vitamin D needs.

Gluten Intolerance

Gluten intolerant: Likely to be gluten intolerant

Gluten is a form of storage protein stored together with starch in the seeds of various cereals such as wheat, barley, rye, and oats. Gluten sensitivity is triggered by eating gluten, which leads to intestinal symptoms and sometimes rashes. Celiac disease is the most severe form of gluten intolerance. Good sources of carbohydrates may also contain gluten. When adopting a gluten-free diet, you need to make sure it contains enough carbohydrates to fuel your training sessions. Variants in genes related to the immune system like HLA-DQB1 can increase the risk of gluten intolerance. [Learn more about Gluten Intolerance](#)

Genes Analyzed:

HLA-DQA1 (HLA-DQ2.5)

HLA-DQB1 (HLA-DQ2.2)

HLA-DRA (HLA-DQ2.2)

CCR3

IL18RAP

KIAA1109

MYO9B

Recommendations

- You carry genetic markers associated with an increased risk of gluten intolerance.
- However, not all individuals who carry these markers are found to have gluten intolerance.
- Gluten intolerance needs to be further confirmed by the presence of symptoms.
- Please consult your physician or dietitian to confirm gluten intolerance before starting on a gluten-free diet.

Riboflavin And Blood Pressure Response

Insensitive: Less likely to have lower BP on high riboflavin intake

Riboflavin, also known as vitamin B2, is a water-soluble vitamin. Nerves and the brain need riboflavin to function properly. It is also required for healthy skin, hair, eyes, and liver. People with certain genetic types may experience a greater reduction in blood pressure in response to high riboflavin intake. [Learn more about Riboflavin And Blood Pressure Response](#)

Genes Analyzed:

MTHFR

Recommendations

- You have a genetic tendency to have no effect on blood pressure on increased intake of riboflavin.
- Though your blood pressure levels are not affected by increasing riboflavin intake, its deficiency can lead to symptoms like burning mouth, angular cheilitis, anemia, and vision problem.
- Include foods rich in riboflavin like eggs, liver, dairy products, and enriched flour in your diet to ensure an optimum level of vitamin B2 in the body.

Salt Intake And Blood Pressure Sensitivity

Higher: Likely to have increased BP on high salt intake

Sodium is an essential electrolyte present in the extracellular fluid. It regulates osmosis and maintains fluid levels within the cell. Sodium also plays an important role in enzyme functions and the contraction of muscles. The American Heart Association (AHA) recommends no more than 2300 mg of sodium per day; however, most people eat too much salt. On average, 3400 mg of sodium is consumed, with most of it coming from processed foods. People with certain genetic types may have higher blood pressure in response to high salt consumption. Nearly 50% of hypertensive people are salt-sensitive - they tend to experience a rise in blood pressure upon salt intake. For these individuals, a lower salt intake is recommended. [Learn more about Salt Intake And Blood Pressure Sensitivity](#)

Genes Analyzed:

ACE

AGT

AGTR1

NPPA

SGK1

Recommendations

- People with your genetic type are associated with an increase in blood pressure upon consuming high amounts of salt in the diet.
- Monitor your salt consumption, and do not consume more than 5g of salt per day (1 teaspoon) from any source.
- Limit the consumption of foods high in salt content (canned, processed, baked, salt-dried and pickled foods).
- Regularly monitor your blood pressure, and in case you are hypertensive, consult your physicians for management of hypertension.
- Certain forms of salt like Himalayan rock salt, Sendha Namak, etc., have lower sodium content as compared to the common table salt and may serve as a healthier substitute for salt. These salts are also low in other elements like iodine. Carefully complement your diet with other dietary sources of these elements to avoid any deficiency.

Alcohol Dependence

Average: Moderately likely to be alcohol dependent

Alcohol dependence (AD) is defined as the use of alcohol in larger amounts or for prolonged periods. AD can be a substantial burden to your health and economy. Heavy alcohol drinking is correlated with increased mortality and risk of various health disorders like chronic liver disease, stroke, heart disease, etc. It can also affect your mental health, interpersonal relationships, and financial status. AD is influenced by various environmental factors and genetics (through regulation of alcohol metabolism). People with certain genetic types are associated with a higher risk of alcohol dependence. They may exhibit signs like experiencing temporary blackouts, choosing to drink over other responsibilities, feeling hungover when not drinking or drinking alone or in secrecy. [Learn more about Alcohol Dependence](#)

Genes Analyzed:

ABI3BP

ADH1B

ADH1C

ADRA2A

AOX2P

B3GALT5

C16orf97

C7orf10

CAMTA1

CC2D2B

CDH13

CNTN5

FLJ43879

GLRX3

GNAL

GRM5

HPGD

IGSF9B

Intergenic

KIAA0040

LOC100129340

LOC100507053

LOC101927285

LOC102723576

MIPOL1

MSR1

NRIP1

PECR

PKNOX2

PPFIA2

PPP2R2B

PRSS54

RGS17

RHAG

SH3BP5

SLC6A1

THSD7B

TPK1

ZNF285A

ZNF578

Recommendations

- You carry genetic markers associated with moderately increased risk of alcohol dependence.
- Stay in control by reducing your alcohol consumption as it can help you keep your drinking under control and may help prevent alcohol dependence.
- Go for alcohol-free days. If you drink regularly, your body starts to build up a tolerance to alcohol.
- Try alternative ways to deal with stress other than alcohol.
- If you already have alcohol dependence, seek help from medical professionals to help you quit alcohol. Go for complete abstinence rather than moderating your consumption. Furthermore, take help from various support groups and psychotherapy centers.

Alcohol Flush

Lower: Less likely to experience alcohol flush

People with certain genetic types may experience symptoms like redness of the face and neck upon

consuming alcohol. This can be due to reduced clearance of acetaldehyde. Aldehydes are formed when the alcohol consumed is broken down inside the body. People with the alcohol flush genotype may be at higher health risk for alcohol flush reaction upon alcohol consumption. [Learn more about Alcohol Flush](#)

Genes Analyzed:

ALDH2

Recommendations

- You have a low genetic tendency to experience alcohol flush.
- However, do remember that alcohol consumption is a risk factor for many health conditions.
- Consume alcohol in moderation.

Caffeine Consumption

Average: Likely to consume moderate amount of caffeine

People with certain genetic types tend to consume more cups of coffee (>625mg of caffeine) a day. Caffeine is a central nervous system stimulant and the most widely consumed psychoactive drug. Increased coffee consumption has been linked to improved health benefits for fast metabolizers of caffeine. Slow metabolizers are prone to increased risk of heart disease with higher caffeine intake. [Learn more about Caffeine Consumption](#)

Genes Analyzed:

ABCG2

AHR

BDNF

CPLX3

CYP1A1-CYP1A2

EFCAB5

GKCR

MLXIPL

Recommendations

- You may have a genetic tendency to consume moderate amount of coffee.
- Do not exceed more than 400 mg of caffeine per day, which is equivalent to 5 cups of coffee per day.
- If you are a slow metabolizer and have anxiety issues, sleep problems, or heart issues, you should further lower your caffeine consumption to less than 200mg per day. Pregnant females must also limit their caffeine consumption to less than 200mg per day.
- If your sleep is sensitive to caffeine, you must take the last caffeine dose at least 5-6 hours before sleeping (the effect of caffeine may last up to 6 hours after consumption depending upon your caffeine metabolizer status).

Caffeine Metabolism

Fast: Likely to be a fast metabolizer of caffeine

Caffeine is a natural alkaloid substance known for its stimulating properties. It has the ability to delay fatigue temporarily and improve reflexes. It can lead to increased heart rate and blood circulation to the muscles and the release of glucose from the liver. Caffeine can improve performance in endurance athletes. It also benefits in high-intensity activities. Some people are more sensitive, and consuming even a small amount of caffeine may create undesirable effects, while others are less sensitive and do not show any adverse effects. Genes like CYP1A2 play a role in influencing these habits by affecting the way our body processes caffeine. [Learn more about Caffeine Metabolism](#)

Genes Analyzed:

CYP1A2

Recommendations

- You may have a genetic tendency to metabolize caffeine fast.
- Regular coffee consumption has been linked to several health benefits.

Homocysteine Levels

Average: Likely to have moderately high homocysteine levels

Homocysteine is an amino acid in your blood. It is synthesized in your body, as well as obtained through food sources. The buildup of this amino acid is harmful to the body, a condition called hyperhomocysteinemia. Homocysteine is converted into either cysteine or methionine, amino acids that are safe and useful for the body. Hyperhomocysteinemia is linked to an increased risk of cardiovascular diseases, certain types of cancer, and bone disease. Variants in genes like MTHFR, BHMT, and MTR, influence the risk of homocysteine buildup. [Learn more about Homocysteine Levels](#)

Genes Analyzed:

MTHFR
BHMT
MTR
CBS
CETP
CHDH
CPS1
CRBP2
CUBN
DPEP1
FUT2
GTPB10
HNF1A
MMACHC
MUT
NOX4
RFC1
SCARB1
SLC17A3