

Predictive

DNA REPORT



*DISCOVER YOUR TRUE POTENTIAL*

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Name : JohnDoe

CustomerID :



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## Type o1 Report: Detailed Report

**DISCLAIMER**

Our recommendations in DNA Lifestyle report are based on the results of your Genetic Risk Assessment and other related information provided by you. This report does not take into account your existing health condition or any medication that have been prescribed to you. This report being neither a substitute to medical treatment nor physicians visit makes it necessary for you to consult your physician before adapting to its recommendations.

Any assertions or recommendations in the report as to an exercise regime or diet, whether specific or general, are based on the following assumptions.

Thatyouareinagoodstateofhealthanddonothaveanymedicalproblemsthatyouareawareof; That you have not had any recurring illness in the past 12months;

Thatnomedicalpractitionerhaseveradvisedyounottoexercise;

That you are not on any prescribed medication that may affect your ability to exercise safely or your diet; That you do not have any food allergies; and

That there is no other reason why you should not follow the assertions or recommendations in the report.

If you have any concerns at any time about whether or not these assumptions are correct in your particular circumstances, before acting, or not acting, on any of the assertions or recommendations, you must consult a medical practitioner.

Because scientific and medical information changes over time, and also a person’s risk of any particular phenotype, condition or trait is also based on other factors like environment, diet, lifestyle, genetic variants, your risk assertions and genetically tailored preventive recommendations for one or more of the conditions contained within this report may also change over time.

The pharmacogenomic panel here refers to your genetic predisposition to the drugs mentioned in the report. This report is for investigational purpose only. It is to be interpreted by a qualified and licensed medical practitioner only. It does not constitute medical advice, diagnosis, or treatment. The assay includes limited set of polymorphisms and may not report for mutations not included in the test panel. This report does not take into account factors like drug-drug interactions, drug food interaction. These assays are carried out by trained individuals and use standard equipment and laboratory designed protocols. Licensed medical practitioners are trained and qualified to make therapeutic decisions pertaining to medications and or dosage based on patient information and medical history, including the pharmacogenetic report.

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How to Read YourReport

**WHATISGENETICS?**

Human are made upof cells

Cells are made up of nucleus

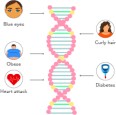
Nucleus is made upof chromosomes

Chromosomes are madeup ofDNA

DNA is made up of genes

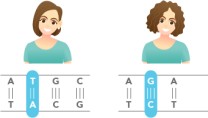




Changesinnucleotidesleadtogeneticvariations

Straighthair Curlyhair

Genes are coded by nucleotides

**SCOREINTERPRETATIONS**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **SCORE** | **DEPICTION** | **INTERPRETATION** |
|  | 0-2 | Excellent / Protective | An 'excellent / protective’ score indicates a very favorable response or ability for a trait |
|  | 2.1-4 | Good / Lower Risk | A 'good / lower risk’ score indicates a favorable response or ability for a trait |
|  | 4.1-6 | Typical | A 'typical’ score indicates a typical response or ability for a trait |
|  | 6.1-8 | Poor / Slightly Elevated | A 'poor / slightly elevated’ score indicates an unfavorable response or ability for a trait |
|  | 8.1-10 | Very Poor / Highly Elevated | A 'very poor / highly elevated’ score indicates a very unfavorable response or ability for a trait |

**GENERALGUIDELINES**

Genetic risk or predisposition given in the report is based on statistically relevant genomics research studies, which shouldnot be taken as a diagnosis of any health condition or overallwellness.

Traits in the report are not genetically interlinked; their genetic associations are independent of each other. Therefore, every trait score and interpretation are independent of each other.

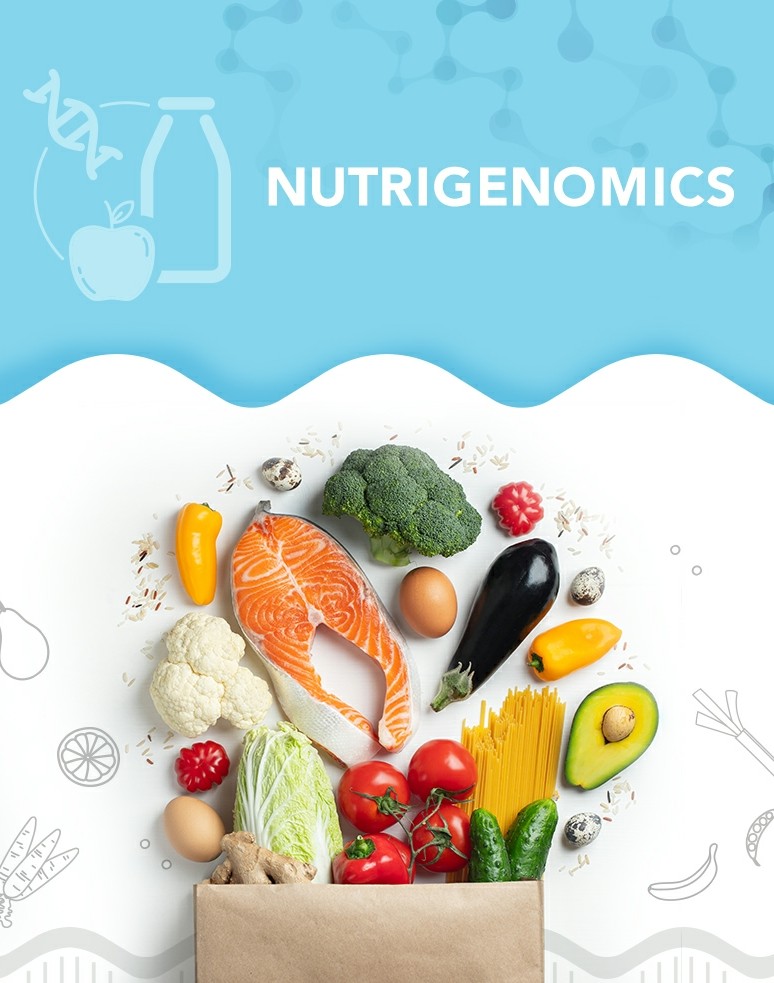


This report provides information The information in the report may provide an Please consult with your doctor, or other

about genetic predispositionsonly and may not indicate current conditions orcharacteristics.

understanding of one’s genetic risksand may help in making informed decisions regarding one’s wellness andgoals.

qualified health care professional before making any dietary, fitness, health and wellness related changes.



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## Category Summary

**REGULATION OF EATING**

9.0

### □□□□□□

Satiety Response

7.0

### □□□□□□

Emotional Eating Dependance

5.9

### □□□□□□

SnackingPattern



# Satiety Response

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### What is Satiety Response?

Satiety means feeling of fullness or suppression of hunger for a period of time after a meal. Certain genetic variations can influence the ability to feel satiated after consumption of a meal, which can lead to overeating for individuals with a poor satiety response. Over eating can lead to an excessive calorie intake, thereby increasing the risk of weight gain.

9.0

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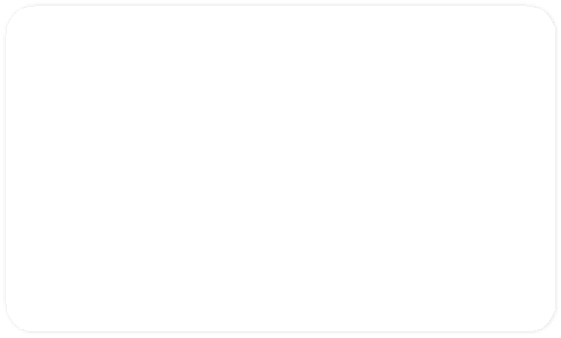
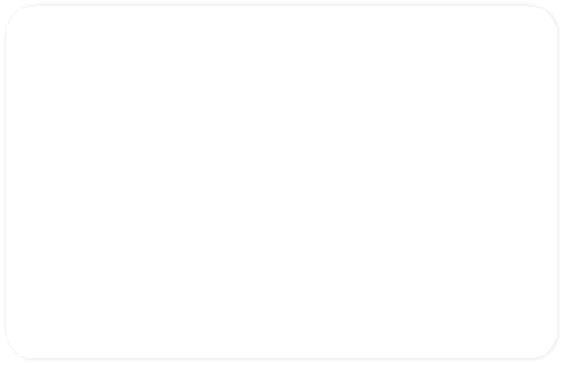
Satiety Response

### Interpretation

As per your genetics, your Satiety Response is very poor. People with such a genotype tend to not reach the satiety point or a feeling of fullness after a meal, which can lead to excessive calorie intake.

### Gene Table

Do's and Don'ts



**Emotional Eating Dependance**

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What is Emotional Eating Dependance ?

Emotional eating is a form of disordered eating, and it is defined as an increase in food intake in response to emotions. Some people have a strong emotional connection with food. Such people can turn to food for comfort consciously or subconsciously, when facing a difficult problem, feeling stressed, or even while feeling bored. Emotional eating can lead to excessive calorie intake, thereby damaging any weight loss efforts. Such a response to food can be triggered due to variations in certain genes.

## 7.0

### □□□□□□

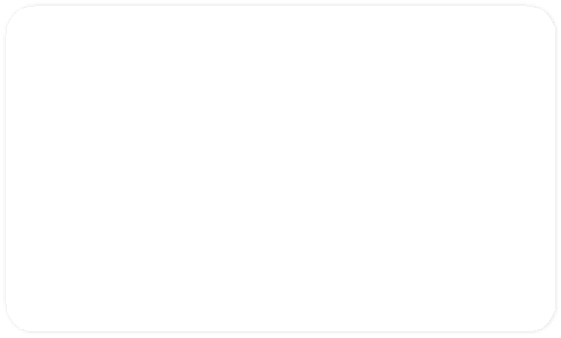
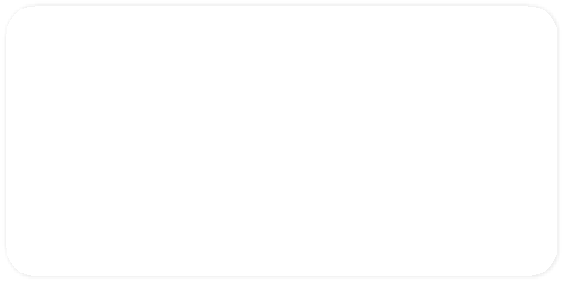
Emotional Eating Dependance

### Interpretation

Asperyourgenotype,yourEmotionalEatingDependanceispoor.Peoplewithsucha genotype are quite likely to indulge in high calorie consumption due to excessive snacking during an emotionaltrigger.

### GeneTable

Do's and Don'ts



**SnackingPattern**

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What is Snacking Pattern?

Eating behavior is a complex interplay of physiological, psychological, social, and genetic factors that influence meal timing, quantity of food intake, food preference, and food selection. Even after a meal, some individuals tend to look for snacks or more meals. Such people have an increased urge to snack on foods throughout the day even though they feel full. Variations in certain genes are involved in poor snacking pattern, resulting in overeating.

## 5.9

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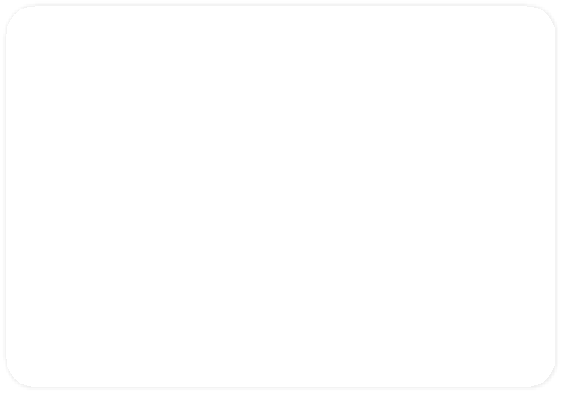
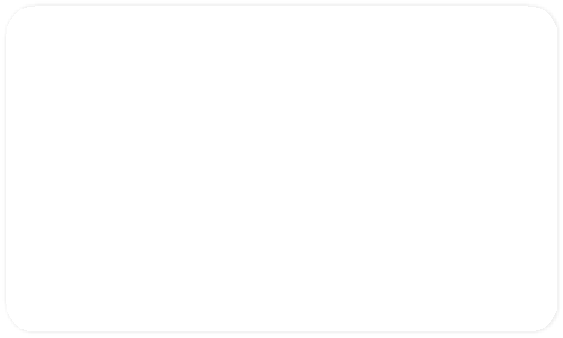
Snacking Pattern

### Interpretation

As per your genotype, your Snacking Pattern is typical. People with such a genetic makeup tend to snack at proper intervals between meals.

### Gene Table

Do's and Don'ts





Category Summary

**TASTE PERCEPTION**

8.0

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Sweet Taste Perception

6.6

### □□□□□□

Fatty Food Preference

5.5

### □□□□□□

Bitter Taste Perception



# Sweet Taste Perception

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### What is Sweet Taste Perception ?

Sweet taste perception is the ability of our taste buds to sense sweet foods. Taste perception explains the individual food preferences and the impact of eating behavior and nutritional intake. Generally, the less sensitive ones are likely to consume more of that food and tend to overeat. Taste buds for sweet taste perception are usually found at the back of the tongue and the roof of the mouth. Genetic variations in the genes encoding taste receptors influence the inter- individual differences observed in sweet taste perception. People with certain variants are poor sweet taste perceivers, and therefore tend to consume sugars in higher amounts.

8.0

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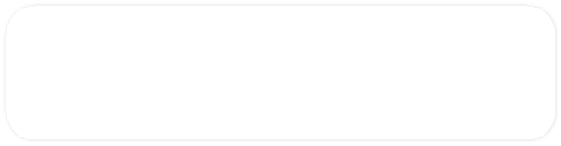
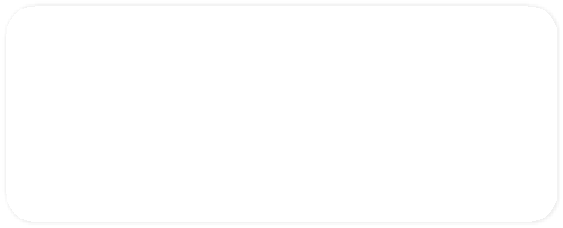
Sweet Taste Perception

### Interpretation

As per your genotype, your Sweet Taste Perception is poor. People with such a genetic profile have a slightly lower sensitivity towards sweet foods, and hence might be unable to satisfy their sweet cravings easily. Therefore, they may indulge in higher amounts of sugary foods, resulting in intake of empty calories.

### Gene Table

Do's and Don'ts



**Fatty Food Preference**

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What is Fatty Food Pre1erence ?

Fatty food preference tells us about our taste-based preference for foods rich in fats, such as deep fried foods, nuts, cheese, and red meats. How an individual perceives the taste of foods dictates the individual food preferences, eating behavior, and nutritional intake. Preference for fatty foods is governed by certain genetic variations which can largely influence our fatty food intake.

## 6.6

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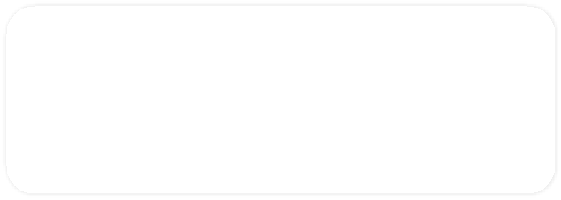
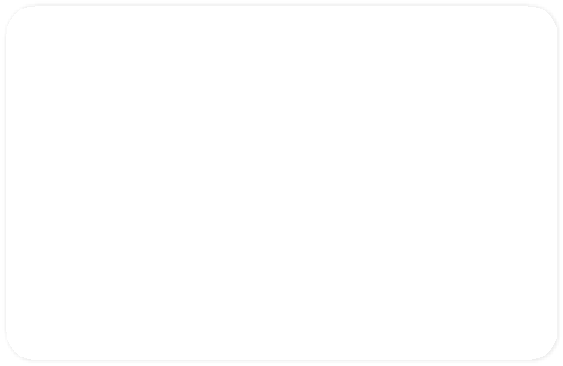
Fatty Food Preference

### Interpretation

Your genotype for Fatty Food Preference is poor. People with such a genetic profile have a higher preference for fatty foods, which may predispose them to develop lifestyle diseases.

### Gene Table

Do's and Don'ts



**Bitter Taste Perception**

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What is Bitter Taste Perception ?

Bitter taste perception is the ability of our taste buds to sense bitter foods. Taste perception explains the individual food preferences and the impact of eating behavior and nutritional intake. Generally, the less sensitive ones are more likely to consume that food and tend to overeat. Lower perception of bitter taste is generally associated with increased consumption of bitter foods, which could possibly lead to toxicity in the body under adverse conditions. Genetic variations in the genes encoding taste receptors are responsible for differences in bitter taste perception.

## 5.5

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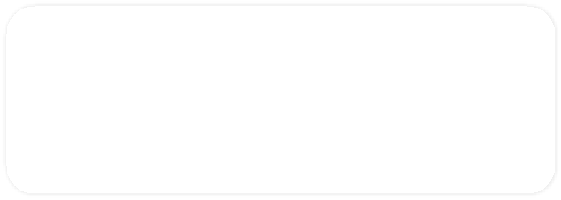
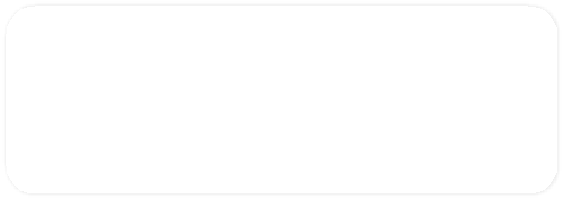
Bitter Taste Perception

### Interpretation

As per your genotype, your Bitter Taste Perception is typical. People with such a genetic profile tend to perceive bitter tasting foods as neither extremely bitter nor less bitter.

### Gene Table

Do's and Don'ts



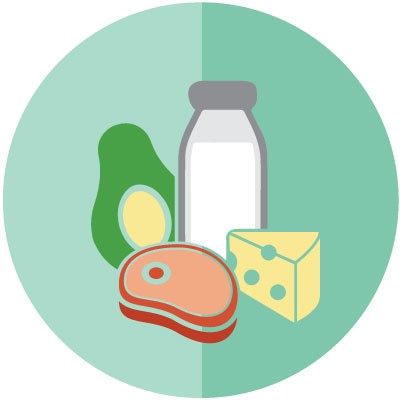


Category Summary

**MACRONUTRIENT REQUIREMENTS**

|  |  |  |
| --- | --- | --- |
| 6.8 | 7.1 | 5.5 |
| □□□□□□ | □□□□□□ | □□□□□□ |
| Response to Saturated Fats | Response to Monounsaturated Fats | Response to Carbohydrates |
| 6.2 | 2.0 | 2.0 |
| □□□□□□ | □□□□□□ | □□□□□□ |
| Response to Polyunsaturated Fats | Response to Protein | Response to Fiber |

**Response To Saturated Fats**

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What is Response to Saturated Fats ?

Saturated fats are a class of macronutrients which are used for energy generation by thebody.Saturated fats are found inbutter,ghee, margarine, and in animal fats. They differ from other types of fats with respect to the number of double bonds in their backbone, with saturated fats having none. They tend to have higher melting points compared to unsaturated fats, which are generally liquid at room temperature. Saturated fats, when consumed in higher amounts compared to other fats are known to increase LDL cholesterol, which leads to deposition of plaques along the walls of the blood vessels, causing narrowing of blood vessels. This directly leads to an increase in the risk of developing cardiovascular diseases. Genetic variations can influence how the body responds to saturated fat intake, in terms of developing abnormal lipid profiles andobesity.

## 6.8

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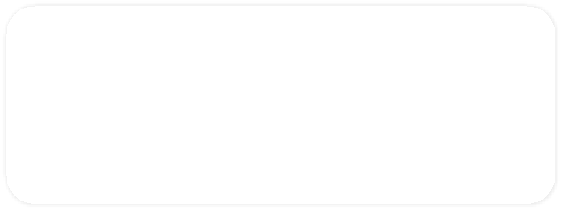
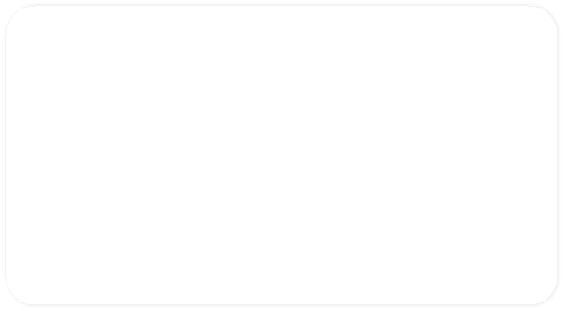
Response to SaturatedFats

### Interpretation

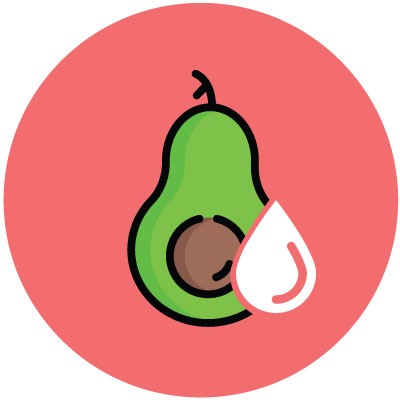
As per your genotype, your Saturated Fat Response is poor. People with such a genotype tend to have a slightly elevated risk of being obese or of having abnormal lipid levels post consumption of saturated fats, which in turn elevates the risk of adverse health conditions such as stroke or cardiovascular diseases.

### Gene Table

Do's and Don'ts



**Response To Monounsaturated Fats**

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What is Response to Monounsaturated Fats?

Monounsaturated fatty acids (MUFA) are a type of fat which contain one double bond in their backbone. These fats are usually liquid at room temperature. Monounsaturated fats also play a critical role in regulating the body’s immune function. Eating monounsaturated fats instead of saturated fats and trans fats can lower cholesterol levels and reduce the risk of heart disease and stroke. Monounsaturated fats are also high in vitamin E, an antioxidant vitamin that keeps the body healthy by protecting cells from damage. Foods like avocados, peanut butter, nuts, seeds, olive oil, peanut oil, canola oil, sesame oil, and sunflower oil are particularly high in monounsaturated fats. Genetic variations can influence the degree of health benefits observed with MUFA intake.

## 7.1

### □□□□□□

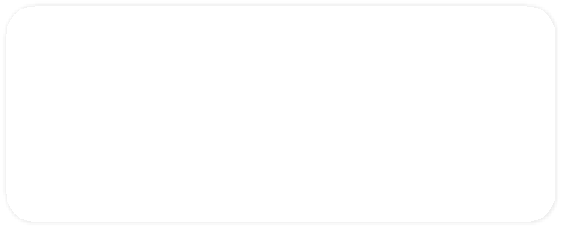
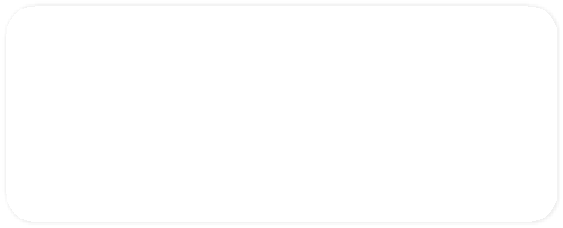
Response to Monounsaturated Fats

### Interpretation

As per your genotype, your Monounsaturated Fatty Acid (MUFA) Response is poor. People with such a genotype tend to benefit less from MUFA rich diets as compared to the typical population.

### Gene Table

Do's and Don'ts



**Response To Carbohydrates**

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What is Response to Carbohydrates ?

Carbohydrates are important macronutrients and the primary source of energy and calories for the body. Carbohydrates are primarily divided into simple carbohydrate and complex carbohydrate groups. Simple carbohydrates are quickly broken down and absorbed by the body, which leads to a spike in the blood sugar levels and insulin secretion. Increased consumption of simple carbohydrates such as refined flour, table sugar, syrups, and fruit drinks could increase the risk of developing diabetes and obesity. Complex carbohydrates, due to their complex structure, cannot be quickly broken down, causing slow and sustained release of sugar and insulin into the bloodstream. Complex carbohydrate sources include oats, quinoa, brown rice, barley, and legumes. Genetic variations can influence the risk of developing insulin resistance and obesity in response to carbohydrate consumption.

## 5.5

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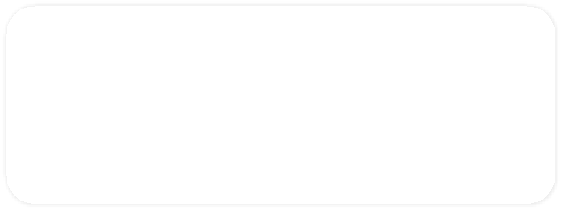
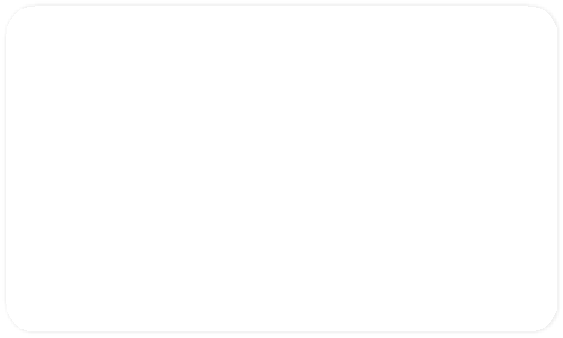
Response toCarbohydrates

### Interpretation

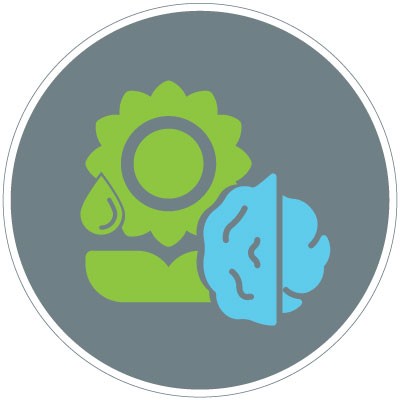
As per your genotype, your Carbohydrate Response is typical. People with such a genetic profile tend to metabolize carbohydrates in a typical manner, thereby not affecting their risk of developing insulin resistance or obesity in response to carbohydrate consumption.

### Gene Table

Do's and Don'ts



**Response To Polyunsaturated Fats**

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What is Response to Polyunsaturated Fats?

Polyunsaturated Fatty Acids (PUFA) are a type of fat which contain more than one double bond in their backbone. PUFA rich sources include olive oil, soybean oil, corn oil, and sunflower oil. Other sources include seeds such as walnuts and flaxseeds. PUFAs at room temperatures are liquids. PUFAs can help reduce LDL cholesterol levels in the blood which can subsequently lower the risk of heart disease and stroke. Oils rich in polyunsaturated fats also contribute vitamin E, an antioxidant vitamin that keeps the body healthy by protecting cells from damage. There are two main types of PUFA, omega 3 and omega 6 fatty acids. Omega 3 PUFAs are anti-inflammatory and found in fatty fish, shellfish, liver, and in some seeds like flaxseed. Omega 6 rich foods are predominantly present in animal fats. The ideal ratio of omega 6 to omega 3 is around 2:1 to 4:1, but modern diets contain ratios ranging from 15:1 to even 25:1, which leads to a much increased dietary need for omega 3 intake for most individuals. Genetic variations can influence the dietary requirement for omega 3 PUFA intake.

## 6.2

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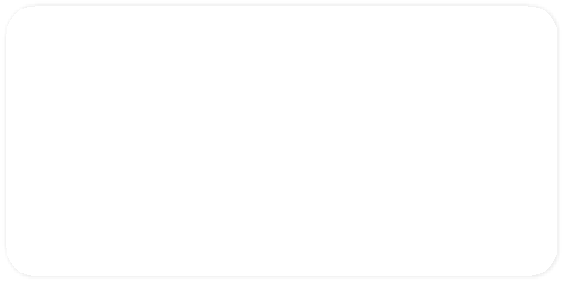
Response to Polyunsaturated Fats

### Interpretation

As per your genotype, your Polyunsaturated Fatty Acid (PUFA) Response is poor. People with such a genotype usually show a diminished response to the usual omega 3 PUFA intake in terms of health benefits, thereby leading to an increased dietary requirement for omega 3 PUFA.

### Gene Table

Do's and Don'ts



**Response To Protein**

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What is Response to Protein ?

Protein is an essential macronutrient required by the body for growth and maintenance. It acts as a building block for all the cells in the body and can also serve as a fuel source. When broken down into amino acids, they are used as precursors to several other molecules essential for life. A protein-rich diet boosts metabolism and reduces appetite. Therefore, consumption of proteins invokes a feeling of fullness, decreases total calorie consumption, and reduces appetite over time, which aids in fat loss and weight maintenance. Dietary sources of protein include both animals and plant proteins, which include meats, dairy products, fish, eggs, grains, legumes, and nuts. Genetic variations can lead to altered response to increased protein consumption in terms of maintaining lost weight.

## 2.0

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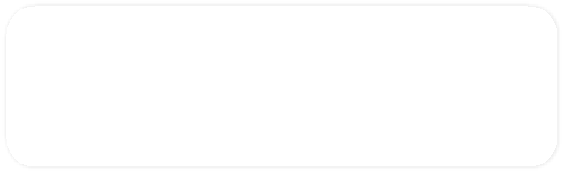
Response to Protein

### Interpretation

According to your genotype, your Protein Response is excellent. People with such a genotypetendtoeasilymaintainbodyweightonadequateproteiningestion.Increasing protein intake along with suitable weight training would help achieve optimum muscle mass andweight.

### Gene Table

Do's and Don'ts



**Response To Fiber**

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What is Response to Fiber ?

Dietary fiber is a type of carbohydrate that cannot be digested by thebody.The primary role of dietary fiber is in bowel function. Dietaryfiber,particularly insolublefiber,helps prevent constipation by increasing stool weight and decreasing the time of transit of stools in the gut. It also helps in lowering the risks of heart disease and diabetes. Fiber based foods retain water in the intestine which helps to feelfuller,thereby keeping excessive calorie intake in check, which reduces the risk of developingobesity.It is commonly found in fruits, vegetable, pulses, and whole grains. Genetic variations can influence the extent of benefit that increased fiber intake can have on keeping weight incheck.

## 2.0

### □□□□□□

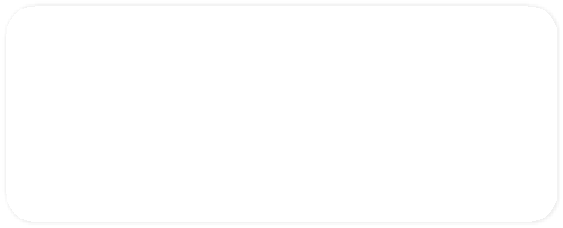
Response toFiber

### Interpretation

As per your genotype, your Fiber Response is excellent. People with such a genotype usually show greater benefits in terms of fat loss with increased fiber intake.

### Gene Table

Do's and Don'ts





Category Summary

**WEIGHT MANAGEMENT AND MAINTENANCE**

6.5

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Ability to Maintain Weight Loss

# Ability To Maintain Weight Loss

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### What is Ability to Maintain Weight Loss ?

While losing weight is dificult for many people, it is equally challenging to keep the weight off. A significant number of people who lose a large amount of weight tend to regain it 1 to 3 years later. Certain genetic variations can influence the ability to maintain body weight post weight loss. This increases the importance of following a healthy nutrition plan and exercise regimen to maintain the weight loss for those people who are at a higher genetic risk for regaining lost weight.

6.5

### □□□□□□

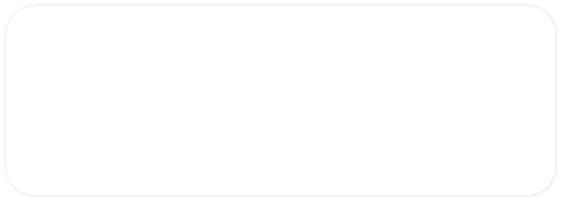
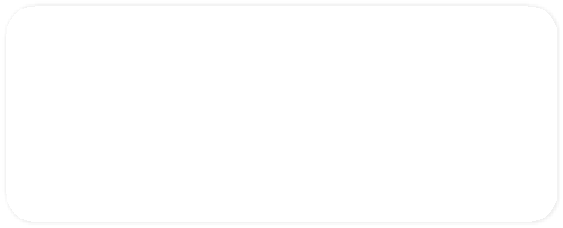
Ability to Maintain Weight Loss

### Interpretation

As per your genotype, your Ability to Maintain Weight Loss is poor. People with such a genotype tend to be unable to maintain their weight post a weight loss intervention.

### Gene Table

Do's and Don'ts



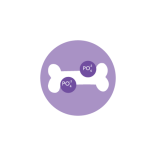


Category Summary

**MICRONUTRIENT REQUIREMENTS**

|  |  |  |
| --- | --- | --- |
| 9.0 | 9.0 | 7.6 |
| □□□□□□ | □□□□□□ | □□□□□□ |
| Phosphate Metabolism | Calcium Metabolism | Vitamin A Metabolism |
| 7.2 | 8.0 | 7.0 |
| □□□□□□ | □□□□□□ | □□□□□□ |
| Vitamin E Metabolism | Vitamin C Metabolism | Vitamin B6 Metabolism |
| 6.0 | 6.9 | 5.0 |
| □□□□□□ | □□□□□□ | □□□□□□ |
| Vitamin D Metabolism | Iron Metabolism | Vitamin B9 Metabolism |
| 5.3 | 5.3 | 2.0 |
| □□□□□□ | □□□□□□ | □□□□□□ |
| Vitamin B12 Metabolism | Antioxidant Metabolism | Magnesium Metabolism |

**Phosphate Metabolism**

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What is Phosphate Metabolism ?

Phosphate is an essential mineral that is necessary for the formation of bones and teeth. In thebody,almost all of the phosphorus is combined with oxygen, forming phosphate. Phosphate is also used as a building block for several important substances including those used by the cell for energy generation, making cell membranes, and making DNA. Dietarysourcesofphosphateincludemilk,meatproducts,seafish(salmon,mackerel,andsardines),seeds(pumpkinand sunflower seeds), legumes, eggs, and oatmeal. Genetic variations can influence serum phosphate levels, thereby leading to altered dietaryrequirement.

## 9.0

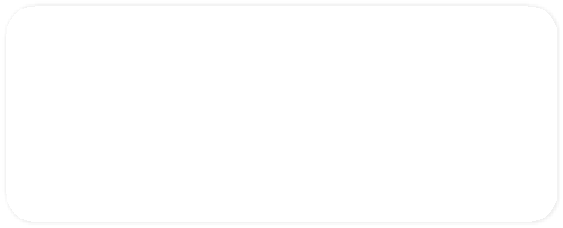
### □□□□□□

Phosphate Metabolism

### Interpretation

As per your genotype, your Phosphate Metabolism is very poor. People with such a genotype tend to be inefficient at phosphate metabolism, thereby leading to an increased dietary requirement.

### Gene Table Do's and Don'ts



What is Calcium Metabolism?

Calcium is the most abundant mineral in thebody,more than 90% of which is present in the bones and teeth. Calcium is alsoimportantforproperfunctioningofthethyroidgland.Calciumisabsorbedbythebodyintheformofphosphatesalts and it is crucial for the regulation of muscle contraction and heart functioning. Calcium levels in the blood are also important in the production of clotting factors and for nerve impulse transmission. Given its multitude of functions in the humanbody,deficiency of calcium can lead to problems such as osteoporosis, osteopenia, and muscle cramps. Excessive intake of calcium can cause constipation, increased thirst or urination, nausea, vomiting, and kidney stones. Foods rich in calcium include all dairy products, almonds, broccoli, cabbage, soybeans, tofu, salmons, and sardines. Genetic variations can lead to abnormal calcium absorption in thebody.

## 9.0

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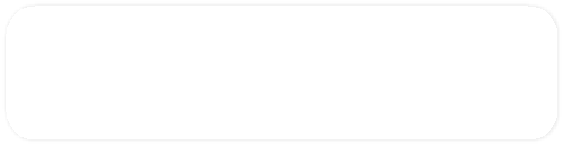
Calcium Metabolism

### Interpretation

As per your genotype, your Calcium Metabolism is very poor. People with such a genotype tend to have an elevated risk of developing high serum calcium levels.

### Gene Table

Do's and Don'ts





What is Vitamin A Metabolism ?

Vitamin A is a group of nutritional organic compounds which are of primary importance in the process of vision. It also plays an important role in the immune function of the body and in maintaining skin health. Animal sources like organ meat, fish, and milk products provide vitamin A in the form of retinol or retinoic acid, while plant sources like carrots, sweet potatoes, spinach, kale, and cantaloupes provide the precursor of vitamin A in the form of carotenes, which are converted into retinol inside thebody.Some symptoms related to vitamin A deficiency include night blindness, acne, or dry skin. Excess vitamin A in the body could lead to abdominal pain, muscle pain, nausea, vomiting, and diarrhea. Genetic variations can affect the process of beta-carotene conversion to retinol, thereby influencing dietary vitamin A requirement.

## 7.6

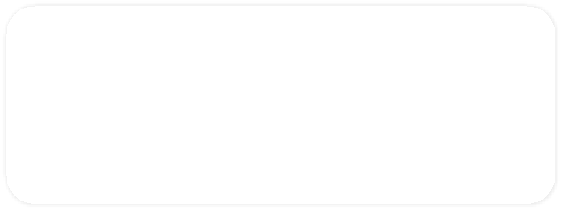
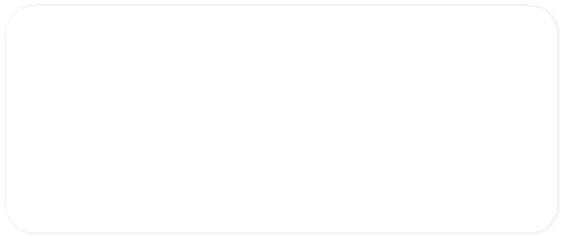
### □□□□□□

Vitamin A Metabolism

### Interpretation

As per your genotype, your Vitamin A Metabolism is poor. People with such a genotype tend to have a reduced ability to metabolize vitamin A, thereby increasing their risk of vitamin A deficiency.

### Gene Table Do's and Don'ts



**Vitamin E Metabolism**

****

What is Vitamin E Metabolism ?

Vitamin E, also known as tocopherols are a class of fat-soluble vitamins. Primary role of vitamin E in the body is as an antioxidant, to neutralize the free radicals produced in thebody,thereby preventing cellular damage. It is also an important component of the immune system. Vitamin E deficiency has been known to cause cognitive decline and neuromuscular problems. Vitamin E is possibly unsafe in excess and may lead to nausea, diarrhea, stomach cramps, headache, and bleeding-related problems. Sources of vitamin E include vegetable oils, nuts, salmon, crayfish, soybean, spinach, broccoli, and almonds. Genetic variations can influence the absorption of vitamin E in thebody.

## 7.2

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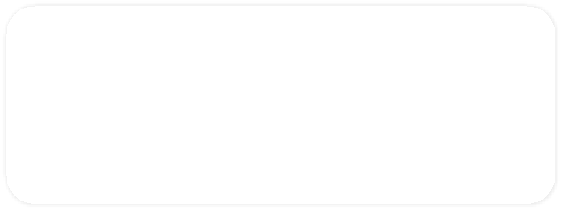
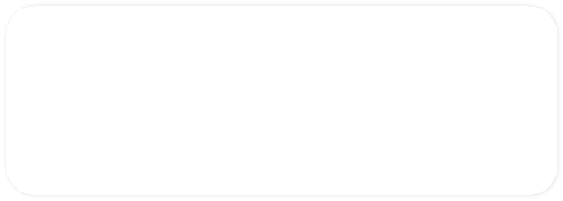
Vitamin E Metabolism

### Interpretation

As per your genotype, your Vitamin E Metabolism is poor. People with such a genotype tend to have lower plasma levels of vitamin E due to its inefficient absorption. Therefore, they are at an elevated risk for vitamin E deficiency.

### Gene Table

Do's and Don'ts



**Vitamin C Metabolism**

****

What is Vitamin C Metabolism ?

Vitamin C, also known as ascorbic acid, is an essential water-soluble vitamin involved in the repair of tissues and the enzymatic production of certain neurotransmitters. It also plays an important role in the immune system, functioning as an antioxidant. Vitamin C deficiency has been known to cause scurvy (bleeding of gums), skin rashes, and impaired wound healing. However, excess intake could cause gastrointestinal problems, headache, and trouble sleeping. Sources rich in ascorbic acid include citrus fruits such as oranges and grapefruit, kiwi, mango, and papaya. Genetic variations can influence the absorption of vitamin C in the body.

## 8.0

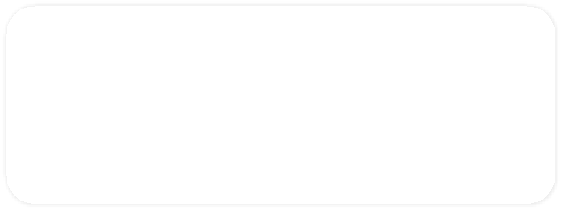
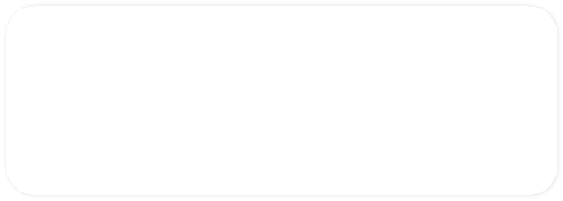
### □□□□□□

Vitamin C Metabolism

### Interpretation

As per your genotype, your Vitamin C Metabolism is poor. People with such a genotype tend to have a reduced ability to absorb vitamin C. Therefore, they are at an elevated risk for vitamin C deficiency.

### Gene Table Do's and Don'ts



What is Vitamin B6 Metabolism ?

Vitamin B6 is a part of the vitamin B group of essential nutrients. Our bodies use B vitamins to convert the food we eat into the energy we need to function. It plays a crucial role in carbohydrate, lipid, and amino acid metabolism. Deficiency of vitamin B6 is associated with anemia, dermatitis, and weakened immune function of thebody.When present in excess, it has been shown to cause neurological disorders. Vitamin B6 sources include chicken, eggs, chickpeas, bananas, sweet potatoes,pistachios,andspinach.GeneticvariationscanaltertheabsorptionofvitaminB6,therebyinfluencingtheriskof vitamin B6deficiency.

## 7.0

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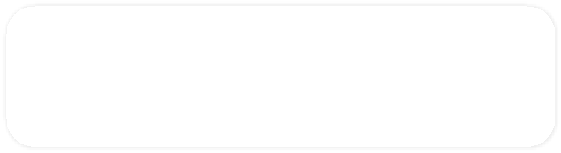
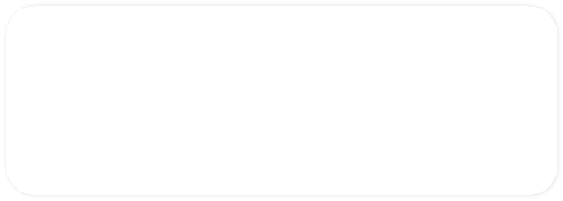
Vitamin B6 Metabolism

### Interpretation

As per your genotype, your Vitamin B6 Metabolism is poor. People with such a genotype tend to have lower plasma levels of vitamin B6 due to its inefficient absorption. Therefore, they are at an elevated risk for vitamin B6 deficiency.

### Gene Table

Do's and Don'ts



**Vitamin D Metabolism**

****

What is Vitamin D Metabolism ?

Vitamin D is a fat-soluble vitamin which is synthesized upon exposure of skin to sunlight. Vitamin D plays an important role in regulating calcium levels in the blood, thereby playing an important role in maintenance of bone health. Vitamin D deficiency has been associated with rickets (bone and muscle weakness). It also results in cognitive impairment in older people. Excess vitamin D in the body is associated with elevated calcium levels in the blood, which in the short term could lead to nausea, vomiting, and poor appetite. Food sources for vitamin D include tuna, salmon, egg yolks, cheese, and spinach.However,food sources contain only a very small percentage of daily vitamin D requirement, thereby making sunlight the primary source for vitaminD.Genetic variations can influence the metabolism of vitaminD,thereby influencing the risk of developing vitamin Ddeficiency.

## 6.0

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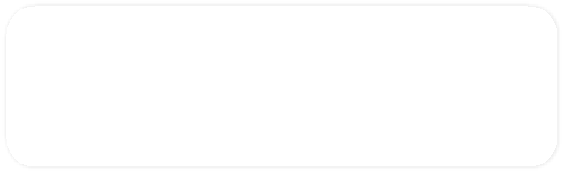
Vitamin D Metabolism

### Interpretation

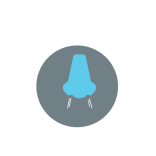
As per your genotype, your Vitamin D Metabolism is typical. People with such a genotype tend to have a typical efficiency for metabolising vitamin D.

### Gene Table

Do's and Don'ts



**Iron Metabolism**

****

What is Iron Metabolism?

Iron is an essential element required in the body for the production of red blood cells. About 70% of the body’s iron stores are found in the red blood cells. It is essential for the formation of hemoglobin and transport of oxygen to the cells in the body. Iron is also involved in immune-system related functions and is a critical nutrient for energy metabolism pathway. Deficiency of iron can lead to fatigue, weakness, pale skin, headache, and dizziness, while excess iron intake is toxic to the body. Dietary sources of iron include chicken, tofu, red meats, broccoli, brussel sprouts, legumes, and spinach. Genetics variations can affect iron metabolism and thereby influence the ability to absorb iron from the diet.

## 6.9

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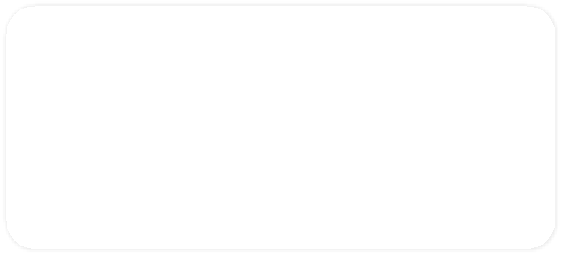
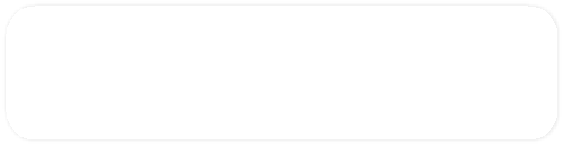
Iron Metabolism

### Interpretation

As per your genotype, your Iron Metabolism is poor. People with such a genotype are usually at an elevated risk of developing iron deficiency due to its inefficient absorption and transport.

### Gene Table

Do's and Don'ts



**Vitamin B9 Metabolism**

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What is Vitamin B9 Metabolism ?

Vitamin B9, more commonly known as folate (naturally-occurring form of B9) or folic acid (a synthetic form), is a water- soluble vitamin that is a part of the B vitaminfamily.Vitamin B9, when converted to its active form, plays an important role in DNA synthesis and cell division, red blood cell production, and clearance of homocysteine, all of which are affected in cases of impaired metabolism of vitamin B9. An excess accumulation of homocysteine can induce inflammation, damage blood vessels, increase blood pressure, and cause a disturbance in heart health.However,excess vitamin B9 intake has been known to cause stomach problems, trouble sleeping, and adverse skin reactions. Sources rich in vitamin B9 include egg yolks, beefliver,tuna, legumes, asparagus, and beetroots. Variations in certain genes can influence the metabolism of vitaminB9.

## 5.0

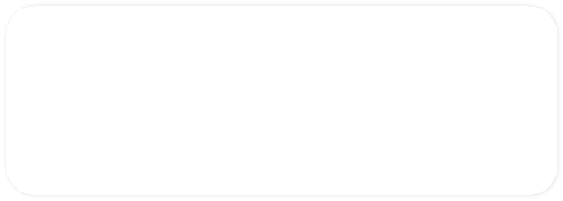
### □□□□□□

Vitamin B9 Metabolism

### Interpretation

As per your genotype, your Vitamin B9 Metabolism is typical. People with such a genotype tend to have a typical efficiency for converting dietary vitamin B9 into its active form.

### Gene Table Do's and Don'ts



**Vitamin B12 Metabolism**

What is Vitamin B12 Metabolism ?

Vitamin B12, or cobalamin, is a water-soluble vitamin involved in many metabolism pathways in our body. It is particularly important in the nervous system functioning and synthesis of myelin. It also plays an important role in red blood cell formation and production of DNA. Along with folate and ribouavin, it also helps in eliminating homocysteine from the cell. Deficiency of vitamin B12 has known to cause impaired nervous system functioning, lethargy, and fatigue. Vitamin B12 sources include chicken, meat, tofu, eggs, salmon, dairy products, and almond milk. Genetic variations can affect its absorption from food, thereby influencing the risk of vitamin B12 deficiency.

## 5.3

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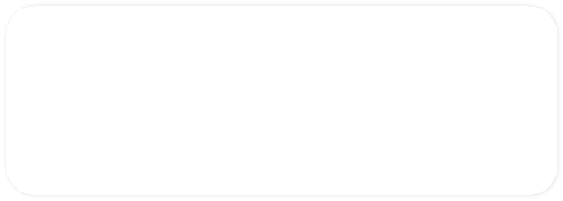
Vitamin B12 Metabolism

### Interpretation

As per your genotype, your Vitamin B12 Metabolism is typical. People with such a genotype tend to have a typical efficiency for vitamin B12 absorption.

### Gene Table

Do's and Don'ts



**Antioxidant Metabolism**

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What is Antioxidant Metabolism?

Antioxidantsarecompoundsthatinhibittheoxidationprocessinthebody.Certainprocessescanleadtotheformationof oxidative species in thebody,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 thebody.They have also been known to reduce the risk of cancer and neurodegenerative diseases such asAlzheimer’sandParkinson’s.Sources rich in antioxidants include dark chocolate, spinach, green tea, and blueberries. Genetic variations can lead to altered functioning of thebody’sinnate antioxidant defence system, thereby influencing the dietary requirement forantioxidants.

## 5.3

### □□□□□□

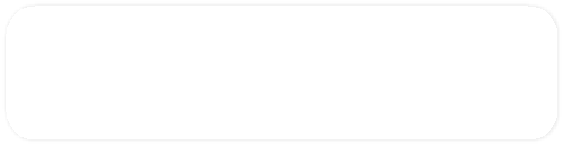
Antioxidant Metabolism

### Interpretation

As per your genotype, your Antioxidant Metabolism is typical. People with such a genotype tend to have a typical antioxidant defence system efficiency.

### Gene Table

Do's and Don'ts



**Magnesium Metabolism**

****

What is Magnesium Metabolism ?

Magnesium is the fourth most abundant mineral in the body. It helps in maintaining normal nerve and muscle function, supports a healthy immune system, keeps the heartbeat steady, and helps bones remain strong. Magnesium also works with calcium for regulation of muscle contraction. Deficiency of magnesium has been associated with improper nerve impulses, thereby resulting in poor coordination, muscle spasms, tremors, and loss of appetite. Meanwhile, excess magnesium intake has been associated with irregular heartbeats, low blood pressure, and slowed breathing. Sources rich in magnesium include salmon, mackerel, tuna, spinach, kale, nuts, and dark chocolate. Genetic variations can influence the absorption of magnesium, thereby affecting its serum levels.

## 2.0

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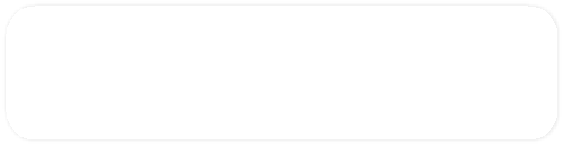
Magnesium Metabolism

### Interpretation

As per your genotype, your Magnesium Metabolism is excellent. People with such a genotype tend to be very efficient at magnesium metabolism.

### Gene Table

Do's and Don'ts





Category Summary

**FOOD INTOLERANCES ANDSENSITIVITIES**

|  |  |  |
| --- | --- | --- |
| 8.7 | 9.0 | 6.5 |
| □□□□□□ | □□□□□□ | □□□□□□ |
| Salt Metabolism | Lactose Intolerance | Gluten Intolerance |
| 3.6  □□□□□□ |  |  |
| Caffeine Metabolism |  |  |

**Salt Metabolism**

****

What is Salt Metabolism?

Tablesalt 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. Sodium enables the transmission of nerve impulses around thebody,regulating the electrical charges moving in and out of the cells. The presence of sodium ions is essential for the contraction of muscles including the most important muscle, the heart. 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. The food sources rich in sodium are cured meats, salted fish, cheese, and canned foods. Genetic variations can influence how an individual responds to salt intake, thereby influencing how much salt can be tolerated in theirdiet.

## 8.7

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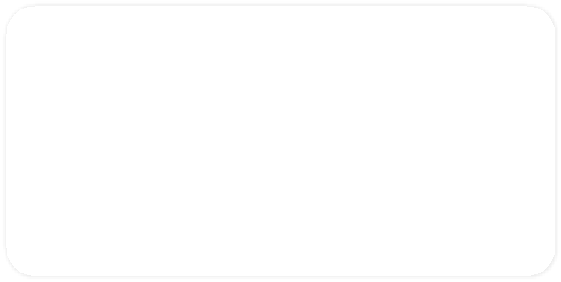
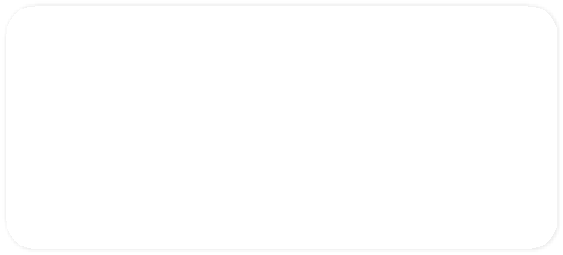
Salt Metabolism

### Interpretation

As per your genotype, your Salt Metabolism is very poor. People with such a genotype are likely to respond very poorly to increased salt intake, and therefore are advised to limit consumption.

### Gene Table

Do's and Don'ts



**Lactose Intolerance**

****

What is Lactose Intolerance?

Lactose, commonly called milksugar,is a form of carbohydrate present in milk and other dairy products. It makes dairy products taste mildly sweet. The body starts metabolizing lactose in the intestines with the help of lactase, an enzyme produced and released by the cells that line the small intestine. When the body does not produce enough lactase enzyme, lactose is fermented by the intestinal bacteria. This leads to formation of lactic acid and various gases in the stomach, causing symptoms related to lactose intolerance. Symptoms of lactose intolerance are bloating, gas formation inthestomach,anddiarrhea.Geneticvariationscaninfluenceanindividual'sriskofdevelopinglactoseintolerance.

## 9.0

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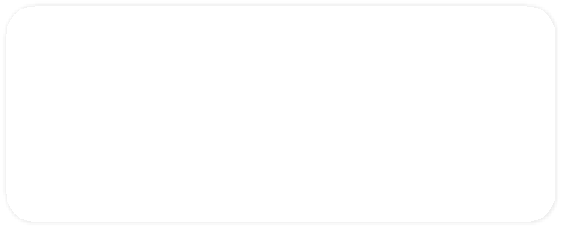
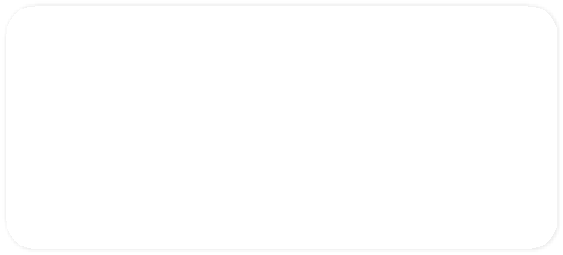
Lactose Intolerance

### Interpretation

As per your genotype, your Lactose Metabolism is very poor. People with such a genotype tend to have a highly elevated risk of developing lactose intolerance. It is usually advised to such people that they have a limited intake of dairy products or avoid it altogether.

### Gene Table

Do's and Don'ts



**Gluten Intolerance**

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What is Gluten Intolerance?

Gluten is a form of storage protein that is stored together with starch in the seeds of various cereals such as wheat, barley, rye, and oats. Gluten in wheat is responsible for providing the elasticity and making it rise during baking process. Gluten intolerance is characterized by adverse reactions to gluten. Celiac disease is the most severe form of gluten intolerance. Symptoms of gluten intolerance upon consumption of gluten-containing products include bloating, diarrhea, constipation, and abdominal pain. Celiac disease has also been associated with other diseases such as diabetes, thyroid disorders, and other autoimmune diseases. People intolerant to gluten can consume gluten-free cereals. A gluten-free diet is essential for managing signs and symptoms of celiac disease and other medical conditions associated with gluten. Genetic variations can influence an individual’s risk of developing celiac disease.

## 6.5

### □□□□□□

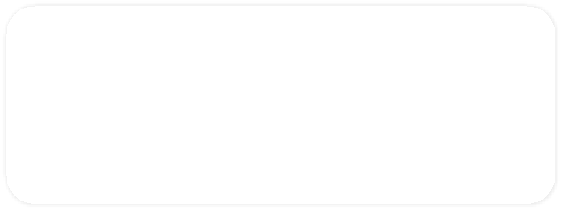
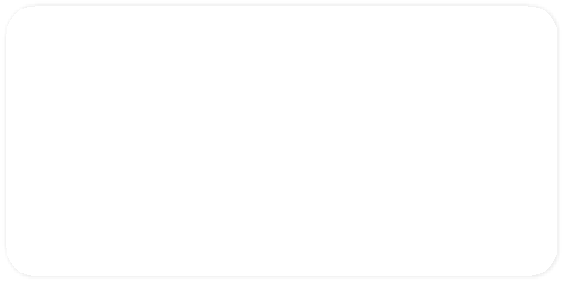
GlutenIntolerance

### Interpretation

As per your genotype, your Gluten Metabolism is poor. People with such a genotype tend tohaveahighriskofdevelopingglutenintolerance.Ongluteningestion,theymayexhibit gastrointestinaldisturbanceslikeabdominalbloating,flatulence,cramps,anddiarrhea.

### Gene Table

Do's and Don'ts



**Caffeine Metabolism**

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What is Ca11eine Metabolism ?

Caffeine is a central nervous system stimulant, present in beverages such as coffee, tea, energy drinks, and aerated drinks like cola. Caffeine invokes a sense of alertness and wakefulness upon consumption.However,it can also produce a mild form of dependence.Generally,up to 400 mg of caffeine appears to be a safe dose for adults, but great variability is observed in terms of how much caffeine can be tolerated by an individual, which in turn is governed by genetic variations. Excess caffeine consumption can cause several side effects such asanxiety,insomnia, digestive issues, high blood pressure, and rapid heartrate.

## 3.6

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Caffeine Metabolism

### Interpretation

As per your genotype, your Caffeine Metabolism is good. People with such a genotype tend to be fast metabolizers of caffeine and therefore can tolerate relatively higher amounts.

### Gene Table

Do's and Don'ts

