

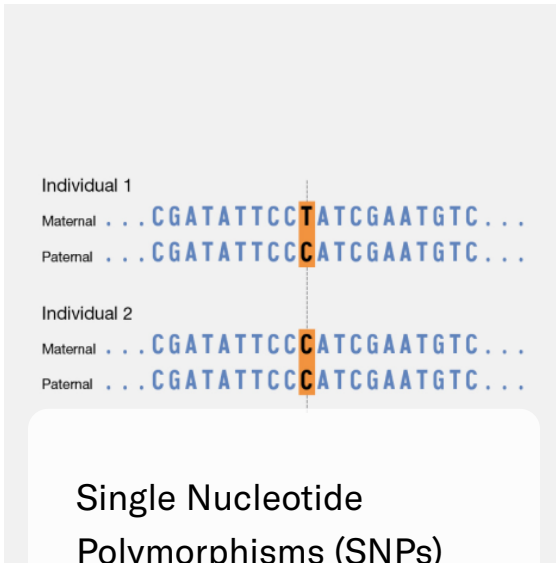


What are genetic nutrition traits?



Nutrigenomics is a fascinating area of research that explores how the foods we eat interact with our genes. It's all about discovering how our unique genetic makeup influences the way we respond to different nutrients and diets. By understanding these connections, your health care provider can create tailor-made nutrition plans that help you feel your best, stay healthy, lose weight, and increase longevity.

LifeNome's Genomic Process



Individual 1
Maternal . . . CGATATTCC**T**ATCGAATGTC . . .
Paternal . . . CGATATTCC**C**ATCGAATGTC . . .

Individual 2
Maternal . . . CGATATTCC**C**ATCGAATGTC . . .
Paternal . . . CGATATTCC**C**ATCGAATGTC . . .

Single Nucleotide Polymorphisms (SNPs)

SNPs are a type of genetic variation that occurs when a single nucleotide (A, T, C, or G) in the DNA sequence is different between individuals in a population. SNPs are the most common type of genetic variation in the human genome.



SNPs can be used as genetic markers to identify and study the relationship between genetic variation and traits or diseases. This association can be established by analyzing large datasets of genetic and phenotypic information from individuals with and without the trait of interest.



You Vs. The Population

Your likelihood of trait expression is the cumulative effect of multiple genetic and non-genetic factors compared to the average risk in the population. Combining polygenic risk assessment with population nutritional assessment can provide valuable insights into the genetic and environmental factors that contribute to nutritional health.

SNP Image Source: <https://www.genome.gov/genetics-glossary/Single-Nucleotide-Polymorphisms>

How to read your reports

Trait Name:

Name of the Genetic Trait

Assessment:

The assessment shows the genetic predisposition likelihood for this trait. A Low assessment means you are unlikely to have a predisposition for this trait. A Moderate assessment means you have a somewhat higher than average predisposition likelihood for this trait. A High assessment means you have a significantly higher likelihood of this trait than the average person in the reference population.

Vitamin A (Carotene) Deficiency

Provitamin A carotenoids are found in plant-based foods such as carrots, spinach, and sweet potatoes. Beta-carotene is the most common provitamin A carotenoid and can be converted to vitamin A in the body. A deficiency of beta-carotene can indicate a lack of dietary intake of fruits and vegetables or an underlying health condition that impairs absorption. Carotenoids are important antioxidants and anti-inflammatory agents and have tremendous protective benefits for heart conditions, respiratory problems, elevated glucose levels, and various other ailments. Alpha and beta-carotenes contribute to skin and hair health. Genetic variants in CD36 and SCARB1 genes have been linked to lower levels of beta-carotene.

Your Genetic Risk: **High**

Your Rank: **70th Percentile**

8 / 13 Predisposing Variations

100% Coverage

Your Recommendations

1. You may want to consider a higher-than-recommended intake of provitamin A.
2. Eat a vitamin A-rich diet. You may also consider adding carotenoid-rich skin and hair care products to your beauty regimen.
3. If you decide to take a carotenoid supplement, consult a registered dietitian or physician first.

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Percentile score:

The population percentile shows where your genetic predisposition likelihood for this trait places you compared to the reference population.

Percentile score:

The population percentile shows where your genetic predisposition likelihood for this trait places you compared to the reference population.

Predisposing Variants:

Total predisposing genetic variants show the total number of genetic variants in your DNA sample that affect your predisposition likelihood for the trait.

Coverage:

The coverage reliability score shows what percentage of the target genetic variants for the trait were tested in your DNA sample. Ideally, the number should be closest to 100% to provide the best accuracy. Coverage reliability lower than 65% can mean that your assessment may not be as reliable because not enough genetic variants were present or correctly measured in the tested sample to provide an accurate result.

Recommendations:

Here are some general recommendations based on your assessment. Remember your health care provider's advice always overrules what is written here.

Traits to Prioritize

Here is a summary of your genetically-influenced traits that have a moderate or high likelihood of influencing your dietary choices. Explore the detailed report for each to understand why these traits deserve your attention and learn how to personalize your diet and lifestyle for the best results.

Bitter Taste Sensitivity

High

Lycopene Deficiency

Medium

Caffeine Metabolism

High

Weak Magnesium Processing

Medium

Weak Calcium Processing

Medium

Monounsaturated Fats Increased Benefits

High

Coenzyme Q10 Deficiency

Medium

Selenium Deficiency

Medium

Difficulty in Losing Weight

High

Sensitivity to Salt

Medium

Fat Overconsumption

Medium

Sugar Cravings

Medium

Fat Taste Perception

High

Weak Vitamin A (Carotene) Processing

High

Glutathione Deficiency

Medium

Weak Vitamin A (Retinol) Processing

High

Weak Iron Processing

High

Weak Vitamin B6 Processing

High

Low-carb Diet Effectiveness

Medium

Weak Vitamin B9 (Folate) Processing

Medium

Low-fat Diet Effectiveness

Medium

Weak Vitamin C Processing

Medium

Low Vegetable Intake

High

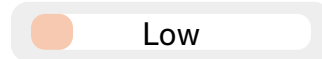
Weak Vitamin E Processing

High

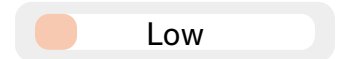
Traits without Significant Risk/Advantage

Here is a summary of dietary characteristics we've tested, and we've found no reason to believe your genetics would adversely affect them. Enjoy the peace of mind, knowing you don't need to worry about these aspects of your diet beyond your typical routine.

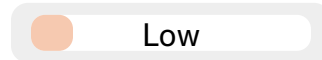
Carb Overconsumption Risk



Frequent Snack Craving



Choline Deficiency



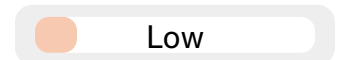
Starch Metabolism Impairment



Weak Copper Processing



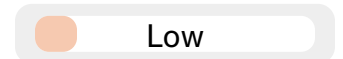
Sweet Snack Preference



Excessive Iron Levels



Increased Sensitivity to Trans Fats



Low Protein Intake Risk



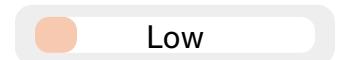
Weak Vitamin B1 Processing



Low Resting Metabolic Rate



Weak Vitamin B12 Processing



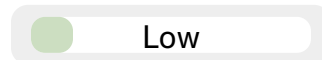
Lutein and Zeaxanthin Deficiency



Weak Vitamin B2 Processing



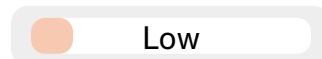
Mediterranean Diet Effectiveness



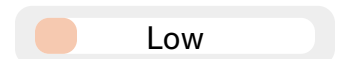
Weak Vitamin B5 Processing



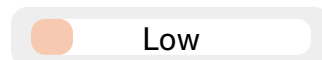
Overweight Potential



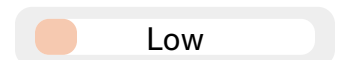
Weak Vitamin B7 Processing



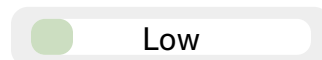
Phosphorus Deficiency



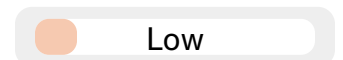
Weak Vitamin D Processing



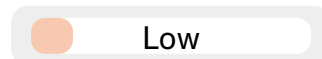
Polyunsaturated Fats Benefits



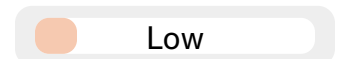
Weak Vitamin K Processing



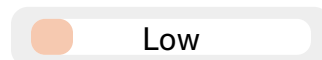
Risk from Saturated Fats



Weak Zinc Processing



Food Portion Control



Weak Vitamin A (Carotene) Processing

Vitamin A, the group of fat-soluble vitamins, is essential for immune system functioning, reproduction, healthy vision, maintenance of strong bones and teeth, red blood cell production, tissue repair, and skin health. Vitamin A comes in two forms: biologically active form, retinol, and provitamin A carotenoids (including alpha- and beta-carotenes) that are converted into retinol. Genetic variants in CD36 and SCARB1 genes have been linked to lower levels of beta-carotene.

Your Genetic Risk:

High

Your Rank:

85th Percentile

3/5

Predisposing
Variations

83%

Coverage

Your Recommendations

Incorporate foods rich in vitamin A into your diet, which include eggs, oranges, squash, broccoli, and leafy green vegetables. Eat a fat source like olive oil or yogurt with your vitamin A-rich food to increase absorption. You should be getting at least 700-900 mcg of vitamin A daily, depending on physical factors such as age, sex, and weight. Consult a physician or registered dietitian if you're considering supplementation, as there are toxic effects if consumed in excess. Consult a wellness provider if you're considering adding carotenoid-rich skin and hair care products to your beauty regimen.



Weak Vitamin A (Retinol) Processing

Vitamin A is essential for immune system functioning, reproduction, healthy vision, maintenance of strong bones and teeth, red blood cell production, tissue repair, and skin health. Vitamin A comes in two forms: biologically active form, retinol, and provitamin A carotenoids that need to be converted into retinol to be useful in the body. Studies show that variations in several key genes in the retinol metabolism pathway impair the conversion of carotenoids to retinol, increase breakdown, or decrease absorption of retinoic acid, therefore affecting the levels of retinol.

Your Genetic Risk:

High

Your Rank:

85th Percentile

4/7

Predisposing
Variations

100%

Coverage

Your Recommendations

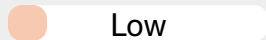
Incorporate foods rich in retinol into your diet, which include eggs, oranges, squash, broccoli, and leafy green vegetables. Eat a fat source like olive oil or yogurt with your retinol-rich food to increase absorption. If you're looking for a new comfort food, eat ice cream - it's rich in retinol. You should be getting at least 700-900 mcg of retinol daily, depending on physical factors such as age, sex, and weight. Consult a physician or registered dietitian if you're considering supplementation. Consult a wellness provider if you're considering adding retinol-rich skin and hair care products to your beauty regimen.



Weak Vitamin B1 Processing

Vitamin B1 (Thiamine), the first vitamin B that was discovered, is sometimes called anti-stress vitamin as it improves the body's ability to withstand stress, strengthens the immune system, fights depression, and assists healthy functioning of the nervous system. Thiamine is involved in several enzyme functions associated with the metabolism of carbohydrates and fatty acids. Severe thiamine deficiencies are rare (except in critically ill people and alcoholics), and they are associated with genetic diseases such as maple syrup urine disease and beriberi. Thiamine imbalances can result from poor dietary intake, reduced gastrointestinal absorption, increased metabolic requirements, or excessive loss of thiamin due to genetic variations.

Your Genetic Risk:



Your Rank:

40th Percentile

0/1
Predisposing
Variations

33%
Coverage

Your Recommendations

Foods rich in thiamine include cereals, whole grains, nuts, and beans. Consuming alcohol can reduce thiamine levels.



Weak Vitamin B2 Processing

Vitamin B2 (riboflavin) is involved in vital metabolic processes in the body and is necessary for energy production and normal cell function and growth. It is also crucial in helping other B vitamins undergo the chemical changes that make them useful and plays an important role in iron absorption. Emerging research shows that riboflavin may play a role in cancer prevention as well as helping with migraine headaches. People with a genetic predisposition for impaired vitamin B2 processing should consider additional supplementation.

Your Genetic Risk:



Your Rank:

20th Percentile

1/3
Predisposing
Variations

100%
Coverage

Your Recommendations

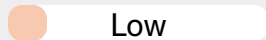
Foods rich in riboflavin include dairy products (such as milk, cheese, and yogurt), eggs, and enriched or fortified cereals. Other sources include grains, nuts, lean meats, liver, dark green vegetables (such as asparagus, broccoli, spinach, and turnip greens), fish, and poultry. Light destroys riboflavin - this is why milk is typically stored in opaque rather than clear containers.



Weak Vitamin B5 Processing

Vitamin B5 (pantothenic acid) is essential to many biochemical reactions in all forms of life (including plants and animals). Vitamin B5 is required to break down fats and carbohydrates, maintain a healthy digestive system, and produce red blood cells, sex, and stress-related hormones. While severe vitamin B5 deficiencies are very rare, imbalances may cause fatigue, depression, irritability, nausea, and upper respiratory infections.

Your Genetic Risk:



Your Rank:

25th Percentile

0/3

Predisposing
Variations

100%

Coverage

Your Recommendations

Foods rich in vitamin B5 include animal organs (liver and kidney), fish, shellfish, milk products, eggs, and avocados. Consuming alcohol can interfere with vitamin B5 levels.



Weak Vitamin B6 Processing

Vitamin B6 is involved in numerous essential processes, including protein metabolism, normal functioning of the immune and nervous systems, production of hemoglobin, and maintenance of normal levels of homocysteine. Vitamin B6, together with vitamin B2, B9 (folate), and choline, facilitates the methylation cycle, which is fundamental to life. Several studies have identified genetic variants associated with lower levels of vitamin B6 absorption.

Your Genetic Risk:

High

Your Rank:

90th Percentile

6/8

Predisposing
Variations

88%

Coverage

Your Recommendations

Incorporate foods rich in vitamin B6 into your diet, which include pork, peanuts, soybeans, oats, bananas, and carrots. Avoid alcohol, which can interfere with vitamin B6 levels. Avoid exercising too much, as it can interfere with vitamin B6 levels. If you have any of the additional risk factors for a vitamin B6 deficiency, consult a health professional to discuss supplements.



Weak Vitamin B7 Processing

Vitamin B7 (biotin) is required by all organisms. It is important for converting food into glucose, which is used to produce energy, producing fatty acids and amino acids. Biotin is essential for the normal function of the nervous system as well as the maintenance of normal skin and mucous membranes, activating metabolism in the hair roots and fingernail cells. Genetic variations in biotinidase enzyme are associated with lower levels of biotin. Symptoms of biotin imbalance include hair loss, brittle fingernails, fatigue, insomnia, and depression.

Your Genetic Risk:



Low

Your Rank:

70th Percentile

1/6
Predisposing
Variations

85%
Coverage

Your Recommendations

Foods rich in biotin include egg yolk, liver, nuts, and seeds. Biotin is common in skincare products.



Weak Vitamin B9 (Folate) Processing

Vitamin B9 (folate) is essential for vital processes such as DNA synthesis, methylation, cell repair and maintenance, protein metabolism, and the formation of blood cells. It is really important for pregnant women and women trying to conceive. Folic acid and folate are often used interchangeably, but folic acid is the type of folate found in vitamin supplements and fortified foods. Folate deficiencies are associated with anemia, elevated levels of homocysteine, pregnancy complications, and increased risk of cardiovascular diseases.

Your Genetic Risk:

Medium

Your Rank:

60th Percentile

9/17
Predisposing
Variations

100%
Coverage

Your Recommendations

Try to incorporate foods rich in folate into your diet, which include dark green vegetables like spinach, asparagus and broccoli, bananas, strawberries, oranges, tomato juice, cereals, nuts, and legumes. Try to avoid overcooking your vegetables, as heat can destroy folate. If you have any of the additional risk factors for a folate deficiency, consider consulting a health professional to discuss supplements.



Weak Vitamin B12 Processing

Vitamin B12 (cobalamin) is required for normal functioning of the brain, nervous and digestive systems, and red blood cell formation. It is involved in DNA synthesis, fatty acid, and amino acid metabolism. Vitamin B12 can only be manufactured by bacteria, and generally, it can be found in animal food sources. Slight imbalances in vitamin B12 can lead to anemia, fatigue, stomach inflammation, and affect the nervous system. Genetic variants in several genes, including FUT2, MTHFR, MTRR, and TCN2, have been linked to levels of vitamin B12.

Your Genetic Risk:



Low

Your Rank:

20th Percentile

5/15
Predisposing
Variations

100%
Coverage

Your Recommendations

Foods rich in cobalamin include liver, red meat, fish, shellfish, milk and other dairy products, nutritional yeast, eggs, and fortified soy. Vitamin C can inhibit vitamin B12 absorption.



Weak Vitamin C Processing

Vitamin C (ascorbic acid) is a water-soluble compound that is critical in numerous vital processes. Vitamin C is essential for the normal functioning of the immune system, production of red blood cells, healthy connective tissues, blood vessels, bones, teeth, and gums. It is a powerful antioxidant, and it participates in iron absorption. Scientific studies identified several genetic variations associated with lower levels of vitamin C.

Your Genetic Risk:

Medium

Your Rank:

70th Percentile

4/5

Predisposing
Variations

55%

Coverage

Your Recommendations

Try to incorporate foods rich in vitamin C into your diet, which include oranges, grapefruits, cantaloupes, kiwi, mango, papaya, pineapple, strawberries, and raspberries. Other sources you can incorporate include blueberries, cranberries, and watermelon; vegetables such as broccoli, brussels sprouts, cauliflower, green and red peppers, and spinach. Try to avoid overcooking your vegetables, as heat can destroy vitamin C. If you have any of the additional risk factors for a vitamin C deficiency, consider consulting a health professional to discuss supplements.



Weak Vitamin D Processing

Vitamin D is a fat-soluble vitamin that is critical to bone and muscle health and the normal functioning of the immune, endocrine, and cardiovascular systems, including its role as a defense against COVID-19 severity. Vitamin D can be synthesized in the skin upon exposure to sunlight. Large-scale studies have identified genetic variants in several genes (including the vitamin binding receptor, VDR; vitamin binding protein GC, and NAD coenzyme) that contribute to vitamin D deficiencies.

Your Genetic Risk:



Your Rank:

30th Percentile

6/13
Predisposing
Variations

100%
Coverage

Your Recommendations

Using sunscreen won't halt vitamin D production - the body only needs a few minutes of sunlight exposure to produce the vitamin D it needs for the day. Foods rich in vitamin D include certain mushrooms, egg yolks, cheese, beef, and fatty fish such as tuna, mackerel, trout, herring, sardines, kipper, anchovies, or carp. Some foods are also fortified with vitamin D, including milk and other dairy products, breakfast cereals, orange juice, and soy drinks.



Weak Vitamin E Processing

Vitamin E is a fat-soluble nutrient that includes eight naturally occurring compounds (four tocopherols and four tocotrienols). Vitamin E acts as an antioxidant, helping to protect cells from the damage caused by free radicals. It is required for the normal functioning of the immune system, blood vessels, and many organs in the body. Vitamin E reduces the risk of life-threatening blood clots. Vitamin E imbalances are relatively common and caused by a diet that does not include a sufficient amount of good fats, fat malabsorption disorders, and genetic variations.

Your Genetic Risk:

High

Your Rank:

95th Percentile

6/12
Predisposing
Variations

100%
Coverage

Your Recommendations

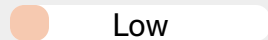
Incorporate foods rich in vitamin E into your diet, which include avocados, whole grains, wheat germs, vegetable oils, nuts such as peanuts, and hazelnuts. Eat a fat source like olive oil or yogurt with your vitamin E-rich food to increase absorption. Add products rich in vitamin E to your skincare routine, as it can be topically absorbed. Consult a physician or registered dietitian if you're considering supplementation, as there are toxic effects if consumed in excess.



Weak Vitamin K Processing

Vitamin K is a group of fat-soluble vitamins (including phylloquinone, or vitamin K1, phytonadione, and K2, menaquinone) that is essential for promoting healthy blood clotting and healthy bones. A growing body of research indicates that optimum intake of vitamin K contributes to longevity. Vitamin K plays a protective role against many modern diseases, including atherosclerosis, osteoporosis, diabetes, and some types of cancer. Genetic variations contribute to vitamin K imbalances: in fact, some variants have been linked to higher levels of circulating phylloquinone levels, while others contribute to lower vitamin K levels.

Your Genetic Risk:



Your Rank:

35th Percentile

4/6

Predisposing
Variations

66%

Coverage

Your Recommendations

Plants rich in vitamin K include fresh green vegetables, including spinach, kale, broccoli, lettuce, swiss chard, and parsley. Animal sources include eggs, cheeses, yogurt, liver, and pork chops. Eating a fat source like olive oil or yogurt with your vitamin K-rich food can increase absorption.



Lutein and Zeaxanthin Deficiency

Lutein and zeaxanthin (LZ) are yellow to red xanthophylls, a type of naturally occurring carotenoids. Lutein and zeaxanthin block blue light from reaching the underlying structures in the retina, reducing the risk of light-induced oxidative damage that could lead to macular degeneration and cataracts, which are the leading causes of visual impairment and acquired blindness. Lutein and zeaxanthin also have important general antioxidant functions in the body. Along with other natural antioxidants, including vitamin C, beta carotene and vitamin E, they guard the body from damaging effects of free radicals. Lutein may also contribute to protection against atherosclerosis (buildup of fatty deposits in arteries), the disease that leads to most heart attacks.

Your Genetic Risk:



Your Rank:

30th Percentile

7/9

Predisposing
Variations

100%

Coverage

Your Recommendations

Yellow, orange, and green colored vegetables are great sources of LZ. These include the following: peas, yellow corn, beet greens, pumpkin, brussel sprouts, broccoli, romaine and iceberg lettuce, asparagus, and carrots. Other sources of LZ are eggs, orange juice, and any yellow-colored fruit. Lutein is best absorbed with a serving of fat, such as olive oil.



Lycopene Deficiency

Lycopene is a bright red carotene, and it gives many fruits and vegetables (tomatoes, watermelons, papayas, pink grapefruits, red carrots) their red color. Lycopene is the most powerful antioxidant that is commonly found in the diet: it has a high capacity to remove free radicals. It also helps to protect the skin from the damage by sunlight. Lycopene is present at higher levels in skin, liver, lungs, prostate, colon and adrenal glands. Scientific studies have linked higher consumption of lycopene rich foods with reduced risk of various diseases, including cardiovascular disease, asthma, some cancers, and age-related vision problems. Lycopene has not got an official status of an essential nutrient. Nevertheless, it is widely considered beneficial for immune system, skin and eye health.

Your Genetic Risk:

Medium

Your Rank:

70th Percentile

4/11

Predisposing
Variations

100%

Coverage

Your Recommendations

Try to eat more tomatoes - they're one of the best sources of lycopene. Experiment with cooking your tomatoes with olive oil or other good fats - lycopene from cooked tomatoes is absorbed over twice as effectively than from fresh tomatoes. If tomatoes don't work for you, consider including watermelons, guava, papaya, pink grapefruit in your diet, as all are sources of lycopene. Consider lycopene supplementation, as it is no harder for you to absorb lycopene found in supplements than lycopene found naturally. Try to avoid supplements that contain calcium, beta-carotene, or lutein, as they can all block lycopene absorption.



Sensitivity to Salt

Sodium, the primary element we get from salt, is essential for life. It is important for multiple body functions, from maintaining the proper balance of water and minerals to conducting nerve impulses and muscle contractions. Too much sodium in the diet can lead to fluid retention and high blood pressure. Individuals vary considerably in their response to sodium intake and salt-sensitivity, which is partly determined by genetics.

Your Genetic Risk:

Medium

Your Rank:

50th Percentile

11/16
Predisposing
Variations

100%
Coverage

Your Recommendations

Consider buying more vegetables, fruits, and low-dairy products when you shop: they all tend to contain less salt. When shopping, try to keep an eye on food labels, which will list sodium levels. Try to limit your sodium intake to less than 2300 mg/day. Consider substituting herbs and spices for salt in meals to help you start to slowly wean yourself off. If you find yourself having symptoms of salt sensitivity, consider bringing it up with your primary healthcare provider.



Weak Iron Processing

Iron is an essential mineral that our bodies need for many functions. Iron is a key element in the metabolism of almost all living organisms. It is a part of many proteins, including oxygen-carrying proteins, hemoglobin (found in red blood cells), and myoglobin (found in muscle cells). Iron is also an essential component of antioxidant enzymes and metabolizing enzymes (cytochromes). Iron deficiency is the world's most common nutrient deficiency. Several genetic variations are associated with iron processing impairment in the body.

Your Genetic Risk:

High

Your Rank:

95th Percentile

13/17

Predisposing
Variations

100%

Coverage

Your Recommendations

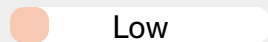
Include animal sources of iron, such as beef, poultry, liver, oysters, salmon, and tuna, into your diet. Also include plant sources, such as beans, fortified cereals, and dark leafy greens like spinach. If you're a vegan or vegetarian, ensure you're getting enough iron: eat more tofu, rice, and pasta. Avoid sources high in calcium, such as dairy products, as they will slow down your absorption of iron. Check with your doctor to see if any medications or antibiotics you're on may be contributing to an iron deficiency.



Excessive Iron Levels

While iron is an essential mineral, too much iron may damage your body. Genetic variations affect how much iron is absorbed, leading to iron overload despite normal iron intake. The excess of iron in the body can lead to fatigue, anorexia, dizziness, nausea, vomiting, headache, weight loss, and shortness of breath. Some people have a genetic disorder of iron metabolism called hereditary hemochromatosis (HH). As many as one in 10 people have at least one genetic variation associated with iron overload.

Your Genetic Risk:



Your Rank:

90th Percentile

2/6
Predisposing
Variations

100%
Coverage

Your Recommendations

Animal sources of iron include beef, poultry, liver, oysters, salmon, and tuna. Plant sources include beans, fortified cereals, and dark leafy greens like spinach. Donating blood can help reduce your iron levels.



Weak Calcium Processing

Calcium is the most abundant mineral in the human body and a major constituent of bones and teeth. It plays a central role in the functions of your nervous system and muscles, controlling blood vessels and insulin secretion. It is important to get enough calcium as long-term calcium deficiency can result in bone loss and osteoporosis. Too high calcium levels in the blood (hypercalcemia) are not good either, as they may weaken the bones and contribute to kidney, heart, and brain problems. Calcium regulation is influenced significantly by genetics.

Your Genetic Risk:

Medium

Your Rank:

65th Percentile

3/10
Predisposing
Variations

90%
Coverage

Your Recommendations

Try incorporating sources rich in calcium into your diet, including spinach, kale, broccoli, figs, almonds, dairy products, sardines, and salmon. Alcohol consumption may lead to decreased calcium absorption - cut back on alcohol or increase calcium consumption to compensate. Increase your consumption of calcium if you're vegan or lactose intolerant, as you may unintentionally be lowering your calcium intake. Check with a doctor or dietician to make sure you're meeting your daily requirements, and consider taking calcium supplements.



Weak Magnesium Processing

Magnesium is an essential mineral involved in numerous physiological pathways, including energy metabolism, nerve control, neurotransmitter release, and blood pressure regulation. Magnesium is an important electrolyte needed for proper muscle function, strong bones, and good heart health. Several genetic variants have been associated with magnesium levels: some variants contribute to lower levels of magnesium, while others are associated with higher magnesium.

Your Genetic Risk:

Medium

Your Rank:

60th Percentile

3/11

Predisposing
Variations

100%

Coverage

Your Recommendations

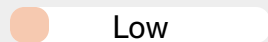
Try incorporating food sources of magnesium into your diet, including brazil nuts, almonds, cashews, pumpkin seeds, sesame seeds, avocados, oats, legumes, bananas, and dark chocolate. Try to avoid diuretics like alcohol, coffee, or some prescription medications, as they can cause you to lose more magnesium when urinating. Be wary of foods rich in calcium, zinc, or iron, as they can also interfere with your magnesium levels. Try to eat your vegetables raw instead of cooking them - raw vegetables tend to help you absorb magnesium. You may also want to meet with a doctor or dietician to consider adding magnesium supplements to your diet.



Phosphorus Deficiency

Phosphorus is another essential mineral that is required by every cell in the body for normal functioning. It is the second most abundant mineral in the body. It contributes to healthy bone mineralization and healthy teeth maintenance. Phosphorus plays role in cell signaling, energy production, digestion, hormonal balance, proper nutrient utilization as well as muscle and nerve functioning. While serious dietary phosphorus deficiency is uncommon, low calcium-to-phosphorus intake ratio may be detrimental to bone health, especially in women at increased risk for osteoporosis. Symptoms of phosphorus deficiency include weak bones, stiff joints, numbness, weakness, loss of appetite, anxiety. Too much phosphorus is not good either as it affects the balance of minerals in the body.

Your Genetic Risk:



Your Rank:

50th Percentile

2/2

Predisposing
Variations

100%

Coverage

Your Recommendations

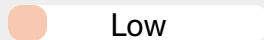
Beef, chicken, and dairy products are good dietary sources of phosphorus. Fish, such as cod, tuna, sardines, halibut, and whiting are all high in phosphorus. Beans, nuts and seeds are the best plant sources of phosphorus.



Weak Zinc Processing

Zinc is an essential trace mineral that is needed for all forms of life. Zinc is required for many regulatory, catalytic, and structural processes in the body. It plays an important role in the healthy functioning of the immune system, wound healing, cell division, and protein synthesis. Zinc deficiency has been linked to impaired immune system function, increased colds and infections, diarrhea, loss of appetite, delayed wound healing, hair loss, taste abnormalities, and mental lethargy. Several genetic variants have been associated with lower levels of zinc.

Your Genetic Risk:



Your Rank:

35th Percentile

1/8
Predisposing
Variations

88%
Coverage

Your Recommendations

Foods rich in zinc include crab, lobster, nuts, beans, and whole grains. Foods high in calcium, iron, or magnesium all compete with zinc for the same binding sites, meaning only a certain amount of them can be absorbed at a time. Zinc from plant sources is four times more difficult to absorb than zinc from meats.



Selenium Deficiency

Selenium (Se) is a vital trace mineral essential for reproductive, immune, and thyroid health. As a potent antioxidant, it works with vitamins C, E and glutathione. Regions with selenium-deficient soil, like parts of the UK and China, often see more deficiencies. In the US, Midwestern and Western States have higher selenium soil levels. Optimal selenium intake can reduce age-related diseases and boost fertility. Factors affecting selenium levels include genetics, smoking, stress, and certain autoimmune conditions.

Your Genetic Risk:
Medium

Your Rank:
65th Percentile

7/10
Predisposing
Variations

100%
Coverage

Your Recommendations

Try to eat more foods rich in selenium, which include a variety of mushrooms (in particular, crimini), brazil nuts, pork, beef, turkey, chicken, eggs, and seafood. Shop local: go to farmer's markets, as local products tend to be higher in selenium. Try to get more selenium if you tend to be more active: high levels of physical activity can lower selenium levels. Note that selenium can be toxic if consumed in high amounts. Try to limit alcohol intake when consuming more selenium, as their combination can be dangerous.



Weak Copper Processing

Copper is another essential trace mineral that has several important functions in the human body. It is a cofactor in many oxidation-reduction reactions, and it plays an important role in the health of blood vessels, nerves, immune system, bones, and connective tissues (hair, skin, nails, tendons, ligaments). It is integral for energy production, the formation of collagen, and iron absorption. Several genetic variants were associated with copper levels, and they may contribute to impaired immune function, anemia, and premature skin aging.

Your Genetic Risk:



Low

Your Rank:

70th Percentile

5/6

Predisposing
Variations

100%

Coverage

Your Recommendations

Protein food sources rich in copper include shellfish, oysters, and organ meats. Vegetable sources include beans, avocado, potatoes, leafy greens, and shiitake mushrooms. Other sources include whole grains, nuts, spirulina, and dark chocolate.



Choline Deficiency

Choline, a water-soluble essential micronutrient, is crucial for various bodily functions, including cell membrane integrity, nerve signaling, lipid transport, and methylation reactions. Though not a mineral, it's often classified with B-complex vitamins. Choline deficiency can lead to muscle damage, fat accumulation in the liver, and potentially nonalcoholic fatty liver disease. While the body can produce small amounts of choline, adequate dietary intake is vital for optimal health. Endurance athletes, bodybuilders, and heavy drinkers may be particularly at risk for choline deficiency, and increased intake is recommended during pregnancy and breastfeeding.

Your Genetic Risk:



Low

Your Rank:

45th Percentile

2/6

Predisposing
Variations

100%

Coverage

Your Recommendations

Foods rich in choline include chicken and turkey liver, eggs, milk, and peanuts. Several vegetables are rich in choline, including avocado, onions, spinach, brussels sprouts, broccoli, and soybeans. Drinking alcohol can limit choline intake.



Glutathione Deficiency

Glutathione, a potent antioxidant produced by the liver, plays critical roles in tissue building, immune response, nutrient metabolism, and cellular regulation, including cell growth and apoptosis. Dubbed the master antioxidant, it eliminates free radicals, peroxides, lipid peroxides, and heavy metals, while also aiding in the functionality of other antioxidants like vitamins C, E, selenium, and carotenoids. A deficiency in glutathione can lead to oxidative stress, contributing to aging and related diseases. Genetic variations in certain genes can reduce glutathione production and activity, impairing its detoxifying abilities. Though present in many foods, glutathione's absorption from fruits and vegetables may be low, yet adequate protein intake can boost its production in the body.

Your Genetic Risk:

Medium

Your Rank:

65th Percentile

3/7

Predisposing
Variations

58%

Coverage

Your Recommendations

Try eating more protein rich foods, such as beef, pork, poultry, fish, cheese, tofu, and legumes, which can all increase glutathione production. You can induce glutathione activity by eating more cruciferous vegetables, such as cauliflower, cabbage, garden cress, bok choy, broccoli, and Brussels sprouts. Try to get regular exercise to boost glutathione production. Keep in mind that athletic overtraining may result in lower glutathione. Though glutathione supplements are readily available, be sure to discuss it with your healthcare provider before taking them.



Coenzyme Q10 Deficiency

Coenzyme Q10 (CoQ10) is a fat-soluble compound synthesized by the body and obtained from diet, crucial for cellular energy production, especially in high-energy demanding organs like the heart, liver, and kidneys. It also acts as an antioxidant and is known to assist in quicker recovery post-cardiovascular surgeries when combined with other nutrients. However, genetic variations, such as in the NQO1 gene, can affect CoQ10 bioavailability, hindering its conversion to ubiquinol. CoQ10 levels naturally decrease with age, and certain prescription drugs may further deplete them. Notably, primary CoQ10 deficiency, a severe disorder affecting neuronal and muscular function, is linked to rare genetic defects not covered by Lifenome testing.

Your Genetic Risk:

Medium

Your Rank:

70th Percentile

2/5

Predisposing
Variations

100%

Coverage

Your Recommendations

Try to include organ meats high in CoQ10, such as the heart, liver, and kidney, into your meals. Meat sources include trout, pork, beef, mackerel, and sardines. Vegetable sources include soybeans, lentils, spinach, and broccoli. Be conscious of which medicines you take, as some (such as statins and anticoagulants) may lower CoQ10 levels. When taking CoQ10, try to pair it with a meal that contains fat, as it is fat-soluble. While no major side effects for CoQ10 have been reported, always tell your doctor if you are using a dietary supplement.



Polyunsaturated Fats Benefits

Polyunsaturated fats are mainly omega-3 and omega-6 fatty acids. Omega-3 fats are a key family of polyunsaturated fats (EPA/DHA/ALA) that humans must get from food. Omega-3s are beneficial for heart and brain health: they lower blood pressure and heart rate, improve blood vessel function, and reduce triglycerides and system inflammation. Several large-scale studies identified genetic variations in and near the FADS enzymes that interfere with the metabolism of omega-3 and omega-6 fats.

Your Genetic
Strength:



Your Rank:
50th Percentile

4/10
Predisposing
Variations

100%
Coverage

Your Recommendations

Walnuts and flaxseed are both valuable sources of omega-3s and 6s. Replacing meats with fish can also boost your intake of polyunsaturated fats. Reading nutrition labels is another great way to keep track of your fat intake.



Monounsaturated Fats Increased Benefits

In addition to tremendous health benefits of omega-3 (alpha linoleic acid) and omega-6 (linoleic acid) fats, there are several other fats that are important for good health. These include monounsaturated (healthier) fatty acids such as omega-7 (palmitoleic acid found in macadamia nuts, for example), omega-9 (oleic acid found in olive oil), as well as some saturated fats (for example, those found in coconut oil or peanuts). These fats are known for their anti-inflammatory properties, lowering triglycerides, reducing blood pressure. Good quality monounsaturated fats are also beneficial for skin as they maintain water level in the epidermis and supply the ceramides and fats that keep the bricks and mortar of the skin and hair healthy and intact.

Your Genetic
Strength:

High

Your Rank:
95th Percentile

5/6
Predisposing
Variations

100%
Coverage

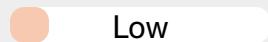
Your Recommendations

Substitute solid fats for liquid fats to increase your monounsaturated fat consumption. You can also cut down on the amount of processed snacks you have by switching to a more natural alternative, like switching chips and cookies out for nuts and trail mix. When making a sandwich, add avocado or peanut butter, as they are high in monounsaturated fats. Add chia or flax seeds into your smoothies or oatmeal for an easy way to increase your monounsaturated fat consumption. Read nutrition labels to keep an eye on how much fat you're consuming. Consult a dietitian to explore other changes you can make in your diet.

Increased Sensitivity to Trans Fats

Humans cannot synthesize trans fatty acids (trans fats). Trans fats are considered the worst type of fat you can eat. Trans fats are of two types: natural and artificial. Trans fats are linked to adverse health outcomes: they raise bad cholesterol levels (LDL) and lower good cholesterol levels (HDL), increasing the risk of developing heart diseases and type 2 diabetes. People with genetic variants in or near the fatty acid desaturase (FADS1 and 2) cluster are more sensitive to the adverse effects of trans fats.

Your Genetic Risk:



Your Rank:

45th Percentile

4/13
Predisposing
Variations

100%
Coverage

Your Recommendations

Vegetables, fruit, and unprocessed whole grains all contain no trans fat. Foods made with hydrogenated or partially hydrogenated oil and shortening tend to be higher in trans fat. Baking your own food instead of relying on pre-packaged mixes is a great way to reduce trans fat intake.



Overweight Potential

Multiple studies have demonstrated a significant role of genetics in overweight potential and obesity. Genetic variations influencing our propensity to gain and keep extra weight are common. The genes that were once beneficial to our ancestors during food shortages have become liabilities in today's environment of food excess. Variants in two lipolytic receptors in fat cells, ADRB2 and ADRB3, are found to be associated with high BMI and excessive weight gain due to high carb intake, in particular refined carbs.

Your Genetic Risk:



Low

Your Rank:

30th Percentile

2/9

Predisposing
Variations

100%

Coverage

Your Recommendations

Replacing simple carbs (such as cookies, white bread, or crackers) with complex carbs (whole wheat bread, fruits, and vegetables) will slow down digestion, pack in more nutrients, and leave you feeling more full. Keep an eye out for carb-dense drinks such as juices, sodas, or alcohol. Unsaturated fats pose less of a health risk than saturated fats.



Mediterranean Diet Effectiveness

The Mediterranean diet is known to have many health benefits. It is rich in monounsaturated (good) fats that are important in reducing risks of heart disease, increasing good cholesterol, and delaying cognitive decline. It is also associated with longevity. In people with genetic variations in the ADIPOQ, PPARG, MTHFR, TCF7L2, LPL, and MLXIP genes, the Mediterranean diet helps facilitate increased fat loss and improve metabolic health.

Your Genetic
Strength:



Your Rank:
55th Percentile

2/4
Predisposing
Variations

100%
Coverage

Your Recommendations

Staples of the Mediterranean diet include olive oil, vegetables, and legumes. Fresh fruits are often eaten as a dessert or snack. Proponents of the Mediterranean diet recommend swapping out red or processed meat for seafood or fish.



Low-carb Diet Effectiveness

Carbohydrates are the main fuel source, and they provide vitamins, minerals, antioxidants, and fiber in the diet. But there are substantial health benefits to limiting your carbohydrate intake. People with genetic variations in several genes associated with obesity, insulin sensitivity, and high levels of bad cholesterol (LDL) are more sensitive to carbohydrates in their diet. These people may benefit more from a low carbohydrate diet that reduces the amount of calories from carbohydrates while consuming nearly equal proportions of fats and proteins.

Your Genetic
Strength:

Medium

Your Rank:
70th Percentile

7/10
Predisposing
Variations

100%
Coverage

Your Recommendations

Consider replacing simple carbs (such as cookies, white bread, or crackers) with complex carbs (whole wheat bread, fruits, and vegetables) to slow down digestion, pack in more nutrients, and feel more full after every meal. Make sure you're still eating your fruits and vegetables, even though they contain carbs. Check your intake of carb-dense drinks such as juices, sodas, or alcohol. Salty, savory snacks such as chips and pretzels tend to be high in carbs and low in protein - consider replacing them with higher-protein snacks like nuts or eggs. Consider consulting a nutritionist to explore other changes you can make in your diet.



Low-fat Diet Effectiveness

It is recommended to limit fat intake to 35% of total calories and control saturated fat intake. A low-fat diet restricts fat intake to 20% while increasing protein and complex carbohydrate intake. At least 12% of daily calories should come from poly and monounsaturated fats. Numerous large-scale studies on weight loss found that people with variations in genes associated with sensitivity to fat (such as FTO, PPARG, APOA2, LIPC) are more responsive to low-fat diets if their goal is weight loss.

Your Genetic
Strength:

Medium

Your Rank:
70th Percentile

7/17
Predisposing
Variations

100%
Coverage

Your Recommendations

Consider eating more unsaturated fats, such as those found in fish, olive oil, avocados, and nuts. Consider switching to fatty fish (such as salmon, mackerel, or tuna), as they tend to have a lower fat content than fatty meats (steak, bacon, or lamb). Mindful eating tactics - such as sitting down for a meal, slowing down when eating, and chewing food more thoroughly - can all help you avoid overeating. Try increasing your water intake throughout the day to feel more satiated. Try to cut down on sauces and toppings, as they tend to be high in fat.



Difficulty in Losing Weight

Not everyone loses weight at the same rate. Some people lose a few pounds a week after they follow any calorie-restrictive diet, while others attempt all kinds of trendy weight-loss diets but do not see results. Studies found that genetics is, at least, in part to blame for the difficulty in losing weight. Studies have shown that carriers of some genetic variations associated with obesity, sensitivity to fat (FTO, PPARG), type 2 diabetes (TCF7L2), emotional eating (SIRT1), and food addiction (DRD2) do not lose weight as easily as other people while on the same diet and exercise regimen.

Your Genetic Risk:

High

Your Rank:

90th Percentile

5/11
Predisposing
Variations

100%
Coverage

Your Recommendations

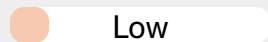
Even though your genes play a factor in your weight loss, exercise and diet are still the two most important factors. Weight management is mostly about diet - controlling your portions and planning ahead is a great way to get to your target weight. Learn to follow your hunger: don't overeat just because there's more on the plate. Remember that being hungry only means that you have to eat soon, not that you have to eat a lot. If you're having trouble controlling your weight, consult a dietician or nutrition specialist about identifying a root cause.



Low Resting Metabolic Rate

Our body weight depends on the balance between energy intake and energy expenditure. Energy intake comes from calories consumed, and energy is spent by the body to maintain normal body temperature and essential processes such as metabolism, breathing, and brain functioning. Individual differences in the energy cost of self-maintenance (resting metabolic rate, RMR) are substantial and depend on age, weight, environment, and genetics. The heritability of RMR is 40-50% of the variance remaining after adjustment for age, gender, and lean body mass.

Your Genetic Risk:



Your Rank:

20th Percentile

2/10
Predisposing
Variations

100%
Coverage

Your Recommendations

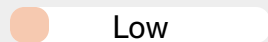
Replacing sugary drinks with cold water - especially before meals - is a great way to boost your metabolism. High-intensity workouts can speed up your metabolism, even after you finish working out. Standing more can help you burn calories and boost your metabolism, especially when compared to sitting.



Food Portion Control

Satiety refers to the physical sensation of fullness from eating. When satiety is normal, the brain receives a signal that enough calories have been consumed, reducing the feeling of hunger. People with genetic variations in the FTO, LEPR, and DNMT3B genes are more likely to be eating more without feeling full and satisfied. There is also a correlation between low satiety and weight gain. Genetic variation associated with low satiety is also linked to higher consumption of high-sugar and high-fat foods.

Your Genetic Risk:



Your Rank:

25th Percentile

1/3
Predisposing
Variations

100%
Coverage

Your Recommendations

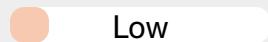
Consuming more fiber and protein will help you feel fuller for longer. Mindful eating tactics - such as sitting down for a meal, slowing down when eating, and chewing food more thoroughly - can all help you stop yourself from overeating. Increasing your water intake throughout the day can make you feel more satiated.



Frequent Snack Craving

Some people feel hungry more often than others and are impulsively driven to frequent snacking, which, if left unchecked, can result in weight gain. Variations in the MC4R, leptin receptor (LEPR), NMB, and BDNF genes have been linked to increased snacking. Genetic variations in the MC4R gene are also significantly associated with higher BMI and obesity.

Your Genetic Risk:



Your Rank:

65th Percentile

2/4
Predisposing
Variations

100%
Coverage

Your Recommendations

Planning out your snacks throughout the day can let you indulge without overeating. Vegetables with hummus are a great low-calorie, nutrient-dense snack. Keeping fruit within arm's reach can help you make healthier choices throughout the day since you'll be more likely to choose it over a processed snack that's farther away.



Bitter Taste Sensitivity

Taste perception plays a fundamental role in our dietary preferences and behaviors by shaping aversions (or cravings) to foods and drinks. The perception of bitterness is due to genetic variations in several bitter taste receptors. When food enters the mouth, molecules like PTC interact with saliva and then bind to taste receptors in the mouth, giving the sensation of a bitter taste. People with these genetic variations are sensitive to bitter vegetables that are beneficial (like broccoli, Brussel sprouts, cabbage) or drinks (like coffee).

Your Genetic Risk:

High

Your Rank:

90th Percentile

3/4

Predisposing
Variations

100%

Coverage

Your Recommendations

Experiment with new herbs or spices - changing up the flavor profile can be a great way to deter bitterness. Try different cooking methods - swapping baking for frying, or vice versa, can help bring out different flavors in food that you may enjoy more. Adding milk, cheese, olive oil, or other fatty ingredients can mask the bitterness of the dish underneath. Sprinkle some salt over a traditionally bitter dish to help you enjoy it. Desensitizing yourself to bitterness is also an option.



Sugar Cravings

A person with a sugar craving predisposition will often crave sweets and snack on sugary foods. Genetic variations in TAS1R2, GLUT2, and FUT1 may be responsible for sugar cravings and the preference for sweet snacks. This may lead to weight gain and elevated glucose levels, as well as pose a future threat of Type-II diabetes in people with predispositions to these conditions.

Your Genetic Risk:

Medium

Your Rank:

95th Percentile

2/5
Predisposing
Variations

100%
Coverage

Your Recommendations

Try snacking on sweet foods like fruits, carrots, or sweet potatoes instead of candy or chocolates. Try to listen to your body: learning your hunger and fullness cues can help prevent overeating. Try to savor every bite of a sweet snack instead of rushing through - it'll help you feel fuller faster. Be wary of artificial sweeteners - they don't lessen sugar cravings and aren't that much healthier. Try to plan out your meals - eat what you intend to eat.



Fat Overconsumption

Fat is a dense source of energy and essential fatty acids, and it also facilitates the absorption of fat-soluble vitamins. However, too much fat consumption may result in heart disease and becoming overweight. Several recent global studies indicate that the percentage of energy derived from saturated fat is above the acceptable range, while the opposite was observed for monounsaturated and polyunsaturated fat. Several genetic variations are known to influence the amount of fat consumed by individuals and their overall fat intake craving.

Your Genetic Risk:

Medium

Your Rank:

80th Percentile

2/9

Predisposing
Variations

90%

Coverage

Your Recommendations

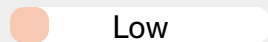
Consider switching out fatty meats (such as steak, bacon, or lamb) for fatty fish (salmon, mackerel, or tuna), as they are less likely to lead to fat accumulation. Try incorporating foods high in unsaturated fats like avocados, nuts, and olive oil into your daily diet, as they are easier to process and digest. When it comes to meats, baking, boiling, or grilling them is always preferable to frying. Focus on lean cuts of meat, like sirloins, over fatty cuts like tenderloins. Try keeping a food diary: keeping track of what you consume is crucial to identifying food habits and changing up your diet.



Carb Overconsumption Risk

Carbohydrates serve as the primary energy source for the brain and of the kilocalories to maintain body weight. Individuals with specific genetic variations are more likely to crave carbs than others. This may result in over-consumption of carbs for such individuals. The recommended carbohydrate intake is 45-65% of total calories intake. Starch and sugar are the major types of carbohydrates. Grains and vegetables (corn, pasta, rice, potatoes, breads) are sources of starch.

Your Genetic Risk:



Low

Your Rank:

40th Percentile

3/10

Predisposing
Variations

100%

Coverage

Your Recommendations

Replacing simple carbs (such as cookies, white bread, or crackers) with complex carbs (whole wheat bread, fruits, and vegetables) will slow down digestion, pack in more nutrients, and leave you feeling more full. Mind your mentality - going "all or nothing" is likely to lead to overeating. Keep an eye out for carb-dense drinks such as juices, sodas, or alcohol.



Low Protein Intake Risk

Protein is the major structural component of all cells in the body, and functions as enzymes, transport carriers, and some hormones. Large studies have identified genetic predispositions associated with protein intake. Some genetic variations are associated with a tendency for lower protein intake, while others are found to be associated with higher consumption of protein.

Your Genetic Risk:



Your Rank:

65th Percentile

2/5
Predisposing
Variations

100%
Coverage

Your Recommendations

Meat isn't the only source of protein - non-meat sources include nuts, beans, and seeds. High-protein snacks include hard-boiled eggs, cheese, and Greek yogurt. Quinoa, rye, and buckwheat are all whole grains that are high in protein.



Low Vegetable Intake

It is a well-known fact that the consumption of fruits and vegetables adds important under-consumed nutrients to diets. Fruits and vegetables reduce the risk of heart disease, stroke, and some cancers and help manage weight. Most UAE residents consume too few fruits and vegetables. It is important to ensure you have adequate amounts of fruits and vegetables in your diet.

Your Genetic Risk:

High

Your Rank:

85th Percentile

3/3

Predisposing
Variations

100%

Coverage

Your Recommendations

Experiment with a variety of preparations - including roasting, sautéing, steaming, or boiling - as each one vastly influences a vegetable taste and texture. Exploring different cuisines to discover new vegetables and new methods of preparation - you're bound to stumble upon one that you like. Pair vegetables with dishes you already enjoy. If you don't like the texture of raw or cooked vegetables, blend them into soups or smoothies. Salads should be on almost every menu. When eating in, use pre-washed greens so that convenience is not a barrier.



Fat Taste Perception

There is growing evidence that foods we crave are at least partially determined by our genetics. Genetic variation in taste receptors (or taste buds) may account for differences in our food choices and dietary habits. Research reported that people with a variant in the CD36 gene do not taste dietary fats as much. These people crave fats more than people with who detect lower amounts of fats in food. In fact, there is consistent emerging evidence that fat is the sixth primary taste, with some people being genetic supertasters and others low-tasters of fat. Low fat taste perception is linked with dietary consumption of fatty foods which in combination with other factors lead to extra weight.

Your Genetic Risk:

High

Your Rank:

65th Percentile

1/1
Predisposing
Variations

100%
Coverage

Your Recommendations

Eat leaner meats, such as fish, which can decrease your overall fat intake. Pay attention to the ingredients of foods you eat to stay conscious of what you're consuming. Expand your palate by trying a variety of flavored foods. This will help you find foods that you enjoy, and make your diet more flexible. Consult a dietician to explore changes you can make in your diet. Consume healthy fats, such as those found in avocado, butter, coconut, and olive oil. Avoid frying your foods: instead, look at baking, broiling, or grilling them.



Caffeine Metabolism

Cytochrome P450 1A2 (CYP1A2) is the primary enzyme responsible for the metabolism of caffeine. People with the AA genotype at rs762551 (within the CYP1A2 gene) are fast metabolizers, while those with the AC or CC are slow metabolizers. For people with normal caffeine metabolism, it only takes 45 minutes for 99% of the caffeine to be absorbed through these membranes. However, those with genetic variations impairing their metabolism can become hypersensitive to tiny amounts of caffeine.

Your Genetic Risk:

High

Your Rank:

95th Percentile

1/1
Predisposing
Variations

100%
Coverage

Your Recommendations

Drink a lot of water and exercise regularly to increase alertness as an alternative to caffeine. Reduce your caffeine intake by getting decaf or watering down some of your more caffeinated drinks. If you're used to higher caffeine intake, be sure to cut back gradually. Shorten the brew time on your tea to reduce the caffeine content while still getting that great taste. If you're determined to cut out caffeine, be sure to read labels carefully.



Starch Metabolism Impairment

Starch is a complex carbohydrate. Foods high in starch include grains (oats, barley, rice) and starchy vegetables (potatoes, beans, corn, lentils). Starch is metabolized by a digestive enzyme called amylase. In some people, amylase can account for up to half of total protein in the saliva, while other people have barely detectable levels. Large variation in the levels of amylase depends on various factors, including stress as well as genetics.

Your Genetic Risk:



Low

Your Rank:

50th Percentile

1/4

Predisposing
Variations

80%

Coverage

Your Recommendations

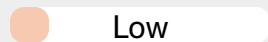
Vegetables like broccoli, tomatoes, and zucchini are low in starch. Fruits like bananas, figs, and dates which are high in starch. White rice and bread have higher starch levels than their brown counterparts.



Risk from Saturated Fats

It is no secret that large amounts of saturated fats are not good for anyone. People with genetic variations in the FABP and APOA2 genes were found to be under higher risk of elevated triglycerides, elevated cholesterol, and extra weight. If your genetic predisposition to elevated triglycerides is high, avoiding foods that are rich in saturated fats is very important.

Your Genetic Risk:



Your Rank:

50th Percentile

1/2
Predisposing
Variations

100%
Coverage

Your Recommendations

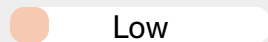
Baked goods, deli meats, and processed foods all have saturated fats. Fatty fish (such as salmon, mackerel, or tuna) tend to have a lower fat content than fatty meats (steak, bacon, or lamb). Sauces and toppings also tend to be high in fat - cutting down on those can be a great way to reduce fat consumption.



Sweet Snack Preference

Scientists from 23andme looked at taste preferences among about over 110,000 customers of European ancestry and identified two genetic biomarkers associated with preference of sweet snacks to salty or savory ones. The study identified variants in two genes, FGF21 and FTO. These genes are not associated with sweet tooth and taste receptors. These genes affect how people metabolize food. This is yet another example that while your culture, habits and your age influence the foods you tend to like, genetics plays it important role too.

Your Genetic Risk:



Your Rank:

40th Percentile

1/2
Predisposing
Variations

100%
Coverage

Your Recommendations

Sweet foods like fruits, carrots, or sweet potatoes are far healthier than candy or chocolates. Learning your hunger and fullness cues can help prevent overeating. Savoring every bite of a sweet snack instead of rushing through can help you feel fuller faster.



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At LifeNome, you control your data and profile and can delete your data and profile at any time. This will erase your raw genetic data from our databases. The well-being reports generated will be kept for your future reference. LifeNome does not share any personally identifiable genetic information with any other third party entities. You understand that LifeNome may use your genotype and phenotype data as part of an aggregate and anonymous research analysis to improve its genomics algorithm.

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LifeNome takes the security of your data seriously. We use state-of-the-art security measures and encryption technologies to safeguard your personal information. You will be responsible for safeguarding your login information and should not share your authentication information to any third party. Please notify us of any unauthorized use of your password.

Statement of Limitations

LifeNome provides non-disease wellness information only. The information provided by LifeNome does not constitute medical advice and

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