



Silverberry Genomix

Ask Your Genes

DNA Wellness Reports

Confidentiality Note

The information contained in this document is privileged and confidential information. The current DNA Wellness Reports are generated for the user SM.

About Silverberry Genomix

Silverberry Genomix is a DNA Lifestyle Company that utilizes the latest advances in genomics science and machine learning methods (AI) to generate personalized wellness reports based on your genes.

Using a saliva sample, 100s+ of reports are generated in the areas of nutrition, exercise, skin care, allergy and personality development to optimize fitness plans and daily wellness decisions.

Revolutionary Genomics Technology and Rigorous Science

Most applications rely on single genetic variation-single genetic trait association studies publicly available. Silverberry explores a network of genetic variations influencing your potential predisposition using an aggregate analysis of more than 2,400 scientific studies and enhanced through learning artificial intelligence algorithms.

Silverberry Statement of Limitations

DNA-based predisposition is NOT a diagnosis of a disease or condition. Predisposition risk or likelihood is a statistical measure based on the latest advances in genomics science and is provided as an additional layer of information for wellness decision-making. Silverberry recommendations fall within general guidelines for wellness and do not constitute medical advice. Consult with your general physician, dermatologist, personal trainer or other certified experts before making any major changes to your routines.

For more information visit [Terms of Use](#) and [Privacy Policy](#) pages.

For information about DNA-Wellness reports visit www.silverberrygenomix.com or contact info@silverberrygenomix.com Silverberry Genomix. 44 Tehama St, San Francisco, CA 94105. Tel: 415-598-9070

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Weight Management Summary Report

This is the summary of your 28 reports.

Positive Traits

Advantaged

- Exercise Benefits for Lowering Cholesterol
- Exercise Benefits for Maximal Oxygen Uptake Response
- Lean Body Mass Potential
- Low-fat Diet Effectiveness

Slightly Advantaged

- Aerobic performance
- Polyunsaturated Fats Increased Benefits

Normal

- Low-carb Diet Effectiveness
- Mediterranean Diet Effectiveness
- Monounsaturated Fats Increased Benefits
- Muscle Response to Resistance Training
- Overall Fitness Benefits

Risky Traits

Elevated

- Carb Overconsumption
- Joint Injury Risk
- Low Protein Intake Risk
- Low Resting Metabolic Rate
- Muscle Strength Loss
- Starch Metabolism
- Sweet Tooth
- Trans Fats Sensitivity

Slightly Elevated

- Exercise Aversion
- Fat Taste Perception
- Risk from Saturated Fats
- Satiety Impairment
- Slow Muscle Repair
- Snacking

Normal

- Difficulty in Losing Weight
- Fat Overconsumption
- Overweight Potential



Basic Wellness Summary Report

This is the summary of your 35 reports.

Positive Traits

Advantaged

- Exercise Benefits for Lowering Cholesterol
- Exercise Benefits for Maximal Oxygen Uptake Response
- Lean Body Mass Potential
- Low-fat Diet Effectiveness

Slightly Advantaged

- Aerobic performance
- Polyunsaturated Fats Increased Benefits
- Joint Flexibility

Normal

- Low-carb Diet Effectiveness
- Mediterranean Diet Effectiveness
- Monounsaturated Fats Increased Benefits
- Muscle Response to Resistance Training
- Overall Fitness Benefits
- Exploratory Behavior
- Reading Aptitude

Risky Traits

Elevated

- Carb Overconsumption
- Joint Injury Risk
- Low Protein Intake Risk
- Low Resting Metabolic Rate
- Muscle Strength Loss
- Starch Metabolism
- Sweet Tooth
- Trans Fats Sensitivity
- Caffeine Metabolism Impairment
- Seasonality

Slightly Elevated

- Exercise Aversion
- Fat Taste Perception
- Risk from Saturated Fats
- Satiety Impairment
- Slow Muscle Repair
- Snacking
- Poor tanning ability

Normal

- Difficulty in Losing Weight
- Fat Overconsumption
- Overweight Potential
- Dryness

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MY ASSESSMENT

- Good News! You seem to have some advantageous genetic predispositions for Aerobic performance
- 3 variations found in your genes for this trait
- Your overall predisposition score for this trait is higher than 65% of the population and is considered statistically advantaged compared to the general population.

WHAT TO DO

VO2 max (maximal aerobic capacity) is the maximum rate of oxygen uptake as measured during incremental exercise, most typically on a motorized treadmill. Maximal oxygen uptake reflects the aerobic physical fitness of the individual, and is an important determinant of their endurance capacity during prolonged, submaximal exercise. . Just a few of the benefits of aerobic fitness are lower blood pressure, lower cholesterol and less risk of obesity, Type II diabetes and heart disease. Aerobic performance measured as the maximal rate of oxygen consumption (VO2max) is an important determinant of the endurance capacity during prolonged exercise. VO2 max (V - volume, O2 - oxygen, max - maximum) is measured during incremental exercise. Overall, maximal oxygen consumption reflects the aerobic physical fitness of the individual, and it is widely accepted as the single best measure of cardiovascular fitness and maximal aerobic power. Absolute values of VO2 max are typically 40-60% higher in men than in women. Starting at about the age of 30, our lung capacity begins to decrease. By the time we are 50 our lung capacity may be half of what it was in our youth. Decreased lung capacity means respiratory function is impaired and less oxygen is getting into our cells. This explains why shortness of breath, decreased endurance, and susceptibility to respiratory illness commonly increases with age. We check for several genetic variants that are associated with aerobic performance.

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WHAT IS AEROBIC PERFORMANCE

VO2 max (maximal aerobic capacity) is the maximum rate of oxygen uptake as measured during incremental exercise, most typically on a motorized treadmill. Maximal oxygen uptake reflects the aerobic physical fitness of the individual, and is an important determinant of their endurance capacity during prolonged, submaximal exercise. . Just a few of the benefits of aerobic fitness are lower blood pressure, lower cholesterol and less risk of obesity, Type II diabetes and heart disease. Aerobic performance measured as the maximal rate of oxygen consumption (VO2max) is an important determinant of the endurance capacity during prolonged exercise. VO2 max (V - volume, O2 - oxygen, max - maximum) is measured during incremental exercise. Overall, maximal oxygen consumption reflects the aerobic physical fitness of the individual, and it is widely accepted as the single best measure of cardiovascular fitness and maximal aerobic power. Absolute values of VO2 max are typically 40-60% higher in men than in women. Starting at about the age of 30, our lung capacity begins to decrease. By the time we are 50 our lung capacity may be half of what it was in our youth. Decreased lung capacity means respiratory function is impaired and less oxygen is getting into our cells. This explains why shortness of breath, decreased endurance, and susceptibility to respiratory illness commonly increases with age. We check for several genetic variants that are associated with aerobic performance.

Contributing Genetic Variations

rs9922134, rs7191721, rs7144481

Inhibiting Genetic Variations

No inhibiting genetic variations were found

MY ASSESSMENT

- Good News! You seem to have low genetic predispositions risk for Carb Overconsumption
- 5 variations found in your genes for this trait
- Your overall predisposition score for this trait is lower than 30% of the population and is considered statistically low compared to the general population.

WHAT TO DO

Carbohydrates serve as the primary energy source for the brain and its role as a source of 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 intake for 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. Natural sugars are found in fruits and juices. Sources of added sugars are soft drinks, candy, fruit drinks, and desserts.

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WHAT IS CARB OVERCONSUMPTION

Carbohydrates serve as the primary energy source for the brain and its role as a source of 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 intake for 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. Natural sugars are found in fruits and juices. Sources of added sugars are soft drinks, candy, fruit drinks, and desserts.

Contributing Genetic Variations

rs2024125, rs4702718, rs1542608, rs197273

Inhibiting Genetic Variations

rs2840445

MY ASSESSMENT

- You seem to have elevated genetic predispositions risk for Difficulty in Losing Weight
- 8 variations found in your genes for this trait
- Your overall predisposition score for this trait is higher than 95% of the population and is considered statistically risky compared to the general population.

WHAT TO DO

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 difficulty in losing weight. Studies have shown that carriers of some genetic variations have more difficulties losing weight and improving their metabolic health than people with reference, or common, alleles. People with genetic variants associated with obesity, sensitivity to fat (FTO, PPARG), type 2 diabetes (TCF7L2) emotional eating (CLOCK, SIRT1) and food addiction (DRD2), do not lose weight as easily as other people while on the same diet and exercise regiment. It is important to remember that genetics plays role in weight loss and weight maintenance. Some medical conditions and medications can also hinder weight loss. The most common ones are hypothyroidism, hormonal changes in women, chronic stress and depression.

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WHAT IS 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 difficulty in losing weight. Studies have shown that carriers of some genetic variations have more difficulties losing weight and improving their metabolic health than people with reference, or common, alleles. People with genetic variants associated with obesity, sensitivity to fat (FTO, PPARG), type 2 diabetes (TCF7L2) emotional eating (CLOCK, SIRT1) and food addiction (DRD2), do not lose weight as easily as other people while on the same diet and exercise regiment. It is important to remember that genetics plays role in weight loss and weight maintenance. Some medical conditions and medications can also hinder weight loss. The most common ones are hypothyroidism, hormonal changes in women, chronic stress and depression.

Contributing Genetic Variations

rs1800497, rs7903146, rs16147, rs322695, rs4994, rs1440581, rs1801260, rs9939609

Inhibiting Genetic Variations

No inhibiting genetic variations were found

MY ASSESSMENT

- You seem to have slightly elevated genetic predispositions risk for Exercise Aversion
- 6 variations found in your genes for this trait
- Your overall predisposition score for this trait is higher than 75% of the population and is considered statistically risky compared to the general population.

WHAT TO DO

Your motivation for physical activity is partly influenced by your genetics. How your body feels during a workout (e.g oxygen transportation and lung capacity), and how you are predispositioned to respond mentally to the challenge all come down to your genetic makeup. Studies indicate that up to 50% of your like or dislike for exercise comes down to your DNA. There is a difference between exercise aversion and a lack of motivation, where the former is a stronger inhibition factor. If you have specific genetic variations, it may result in a lower biological desire to engage in physical activity making exercise your least favorite activity.

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WHAT IS EXERCISE AVERSION

Your motivation for physical activity is partly influenced by your genetics. How your body feels during a workout (e.g oxygen transportation and lung capacity), and how you are predispositioned to respond mentally to the challenge all come down to your genetic makeup. Studies indicate that up to 50% of your like or dislike for exercise comes down to your DNA. There is a difference between exercise aversion and a lack of motivation, where the former is a stronger inhibition factor. If you have specific genetic variations, it may result in a lower biological desire to engage in physical activity making exercise your least favorite activity.

Contributing Genetic Variations

rs12101846, rs2762527, rs10887741, rs238404

Inhibiting Genetic Variations

rs8097348, rs1766581

MY ASSESSMENT

- Great News! You seem to have Significant advantageous genetic predispositions for Exercise Benefits for Lowering Cholesterol
- 3 variations found in your genes for this trait
- Your overall predisposition score for this trait is higher than 90% of the population and is considered statistically advantaged compared to the general population.

WHAT TO DO

Research has shown that exercise stimulates enzymes that help move bad cholesterol from the blood to the liver, allowing it to be excreted as bile. It is also stipulated that exercise increases the size of the protein particles that carry cholesterol through the blood, reducing the possibility that smaller particles may clog arteries. People with some genetic variants will have good results at increasing levels of good cholesterol by exercise alone, while carriers of other genetic variants are less likely to succeed to lower bad cholesterol levels by exercise alone.

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WHAT IS EXERCISE BENEFITS FOR LOWERING CHOLESTEROL

Research has shown that exercise stimulates enzymes that help move bad cholesterol from the blood to the liver, allowing it to be excreted as bile. It is also stipulated that exercise increases the size of the protein particles that carry cholesterol through the blood, reducing the possibility that smaller particles may clog arteries. People with some genetic variants will have good results at increasing levels of good cholesterol by exercise alone, while carriers of other genetic variants are less likely to succeed to lower bad cholesterol levels by exercise alone.

Contributing Genetic Variations

rs2016520, rs1800588, rs1532624

Inhibiting Genetic Variations

No inhibiting genetic variations were found

Exercise Benefits for Maximal Oxygen Uptake Response

Assessment: **Normal**

MY ASSESSMENT

- Great News! You seem to have Significant advantageous genetic predispositions for Exercise Benefits for Maximal Oxygen Uptake Response
- 14 variations found in your genes for this trait
- Your overall predisposition score for this trait is higher than 85% of the population and is considered statistically advantaged compared to the general population.

WHAT TO DO

VO2 max (also maximal oxygen consumption, maximal oxygen uptake, peak oxygen uptake or maximal aerobic capacity) is the maximum rate of oxygen consumption as measured during incremental exercise, most typically on a motorized treadmill. One of the exercise benefits is improvement in maximal oxygen uptake response. When you exercise your muscles are working harder than normal and, as a result, they require more energy than normal. Since the ATP energy used by your muscles is generated with the aid of oxygen, it follows that an increase in exercise intensity will result in an increase in muscular oxygen demands. Therefore, increased exercise intensity ultimately corresponds to an increased VO2. This is the reason that your breathing gets progressively faster and deeper as your exercise intensity increases, your body is trying to provide more oxygen to your working muscles so that they can generate enough ATP energy to keep you moving. People with differences in genetics, gender, age and fitness state respond differently to the same exercise training program. At least 50% of these differences have been found to be due to genetic variations.

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WHAT IS EXERCISE BENEFITS FOR MAXIMAL OXYGEN UPTAKE RESPONSE

VO2 max (also maximal oxygen consumption, maximal oxygen uptake, peak oxygen uptake or maximal aerobic capacity) is the maximum rate of oxygen consumption as measured during incremental exercise, most typically on a motorized treadmill. One of the exercise benefits is improvement in maximal oxygen uptake response. When you exercise your muscles are working harder than normal and, as a result, they require more energy than normal. Since the ATP energy used by your muscles is generated with the aid of oxygen, it follows that an increase in exercise intensity will result in an increase in muscular oxygen demands. Therefore, increased exercise intensity ultimately corresponds to an increased VO2. This is the reason that your breathing gets progressively faster and deeper as your exercise intensity increases, your body is trying to provide more oxygen to your working muscles so that they can generate enough ATP energy to keep you moving. People with differences in genetics, gender, age and fitness state respond differently to the same exercise training program. At least 50% of these differences have been found to be due to genetic variations.

Contributing Genetic Variations

rs7531957, rs884736, rs6552828, rs2428514, rs6090314, rs959066, rs2523849, rs2198009, rs4952535, rs2517518, rs4973706, rs10921078, rs4938561, rs353625

Inhibiting Genetic Variations

No inhibiting genetic variations were found

MY ASSESSMENT

- You seem to have elevated genetic predispositions risk for Fat Overconsumption
- 5 variations found in your genes for this trait
- Your overall predisposition score for this trait is higher than 85% of the population and is considered statistically risky compared to the general population.

WHAT TO DO

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 studies in the US and Europe indicate that the percentage of energy derived from saturated fat is above the acceptable range, while the opposite was observed for mono-unsaturated and poly-unsaturated fat. Several genetic variations are known to influence the amount of fat consumed by individuals and their overall fat intake craving.

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WHAT IS 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 studies in the US and Europe indicate that the percentage of energy derived from saturated fat is above the acceptable range, while the opposite was observed for mono-unsaturated and poly-unsaturated fat. Several genetic variations are known to influence the amount of fat consumed by individuals and their overall fat intake craving.

Contributing Genetic Variations

rs13290799, rs11890236, rs7625360, rs13114435, rs1167125

Inhibiting Genetic Variations

No inhibiting genetic variations were found

MY ASSESSMENT

- You seem to have slightly elevated genetic predispositions risk for Fat Taste Perception
- 1 variations found in your genes for this trait
- Your overall predisposition score for this trait is higher than 60% of the population and is considered statistically risky compared to the general population.

WHAT TO DO

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 super-tasters 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.

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WHAT IS FAT TASTE PERCEPTION

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Contributing Genetic Variations

rs1527479

Inhibiting Genetic Variations

No inhibiting genetic variations were found

MY ASSESSMENT

- Good News! You seem to have low genetic predispositions risk for Joint Injury Risk
- 5 variations found in your genes for this trait
- Your overall predisposition score for this trait is lower than 45% of the population and is considered statistically low compared to the general population.

WHAT TO DO

Many sports-related injuries involve damage to the joints. Common joint injuries include a twisted ankle, sprained wrist, overextended elbow, and damaged knee ligaments. When exercising you can be more at risk for overuse injuries. But you can build strength in your joints and avoid joint injuries by stretching and exercising correctly.

The risk of joint injury is associated with higher genetic predisposition to osteoarthritis. Knowing about this risk is important in adjusting duration and intensity of training sessions. Sports and high-impact activities lead to cartilage lesions, and may lead to joint injuries. Your risk for the joint injury is computed based on 13 genetic variations that were found to be associated with joint problems.

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WHAT IS JOINT INJURY RISK

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Contributing Genetic Variations

rs17610181, rs16944, rs1207421, rs10948172, rs8044769

Inhibiting Genetic Variations

No inhibiting genetic variations were found

MY ASSESSMENT

- Great News! You seem to have Significant advantageous genetic predispositions for Lean Body Mass Potential
- 8 variations found in your genes for this trait
- Your overall predisposition score for this trait is higher than 65% of the population and is considered statistically advantaged compared to the general population.

WHAT TO DO

Your lean body mass is the portion of your weight that is not fat. Your lean body mass is actually composed of your muscle and bone tissue as well as the water in your body and your organs – everything except the fat beneath the surface of your skin. Leaner body mass has a strong genetic component. If you are predisposed to having a higher lean body mass, you have a better chance of attaining a muscular body through fitness exercises than the average population. Higher lean body mass also decreases the likelihood of excessive body weight, obesity, impaired protein balance, osteoporosis and sarcopenia.

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WHAT IS LEAN BODY MASS POTENTIAL

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Contributing Genetic Variations

rs3925087, rs7832552, rs2276541, rs1056513, rs4735098, rs12409277

Inhibiting Genetic Variations

rs2066470, rs2830395

Low Protein Intake Risk

Assessment: **Elevated**

MY ASSESSMENT

- Good News! You seem to have low genetic predispositions risk for Low Protein Intake Risk
- 2 variations found in your genes for this trait
- Your overall predisposition score for this trait is lower than 5% of the population and is considered statistically low compared to the general population.

WHAT TO DO

Protein is the major structural component of all cells in the body, and functions as enzymes, transport carriers and as some hormones. Large study 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.

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WHAT IS LOW PROTEIN INTAKE RISK

Protein is the major structural component of all cells in the body, and functions as enzymes, transport carriers and as some hormones. Large study 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.

Contributing Genetic Variations

No contributing genetic variations were found

Inhibiting Genetic Variations

rs9939609, rs1421085

MY ASSESSMENT

- Good News! You seem to have low genetic predispositions risk for Low Resting Metabolic Rate
- 5 variations found in your genes for this trait
- Your overall predisposition score for this trait is lower than 65% of the population and is considered statistically low compared to the general population.

WHAT TO DO

Body weight depends on the balance between energy intake and energy expenditure. Energy intake comes from calories consumed, and energy expenditure is the energy that body uses to maintain normal body temperature and essential processes such as metabolism, breathing, 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 fat-free mass. Uncoupling proteins, UCP1 and UCP3, play important roles in regulating body temperature and energy expenditure: these proteins are found in brown fats and they are involved in metabolic process by which energy is dissipated as heat in response to excess of caloric intake and cold stress. People with genetic variations in the UCP genes tend to have lower RMR.

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WHAT IS LOW RESTING METABOLIC RATE

Body weight depends on the balance between energy intake and energy expenditure. Energy intake comes from calories consumed, and energy expenditure is the energy that body uses to maintain normal body temperature and essential processes such as metabolism, breathing, 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 fat-free mass. Uncoupling proteins, UCP1 and UCP3, play important roles in regulating body temperature and energy expenditure: these proteins are found in brown fats and they are involved in metabolic process by which energy is dissipated as heat in response to excess of caloric intake and cold stress. People with genetic variations in the UCP genes tend to have lower RMR.

Contributing Genetic Variations

rs1800592, rs3811787, rs6818288, rs1011397, rs2075577

Inhibiting Genetic Variations

No inhibiting genetic variations were found

MY ASSESSMENT

- You do not seem to have known advantageous genetic predispositions for Low-carb Diet Effectiveness
- 4 variations found in your genes for this trait
- Your overall predisposition score for this trait is lower than 10% of the population and is considered statistically compared to the general population. Therefore it is considered below a threshold where it would be deemed a statistically advantageous trait.

WHAT TO DO

Carbohydrates are the main fuel source, and they provide vitamins, minerals, antioxidants and fiber in the diet. While your body uses carbohydrates as its main fuel source, there are substantial health benefits to limiting your carbohydrate intake. There are two major types of carbohydrates, simple (bad) and complex (good). Simple carbohydrates include sugary foods, pasta, bread, and white rice. Complex carbohydrates are whole grains, and legumes, including brown rice, and whole wheat breads. It is beneficial to eat more complex carbohydrates. 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 low carbohydrate diet that reduces the amount of calories from carbohydrates and consuming nearly equal proportions of fats and proteins. A low-carb diet restricts the type and amount of carbohydrates you eat. In general, a low-carb diet focuses on proteins, including meat, poultry, fish and eggs, and some nonstarchy vegetables. A low-carb diet generally excludes or limits most grains, legumes, fruits, breads, sweets, pastas and starchy vegetables, and sometimes nuts and seeds.

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WHAT IS LOW-CARB DIET EFFECTIVENESS

Carbohydrates are the main fuel source, and they provide vitamins, minerals, antioxidants and fiber in the diet. While your body uses carbohydrates as its main fuel source, there are substantial health benefits to limiting your carbohydrate intake. There are two major types of carbohydrates, simple (bad) and complex (good). Simple carbohydrates include sugary foods, pasta, bread, and white rice. Complex carbohydrates are whole grains, and legumes, including brown rice, and whole wheat breads. It is beneficial to eat more complex carbohydrates. 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 low carbohydrate diet that reduces the amount of calories from carbohydrates and consuming nearly equal proportions of fats and proteins. A low-carb diet restricts the type and amount of carbohydrates you eat. In general, a low-carb diet focuses on proteins, including meat, poultry, fish and eggs, and some nonstarchy vegetables. A low-carb diet generally excludes or limits most grains, legumes, fruits, breads, sweets, pastas and starchy vegetables, and sometimes nuts and seeds.

Contributing Genetic Variations

rs1042713, rs1042714, rs7957619, rs3764261

Inhibiting Genetic Variations

No inhibiting genetic variations were found

MY ASSESSMENT

- Great News! You seem to have Significant advantageous genetic predispositions for Low-fat Diet Effectiveness
- 13 variations found in your genes for this trait
- Your overall predisposition score for this trait is higher than 95% of the population and is considered statistically advantaged compared to the general population.

WHAT TO DO

General recommendation is to limit fat intake to 35% of total calories and to control saturated fat intake. A low-fat diet restricts fat intake to 20%, while increases protein and complex carbohydrate intake. Monitoring saturated fats is particularly important: at least 12% of daily calories should come from poly- and monounsaturated fats. The other 80% of calories in the diet come from carbohydrates and protein with general recommendations to consume about 55-60% of carbs and 20-25% of proteins. Low fat high protein diet is based on boosting protein intake to 40%, while decreasing carbohydrate intake to 40%. 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.

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WHAT IS LOW-FAT DIET EFFECTIVENESS

General recommendation is to limit fat intake to 35% of total calories and to control saturated fat intake. A low-fat diet restricts fat intake to 20%, while increases protein and complex carbohydrate intake. Monitoring saturated fats is particularly important: at least 12% of daily calories should come from poly- and monounsaturated fats. The other 80% of calories in the diet come from carbohydrates and protein with general recommendations to consume about 55-60% of carbs and 20-25% of proteins. Low fat high protein diet is based on boosting protein intake to 40%, while decreasing carbohydrate intake to 40%. 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.

Contributing Genetic Variations

rs1800588, rs9939609, rs7903146, rs16147, rs4994, rs5082, rs1440581, rs2287019, rs2070895, rs8050136, rs1558902, rs1799883, rs1801260

Inhibiting Genetic Variations

No inhibiting genetic variations were found

MY ASSESSMENT

- You do not seem to have known advantageous genetic predispositions for Mediterranean Diet Effectiveness
- 2 variations found in your genes for this trait
- Your overall predisposition score for this trait is lower than 45% of the population and is considered statistically compared to the general population. Therefore it is considered below a threshold where it would be deemed a statistically advantageous trait.

WHAT TO DO

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, delaying cognitive decline. It is also associated with longevity. Research by Mayo Clinic has shown that the traditional Mediterranean diet reduces the risk of heart disease. The diet has been associated with a lower level of oxidized low-density lipoprotein (LDL) cholesterol — the "bad" cholesterol that's more likely to build up deposits in your arteries. According to the Mayo Clinic, a meta-analysis of more than 1.5 million healthy adults demonstrated that following a Mediterranean diet was associated with a reduced risk of cardiovascular mortality as well as overall mortality. The Mediterranean diet is also associated with a reduced incidence of cancer, and Parkinson's and Alzheimer's diseases. Women who eat a Mediterranean diet supplemented with extra-virgin olive oil and mixed nuts may have a reduced risk of breast cancer (<http://www.mayoclinic.org/healthy-lifestyle/nutrition-and-healthy-eating/in-depth/mediterranean-diet/art-20047801>)Mayo Clinic).

In people with genetic variations in the ADIPOQ, gene and Mediterranean diet also helps to facilitate fat loss and to improve metabolic health. Genetic variations in several other genes, including PPARG, MTHFR, TCF7L2, LPL and MLXIPL, were found to be associated with increased advantage of following the Mediterranean diets.

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WHAT IS MEDITERRANEAN DIET EFFECTIVENESS

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Contributing Genetic Variations

rs1801133, rs17300539

Inhibiting Genetic Variations

No inhibiting genetic variations were found

MY ASSESSMENT

- You do not seem to have known advantageous genetic predispositions for Monounsaturated Fats Increased Benefits
- 3 variations found in your genes for this trait
- Your overall predisposition score for this trait is lower than 55% of the population and is considered statistically compared to the general population. Therefore it is considered below a threshold where it would be deemed a statistically advantageous trait.

WHAT TO DO

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. The Mediterranean Diet, known for its numerous health benefits, is heavily influenced by monounsaturated fats. They are also good for keeping heart healthy. 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.

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WHAT IS MONOUNSATURATED FATS INCREASED BENEFITS

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Contributing Genetic Variations

rs1931575, rs102275, rs3134950

Inhibiting Genetic Variations

No inhibiting genetic variations were found

MY ASSESSMENT

- You do not seem to have known advantageous genetic predispositions for Muscle Response to Resistance Training
- 3 variations found in your genes for this trait
- Your overall predisposition score for this trait is lower than 5% of the population and is considered statistically compared to the general population. Therefore it is considered below a threshold where it would be deemed a statistically advantageous trait.

WHAT TO DO

Muscle-strengthening are recommended to be included in fitness routines for a minimum of 2 days a week. Long-term systematic resistance training increases skeletal muscle size and strength in both men and women of different ages. While studies demonstrate that nearly all individuals will get some benefit from RT, RT-induced gains in muscle size and strength are highly variable between individuals. Muscle strength and size gains following standardized program depend on gender, age, general health, nutrition, and genetics. Several studies reported associations with muscle strength and size. People with some genetic variations gained higher (isometric) muscle strength and biceps size in response to the same resistance training routine.

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WHAT IS MUSCLE RESPONSE TO RESISTANCE TRAINING

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Contributing Genetic Variations

rs1137101, rs10482614

Inhibiting Genetic Variations

rs4634384

MY ASSESSMENT

- Good News! You seem to have low genetic predispositions risk for Muscle Strength Loss
- 2 variations found in your genes for this trait
- Your overall predisposition score for this trait is lower than 15% of the population and is considered statistically low compared to the general population.

WHAT TO DO

From the time you are born to around the time you turn 30, your muscles grow larger and stronger. But at some point in your 30s, you start to lose muscle mass and function. The cause is age-related sarcopenia. Physically inactive people can lose as much as 3% to 5% of their muscle mass each decade after age 30. Even if you are active, you'll still have some muscle loss.

The speed by which we lose muscle strength when we stop exercising, depends on a variety of factors, such as age, diet and the amount of sleep that we get. Sometimes even two weeks of physical inactivity can result in substantial muscle strength loss. Genetic variants in some inflammation-related genes (IGF2) were found to be related to the greatest muscle strength loss after exercise.

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WHAT IS MUSCLE STRENGTH LOSS

From the time you are born to around the time you turn 30, your muscles grow larger and stronger. But at some point in your 30s, you start to lose muscle mass and function. The cause is age-related sarcopenia. Physically inactive people can lose as much as 3% to 5% of their muscle mass each decade after age 30. Even if you are active, you'll still have some muscle loss.

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Contributing Genetic Variations

rs4244808, rs3213221

Inhibiting Genetic Variations

No inhibiting genetic variations were found

MY ASSESSMENT

- You do not seem to have known advantageous genetic predispositions for Overall Fitness Benefits
- 4 variations found in your genes for this trait
- Your overall predisposition score for this trait is lower than 30% of the population and is considered statistically compared to the general population. Therefore it is considered below a threshold where it would be deemed a statistically advantageous trait.

WHAT TO DO

The health benefits of regular exercise and physical activity are hard to ignore. Everyone benefits from exercise, regardless of age, sex or physical ability. Exercise can help prevent excess weight gain or help maintain weight loss. Regular exercise helps prevent or manage a wide range of health problems and concerns, including stroke, metabolic syndrome, type 2 diabetes, depression, a number of types of cancer, arthritis and falls. Exercise delivers oxygen and nutrients to your tissues and helps your cardiovascular system work more efficiently. And when your heart and lung health improve, you have more energy to tackle daily chores.

Some people show quick and strong benefits, while others need more exercise and changes to their diets too. For people with some genetic variants, active life-style was shown to produce quick results to lower levels of cholesterol, triglycerides, and blood pressure.

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WHAT IS OVERALL FITNESS BENEFITS

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Contributing Genetic Variations

rs2016520, rs1800588, rs4082919, rs1532624

Inhibiting Genetic Variations

No inhibiting genetic variations were found

MY ASSESSMENT

- You seem to have elevated genetic predispositions risk for Overweight Potential
- 7 variations found in your genes for this trait
- Your overall predisposition score for this trait is higher than 95% of the population and is considered statistically risky compared to the general population.

WHAT TO DO

Multiple studies have demonstrated a significant role for genetics in overweight potential and obesity. Genetic variations influencing our propensity to gaining and keeping extra weight are not uncommon. The genes that were once beneficial to our ancestors during food shortages have become liabilities in today's environment of food excess. Some people have the tendency to gain weight through fat consumption. Variants in the FTO, FABP2 and PPARG genes have been found to be associated with this problem. 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. Genetic variants in MC4R gene are associated with increased frequency of snacking, and higher risk of diabetes. While overweight related traits have a significant genetic component, diet, habits, and lifestyle play important roles too.

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WHAT IS OVERWEIGHT POTENTIAL

Multiple studies have demonstrated a significant role for genetics in overweight potential and obesity. Genetic variations influencing our propensity to gaining and keeping extra weight are not uncommon. The genes that were once beneficial to our ancestors during food shortages have become liabilities in today's environment of food excess. Some people have the tendency to gain weight through fat consumption. Variants in the FTO, FABP2 and PPARG genes have been found to be associated with this problem. 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. Genetic variants in MC4R gene are associated with increased frequency of snacking, and higher risk of diabetes. While overweight related traits have a significant genetic component, diet, habits, and lifestyle play important roles too.

Contributing Genetic Variations

rs1042713, rs9939609, rs1042714, rs1421085, rs4994, rs12970134, rs17782313

Inhibiting Genetic Variations

No inhibiting genetic variations were found

MY ASSESSMENT

- Good News! You seem to have some advantageous genetic predispositions for Polyunsaturated Fats Increased Benefits
- 7 variations found in your genes for this trait
- Your overall predisposition score for this trait is higher than 70% of the population and is considered statistically advantaged compared to the general population.

WHAT TO DO

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 the heart and brain health: they lower blood pressure and heart rate, improve blood vessel function, reduce triglycerides and system inflammation. They are good for eye health and skin appearance. Scientific studies show that omega-3s can help fight depression and improve attention. Along with omega-3 fats, omega-6 fats play a crucial role in brain function, and normal growth and development. Omega-6s help stimulate skin and hair growth, maintain bone health, regulate metabolism, and maintain the reproductive system. Several large-scale studies identified genetic variations in and near the FADS enzymes that interfere with metabolism of omega-3 and omega-6 fats. While both omega-3 and omega-6 fatty acids are essential for human body, a healthy diet should contain an equal ratio of omega-6 to omega-3. The main problem with a typical Western diet is that it contains way too many Omega-6s relative to Omega-3s.

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WHAT IS POLYUNSATURATED FATS INCREASED BENEFITS

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Contributing Genetic Variations

rs174570, rs3134950, rs10761785, rs174550, rs174546, rs174547, rs174537

Inhibiting Genetic Variations

No inhibiting genetic variations were found

MY ASSESSMENT

- You seem to have slightly elevated genetic predispositions risk for Risk from Saturated Fats
- 2 variations found in your genes for this trait
- Your overall predisposition score for this trait is higher than 70% of the population and is considered statistically risky compared to the general population.

WHAT TO DO

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.

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WHAT IS RISK FROM SATURATED FATS

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Contributing Genetic Variations

rs5082, rs1799883

Inhibiting Genetic Variations

No inhibiting genetic variations were found

MY ASSESSMENT

- You seem to have slightly elevated genetic predispositions risk for Satiety Impairment
- 2 variations found in your genes for this trait
- Your overall predisposition score for this trait is higher than 65% of the population and is considered statistically risky compared to the general population.

WHAT TO DO

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 are also linked to higher consumption of high-sugar and high-fat foods.

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WHAT IS SATIETY IMPAIRMENT

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 are also linked to higher consumption of high-sugar and high-fat foods.

Contributing Genetic Variations

rs1137101, rs9939609

Inhibiting Genetic Variations

No inhibiting genetic variations were found

MY ASSESSMENT

- You seem to have slightly elevated genetic predispositions risk for Slow Muscle Repair
- 9 variations found in your genes for this trait
- Your overall predisposition score for this trait is higher than 65% of the population and is considered statistically risky compared to the general population.

WHAT TO DO

Are you one of those people who take a very long time to heal after a muscle injury? Prolonged strenuous exercise, like high intensity weight training, results in activation of inflammatory factors. Genetic variants in several genes enhance the inflammatory response that may slow down the repair of muscle damage following exercise. A person with higher predisposition to inflammation will benefit from less frequent exercise activities, and longer recovery periods. If the body is not fully recovered it may result in injuries, muscle straining and over-training. This is particularly important for high-intensity weight training athletes, and bodybuilders.

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WHAT IS SLOW MUSCLE REPAIR

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Contributing Genetic Variations

rs1800629, rs3213221, rs1205, rs380092, rs1143634, rs4244808, rs16944, rs4880, rs4129267

Inhibiting Genetic Variations

No inhibiting genetic variations were found

MY ASSESSMENT

- You seem to have slightly elevated genetic predispositions risk for Snacking
- 3 variations found in your genes for this trait
- Your overall predisposition score for this trait is higher than 75% of the population and is considered statistically risky compared to the general population.

WHAT TO DO

Some people feel hungry more often than others and are impulsively driven to frequent snacking, which if left unchecked can result in extra weight. 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.

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WHAT IS SNACKING

Some people feel hungry more often than others and are impulsively driven to frequent snacking, which if left unchecked can result in extra weight. 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.

Contributing Genetic Variations

rs17782313, rs925946, rs1051168

Inhibiting Genetic Variations

No inhibiting genetic variations were found

MY ASSESSMENT

- Good News! You seem to have low genetic predispositions risk for Starch Metabolism
- 2 variations found in your genes for this trait
- Your overall predisposition score for this trait is lower than 50% of the population and is considered statistically low compared to the general population.

WHAT TO DO

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 of this enzyme. Large variation in levels of amylase depends on various factors, including stress, as well as genetics. Interestingly, populations who historically relied on starch (rice, potato) for dietary energy have higher levels of the amylase than populations who consumed high-protein diets. People with high levels of amylase were found to be good metabolizers of starch-rich diet, while people with low levels of amylase enzyme are poor metabolizers of starch, and they may be at greater risk for increased blood glucose levels, insulin resistance and diabetes if they consume starch-rich diets.

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WHAT IS STARCH METABOLISM

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 of this enzyme. Large variation in levels of amylase depends on various factors, including stress, as well as genetics. Interestingly, populations who historically relied on starch (rice, potato) for dietary energy have higher levels of the amylase than populations who consumed high-protein diets. People with high levels of amylase were found to be good metabolizers of starch-rich diet, while people with low levels of amylase enzyme are poor metabolizers of starch, and they may be at greater risk for increased blood glucose levels, insulin resistance and diabetes if they consume starch-rich diets.

Contributing Genetic Variations

rs1566154

Inhibiting Genetic Variations

rs6696797

MY ASSESSMENT

- Good News! You seem to have low genetic predispositions risk for Sweet Tooth
- 1 variations found in your genes for this trait
- Your overall predisposition score for this trait is lower than 30% of the population and is considered statistically low compared to the general population.

WHAT TO DO

A person with a sweet tooth has a higher sugar craving than the average person. If a person has a high sweet tooth predisposition, it is likely that they will often crave sweets and snack on sugary foods. Genetic variations in TAS1R2, GLUT2, FUT1, may be responsible for sugar cravings, and preference of sweet snacks. This may lead to weight gain, elevated glucose levels as well as pose future threats of Type-II diabetes, in particular in people with predispositions to these conditions. Remember, it is recommended that healthy adults may consume of added sugars up to to 150 calories per day (37.5 grams or 9 teaspoons) for men, and 100 calories per day (25 grams or 6 teaspoons) for women.

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WHAT IS SWEET TOOTH

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Contributing Genetic Variations

rs5400

Inhibiting Genetic Variations

No inhibiting genetic variations were found

MY ASSESSMENT

- Good News! You seem to have low genetic predispositions risk for Trans Fats Sensitivity
- 8 variations found in your genes for this trait
- Your overall predisposition score for this trait is lower than 50% of the population and is considered statistically low compared to the general population.

WHAT TO DO

Trans fatty acids (trans fats) cannot be synthesized by humans. Trans fats are considered the worst type of fat you can eat. Trans fats are of two types: natural and artificial. Natural trans fats can be found in small quantities in dairy and meat products. Artificial trans fats are created in an industrial process that adds hydrogen to liquid vegetable oils, producing partially hydrogenated oils. Trans fats are linked to adverse health outcomes: they raise bad cholesterol levels (LDL) and lower good cholesterol levels (HDL), increase risk of developing heart diseases and type 2 diabetes. It is common knowledge that trans-fats are not healthy. People with genetic variants in or near the fatty acid desaturase (FADS1 and 2) cluster are more sensitive to adverse effects of trans fats.

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WHAT IS TRANS FATS SENSITIVITY

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Contributing Genetic Variations

rs102275, rs174576, rs1535, rs174550, rs174546, rs174547, rs174534, rs174537

Inhibiting Genetic Variations

No inhibiting genetic variations were found

MY ASSESSMENT

- Good News! You seem to have low genetic predispositions risk for Caffeine Metabolism Impairment
- No variations found in your genes for this trait
- Your overall predisposition score for this trait is lower than 50% of the population and is considered statistically low compared to the general population.

WHAT TO DO

Cytochrome P450 1A2 (CYP1A2) is the main responsible enzyme 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. In humans, the half-life for caffeine is anywhere from 4 to 6 hours on average, which explains why the average energy drink or coffee's effect lasts about 4 to 6 hours. However those with genetic variations impairing their metabolism can become hypersensitive to Caffeine. These people react to very small amounts of caffeine. Even at amounts less than 100 mg, people who are hypersensitive to caffeine can experience overdose symptoms such as insomnia, jitters, and an increased heartbeat. For these people, it can take as much as twice as long for caffeine to be metabolized.

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WHAT IS CAFFEINE METABOLISM IMPAIRMENT

Cytochrome P450 1A2 (CYP1A2) is the main responsible enzyme 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. In humans, the half-life for caffeine is anywhere from 4 to 6 hours on average, which explains why the average energy drink or coffee's effect lasts about 4 to 6 hours. However those with genetic variations impairing their metabolism can become hypersensitive to Caffeine. These people react to very small amounts of caffeine. Even at amounts less than 100 mg, people who are hypersensitive to caffeine can experience overdose symptoms such as insomnia, jitters, and an increased heartbeat. For these people, it can take as much as twice as long for caffeine to be metabolized.

Contributing Genetic Variations

No contributing genetic variations were found

Inhibiting Genetic Variations

No inhibiting genetic variations were found

MY ASSESSMENT

- You seem to have elevated genetic predispositions risk for Dryness
- 2 variations found in your genes for this trait
- Your overall predisposition score for this trait is higher than 95% of the population and is considered statistically risky compared to the general population.

WHAT TO DO

Balanced level of hydration is absolutely fundamental for healthy facial and body skin. Aquaporin channels, a family of integral cell membrane proteins, play central role in keeping our skin hydrated by allowing the movement of water and glycerol across the cell membrane. The expression of aquaporin channels in human skin is strongly affected by aging, chronic sun exposure, and inflammation. The most abundant (and best studied) aquaporin in the skin is the AQP3 gene. It transports water, glycerol and small solutes (urea) across the plasma membrane, regulates skin hydration, skin barrier recovery and wound healing. Another group of genes expressed in skin are called claudins. They are tight junction membrane proteins that form paracellular barriers and pores that determine tight junction permeability. Genetic variations in the AQP3 and CLDN1 genes result in their lower expression and reduced activity in epidermis leading to impairments in skin intrinsic hydration capacity, and skin dryness.

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WHAT IS DRYNESS

Balanced level of hydration is absolutely fundamental for healthy facial and body skin. Aquaporin channels, a family of integral cell membrane proteins, play central role in keeping our skin hydrated by allowing the movement of water and glycerol across the cell membrane. The expression of aquaporin channels in human skin is strongly affected by aging, chronic sun exposure, and inflammation. The most abundant (and best studied) aquaporin in the skin is the AQP3 gene. It transports water, glycerol and small solutes (urea) across the plasma membrane, regulates skin hydration, skin barrier recovery and wound healing. Another group of genes expressed in skin are called claudins. They are tight junction membrane proteins that form paracellular barriers and pores that determine tight junction permeability. Genetic variations in the AQP3 and CLDN1 genes result in their lower expression and reduced activity in epidermis leading to impairments in skin intrinsic hydration capacity, and skin dryness.

Contributing Genetic Variations

rs17501010, rs17553719

Inhibiting Genetic Variations

No inhibiting genetic variations were found

MY ASSESSMENT

- You do not seem to have known advantageous genetic predispositions for Exploratory Behavior
- 4 variations found in your genes for this trait
- Your overall predisposition score for this trait is lower than 15% of the population and is considered statistically compared to the general population. Therefore it is considered below a threshold where it would be deemed a statistically advantageous trait.

WHAT TO DO

Exploratory behavior, or Novelty Seeking, is one of 4 temperaments according to the Cloninger's model of personality. The other three are Harm Avoidance, Reward Dependence, and Persistence. Exploratory behavior reflects the tendency to respond strongly to novelty and cues for reward. Explorers have the tendency to crave stimulation and thrills; they tend to be attracted by large crowds and bright colors. Interestingly, exploratory behavior is influenced by specific neurotransmitter pathways in the brain and it has a heritable genetic component.

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WHAT IS EXPLORATORY BEHAVIOR

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Contributing Genetic Variations

rs10176705, rs4680, rs1533665, rs3120665

Inhibiting Genetic Variations

No inhibiting genetic variations were found

MY ASSESSMENT

- Good News! You seem to have some advantageous genetic predispositions for Joint Flexibility
- 1 variations found in your genes for this trait
- Your overall predisposition score for this trait is higher than 70% of the population and is considered statistically advantaged compared to the general population.

WHAT TO DO

While flexibility and range of motion can be improved with regular stretching, some people have inherent joint flexibility that is a highly heritable trait. Genetic variants in several collagen genes alter amino acid sequence and change the amount of collagen proteins being produced affecting architecture and biomechanical properties of some tissues, including ligaments. Therefore, people with these genetic variants in general have higher range of motion and better joint laxity and flexibility. Interestingly, the research has shown that violinists, flautists, and pianists with lax finger joints suffer less pain than their less flexible peers. An opposite spectrum of this is risk of non-contact soft tissue injuries while doing very active sports. Other genetic variants in the collagen genes reduce joint flexibility and potentially protect from cruciate ligament, shoulder dislocation, and anterior cruciate ligament ruptures.

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WHAT IS JOINT FLEXIBILITY

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Contributing Genetic Variations

rs12722

Inhibiting Genetic Variations

No inhibiting genetic variations were found

MY ASSESSMENT

- You seem to have slightly elevated genetic predispositions risk for Poor tanning ability
- 5 variations found in your genes for this trait
- Your overall predisposition score for this trait is higher than 65% of the population and is considered statistically risky compared to the general population.

WHAT TO DO

Tanning is the physiologically stimulated response to ultraviolet (UV) radiation of the solar light. UV exposure increases the production of eumelanin, a type of pigment melanin, that darkens the skin in an attempt to protect it from the damage. Ability of skin to tan is variable and is determined by genetics. Many genes are involved in the production of melanin that is the substance that gives skin, hair, and eyes their color. Large studies identified a number of genetic variants in the key pigmentation genes that are associated with tanning phenotype. Variants in the tyrosinase (TYR) gene variants encode skin color. MC1R gene is strongly associated with red hair, freckling and sun sensitivity: nearly all red-heads have genetic variants in the MC1R gene, and hence diminished ability to tan. Similarly, genetic variants adjacent to OCA2 gene give lighter color to the eyes. Another genetic variants of OCA2 is involved in the light skin tone in East Asians. People with a number of genetic variants in the pigmentary genes tend to have lighter eye color, fair skin, and diminished ability to tan.

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WHAT IS POOR TANNING ABILITY

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Contributing Genetic Variations

rs11648785, rs12913832, rs1393350, rs1126809, rs7279297

Inhibiting Genetic Variations

No inhibiting genetic variations were found

MY ASSESSMENT

- You do not seem to have known advantageous genetic predispositions for Reading Aptitude
- 13 variations found in your genes for this trait
- Your overall predisposition score for this trait is lower than 40% of the population and is considered statistically compared to the general population. Therefore it is considered below a threshold where it would be deemed a statistically advantageous trait.

WHAT TO DO

Reading ability measures the processing and comprehension capacity of written language. Often, significant similarities can be observed among family members with regards to reading ability. While there is definitely an environmental and social component, research has shown that genetics and heredity plays a major role in the ability of people to process written language. There are known genetic variations that seem to contribute to the overall reading ability of individuals. Interestingly, about half of these genetic contributions are shared by individuals who are also good at mathematical aptitude. Another interesting finding is that genetic variations associated with reading abilities in English and Chinese overlap.

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WHAT IS READING APTITUDE

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Contributing Genetic Variations

rs17135159, rs764255, rs1859596, rs349045, rs479526, rs761100

Inhibiting Genetic Variations

rs2179515, rs3756821, rs2038137, rs2038139, rs4504469, rs6935076, rs1555090

MY ASSESSMENT

- Good News! You seem to have low genetic predispositions risk for Seasonality
- 2 variations found in your genes for this trait
- Your overall predisposition score for this trait is lower than 10% of the population and is considered statistically low compared to the general population.

WHAT TO DO

Seasonality or Seasonal affective disorder (SAD) is seasonal changes in mood and behavior. SAD begins and ends at about the same times every year. Study of over 4000 individuals (Australians and Amish) identified several genetic variants with small additive effects that are significantly associated with SAD.

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WHAT IS SEASONALITY

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Contributing Genetic Variations

rs1801260, rs11825064

Inhibiting Genetic Variations

No inhibiting genetic variations were found

