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Trending Diets

Client

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Diet Summary

The Diet Summary Overview synthesizes the critical insights from various dietary patterns—Mediterranean, Keto, Paleo, Carnivore, Vegetarian, DASH, and others—underlining the paramount importance of personalizing nutrition based on genetic predispositions. This holistic view emphasizes that there is no one-size-fits-all solution to nutrition; rather, successful dietary planning must consider individual genetic makeup to fully harness the potential health benefits of each dietary approach.

Understanding how genetic variations affect the metabolism of fats, proteins, carbohydrates, and key micronutrients can guide the selection of the most suitable diet for an individual, optimizing nutrient absorption and metabolic health. Genetic insights enable the customization of traditional dietary patterns to meet personal health goals, whether it's managing weight, improving cardiovascular health, enhancing athletic performance, or preventing chronic diseases. By aligning dietary choices with genetic risk factors for diseases such as obesity, diabetes, hypertension, and heart disease, individuals can proactively manage health risks and work towards long-term wellness. Successful dietary strategies also consider lifestyle factors, including physical activity, sleep habits, and stress management, creating a comprehensive approach to health that complements genetic predispositions.

The future of nutrition lies in the integration of genetic testing and personalized dietary recommendations, moving beyond generic guidelines to offer tailored advice that maximizes health outcomes. This approach not only enhances the effectiveness of diet-related interventions but also empowers individuals to make informed choices about their nutrition, based on a deep understanding of their own body's needs.



Ideal Diet Plan



Mediterranean

Understanding what this may mean

Ideal for those with a genetic profile that supports a balanced distribution of macronutrients with an emphasis on carbohydrates. This diet includes approximately 30% fat (focusing on healthy fats), 20% protein, and 50% carbs, incorporating a variety of fruits, vegetables, whole grains, fish, and olive oil. It's well-suited for individuals whose genetics indicate a good tolerance for carbohydrates and a preference for unsaturated fats, promoting overall heart health and longevity.

Paleo Diet

The Paleo Diet, emphasizing foods presumed to have been available to Paleolithic humans such as lean meats, fish, fruits, vegetables, nuts, and seeds, aims to mimic the eating patterns of our ancestors. This section examines how genetic markers can influence an individual's compatibility with the Paleo Diet, offering insights into how ancient dietary practices might align with contemporary nutritional needs.

Genetic variations that have emerged since the Paleolithic era affect how modern humans metabolize certain nutrients. For instance, the ability to digest lactose or process complex carbohydrates varies widely, with some individuals genetically predisposed to thrive on a diet lower in grains and dairy, similar to Paleo principles. Exploring these genetic factors can reveal a predisposition for better health outcomes on the Paleo Diet. The Paleo Diet's exclusion of processed foods, grains, and dairy is posited to reduce inflammation and autoimmune reactions for some individuals. Genetic markers associated with inflammation and immune response can indicate a higher likelihood of benefiting from the Paleo dietary approach, potentially mitigating symptoms of autoimmune conditions and chronic inflammation.

While the Paleo Diet provides a general framework, genetic insights allow for further customization of the diet to meet individual health goals and nutritional needs. Tailoring the intake of specific macronutrients and micronutrients according to genetic predispositions can enhance the diet's effectiveness, promoting optimal health, weight management, and disease prevention. Adopting a Paleo Diet also involves considering lifestyle and environmental factors that interact with genetic predispositions. Physical activity levels, stress, and exposure to environmental toxins play roles in determining the most beneficial dietary pattern for an individual, with the Paleo approach potentially offering a return to a more natural, health-aligned way of eating for some.

Standard Macronutrient Profile

- 30% protein
- 40% fat



- 30% carbs

General goals

- Weight loss
- Reducing cardiovascular risk

Food guidelines

- Eat: Fruit, veggies, nuts/seeds, eggs, lean meat, fish, some oils
- Avoid: Grains, legumes, dairy, refined/added sugar, Extra salt, Starchy veggies, Processed foods

Paleo Fit



Good Fit

Understanding what this may mean

Likely to have a standard benefit from Paleo-style nutrition plans. It's likely to be a good fit, although there may be others which are more effective.

Protein Benefit



Neutral

Understanding what this may mean

Likely to have the standard benefits from Protein. Protein intake recommendations vary, but are generally between 0.8-1g/lb (1.8-2.2g/kg) of ideal bodyweight.

Dietary Fat Response



Limit intake

Understanding what this may mean

Individuals with this genetic result may have a higher sensitivity to dietary fat and may need to limit their fat intake. Genetic variations associated with this result suggest that the body may not efficiently process or metabolize dietary fats, potentially leading to adverse health effects. It is important to review more specific fat sections to determine ideal ratios of fat sources.

Saturated Fat Response



Poor Response

Understanding what this may mean

Individuals with this genetic result may have a poor response to saturated fats. Genetic variations associated with this result suggest that their bodies may have difficulty metabolizing or processing saturated fats efficiently. Consuming high amounts of saturated fats may increase the risk of adverse health outcomes. It is important for individuals with this result to limit their intake of foods high in saturated fats, such as fatty meats, full-fat dairy products, fried foods, and coconut oil.

Complex Carb Utilization



Neutral

Understanding what this may mean

Those with a typical ability to utilize complex carbohydrates have an average efficiency in processing and extracting energy from these nutrients, similar to the general population. Complex carbs are essential for providing sustained energy, supporting digestive health, and maintaining stable blood sugar levels. Including a variety of complex carbohydrates in the diet, alongside proteins and healthy fats, can support overall health and well-being. Regular physical activity can also enhance metabolic health, complementing a balanced diet.

Weight Loss from Low-Carb Diet



Low

Understanding what this may mean

Individuals with this genetic result may experience a lower response to weight loss from a low-carbohydrate (low-carb) diet. Genetic variations associated with this result suggest that their bodies may not efficiently respond to the weight loss benefits typically observed in others following a low-carb diet. It is important for individuals with this result to explore other dietary approaches or consider seeking guidance from healthcare professionals or registered dietitians to find a weight loss strategy that suits their specific needs and genetic profile.

Omega-3 Need



Much Increased

Understanding what this may mean

Individuals with this genetic result may have a much higher need for omega-3 fatty acids. Genetic variations associated with this result suggest a significant requirement for omega-3s to support overall health and reduced conversion of plant-based omega-3s to the beneficial EPA and DHA. It is crucial for individuals with this result to prioritize food sources rich in omega-3s such as fatty fish. Omega-3 supplements may also be considered under the guidance of healthcare professionals.

Omega-6 Risk



Neutral

Understanding what this may mean

Individuals with this genetic result have a neutral response to omega-6 fatty acids. Their bodies can process and metabolize omega-6 fatty acids in a normal manner. It is recommended to consume omega-6 fatty acids in moderation and ensure a well-balanced diet that includes other types of fats, such as omega-3 fatty acids, for optimal health benefits. Blood testing can assist in measuring and managing omega levels.

GAD1 Activity



Neutral Activity

Understanding what this may mean

Individuals with this result are likely to have neutral conversion of glutamate to GABA in the brain compared to the general population. Some anecdotal reports have linked GAD1 activity to various food sensitivities including MSG, grains, and glutamic acid, yet there are currently no scientific studies to support this assertion.

Gluten Risk



Understanding what this may mean

Individuals with this genetic result have a lower risk of gluten sensitivity or intolerance. Genetic variations associated with this result suggest a reduced likelihood of experiencing adverse reactions to gluten-containing foods. However, it's important to note that gluten sensitivity can vary among individuals and may be influenced by other factors. If individuals with this result experience symptoms or concerns related to gluten, they should consult with healthcare professionals or registered dietitians for further evaluation and guidance.

Lactose Intolerance Risk



Understanding what this may mean

Individuals with this result are likely to have a typical risk of developing an intolerance to dairy. Reduced production of the enzyme responsible for dairy sugar breakdown is predicted, which results in a possibility of intolerance development.

Vegan Diet

The Vegan Diet, characterized by the exclusion of all animal products, focuses on plant-based foods for health, ethical, and environmental reasons. This section delves into the genetic aspects that may influence how well an individual adapts to a vegan lifestyle, highlighting the importance of personalized nutrition in the context of plant-based eating.

Genetic variations can impact the absorption and metabolism of key nutrients in a vegan diet, such as Vitamin B12, iron, and omega-3 fatty acids. Identifying genetic predispositions that affect nutrient levels can guide supplementation and dietary adjustments to prevent deficiencies and support overall health. Differences in genes related to muscle growth and protein utilization may influence dietary protein requirements.

The way individuals metabolize plant-based compounds, including phytonutrients and fibers, varies genetically. These differences can affect the health benefits experienced from a vegan diet, such as improved cardiovascular health, weight management, and reduced disease risk. A vegan diet, while potentially offering some health benefits, requires careful planning to meet all nutritional needs.

Macronutrient profile - Not standardized

Common deficiencies to be watchful for include:

- Protein (resulting in reduced muscle/bone)
- Choline
- B Vitamins
- Iron
- Omega-3 (EPA/DHA)

Goals



- Avoid animal products

Food guidelines

- Eat: fruit, vegetables, legumes, nuts/seeds, breads/rice/pasta, vegetable oils
- Avoid: Meat, Fish, Dairy,

Vegan Diet Fit



Avoid

Understanding what this may mean

The risk for multiple nutrient deficiencies is significant. A vegan-style diet is not recommended except under the care of a provider actively monitoring nutrient levels and intake.

Omega-3 Need



Much Increased

Understanding what this may mean

Individuals with this genetic result may have a much higher need for omega-3 fatty acids. Genetic variations associated with this result suggest a significant requirement for omega-3s to support overall health and reduced conversion of plant-based omega-3s to the beneficial EPA and DHA. It is crucial for individuals with this result to prioritize food sources rich in omega-3s such as fatty fish. Omega-3 supplements may also be considered under the guidance of healthcare professionals.

Omega-6 Risk



Neutral

Understanding what this may mean

Individuals with this genetic result have a neutral response to omega-6 fatty acids. Their bodies can process and metabolize omega-6 fatty acids in a normal manner. It is recommended to consume omega-6 fatty acids in moderation and ensure a well-balanced diet that includes other types of fats, such as omega-3 fatty acids, for optimal health benefits. Blood testing can assist in measuring and managing omega levels.

Vitamin B12 Level Propensity



Reduced

Understanding what this may mean

This result corresponds with a lower genetic propensity for sufficient levels of vitamin B12. Low levels of vitamin B12 can lead to a range of symptoms, including fatigue, weakness, and even anemia. To optimize vitamin B12 levels, individuals with this result may benefit from consuming more foods that are high in vitamin B12, such as fish, eggs, meat, and dairy products. Individuals who follow a vegan or vegetarian diet and those with this genetic propensity likely benefit from supplementation of B vitamins including B12, specifically, the methylcobalamin form.

Vitamin B9 Need



Neutral

Understanding what this may mean

Individuals with a neutral genetic propensity for Vitamin B9 (Folate) may have average requirements for this nutrient. It is important to consume a balanced diet that includes folate-rich foods such as leafy green vegetables, legumes, and fortified cereals to meet their daily needs.

Choline Deficiency Severity



Increased

Understanding what this may mean

Individuals with this genetic result may have an increased risk of experiencing severe health consequences associated with choline deficiency such as DNA Damage, muscle damage, and organ dysfunction. It is particularly important to consume adequate amounts of choline through their diet or supplementation to prevent deficiency.

Choline Need



Increased

Understanding what this may mean

This result corresponds with a higher than average need for choline. It is important to consume sufficient amounts of choline through dietary sources such as eggs or liver, as choline plays a critical role in various physiological processes such as brain function, methylation, nerve function, and metabolism. Additionally, supplementation with choline may be beneficial. 500-1000mg of Alpha GPC or 1000+mg of Phosphatidylcholine are likely to be most effective.

Iron Deficiency Risk



Low

Understanding what this may mean

Individuals with this genetic result have a lower risk of iron deficiency compared to the general population. It is still important to consume adequate amounts of iron through their diet to maintain healthy iron levels.

Plant Sterol Risk



Typical

Understanding what this may mean

Individuals with this genetic result have a typical risk associated with plant sterol supplementation. Plant sterols can help lower cholesterol absorption in the intestines, which may reduce the risk of coronary artery disease (CAD) in individuals with elevated cholesterol levels. However, it is essential for individuals with this result to use plant sterol supplements as part of a comprehensive approach to heart health, including a balanced diet, regular physical activity, and other lifestyle practices that support cardiovascular well-being.

Plant Sterol Benefit



Increased

Understanding what this may mean

Individuals with this genetic result may experience an increased benefit from plant sterol supplementation in reducing triglycerides and cholesterol levels. As a result, they are more likely to experience significant reductions in blood triglycerides and cholesterol levels when using plant sterol supplements. One study showed a 4x greater decrease in LDL cholesterol from consuming plant sterols compared to controls. However, it is essential for individuals with this result to use plant sterol supplements as part of a well-rounded heart health plan, and not solely rely on supplementation.

Carnivore Diet

The Carnivore Diet, characterized by an exclusive consumption of animal products, posits benefits such as weight loss, improved mood, and reduced inflammation for some adherents. This section investigates the genetic factors that may influence an individual's adaptation to and success with a carnivore dietary approach, providing insights into how this extreme elimination diet aligns with specific genetic profiles.

Certain genetic variants influence how efficiently individuals metabolize fats and proteins, the primary macronutrients in a carnivore diet. For example, variations in genes related to lipid metabolism and ketogenesis can determine how well someone might transition to and sustain energy levels on this high-fat, high-protein diet, impacting weight management and metabolic health outcomes. Genetic predispositions affect the production of digestive enzymes and the composition of gut microbiota, both of which are crucial for breaking down and absorbing nutrients from animal products. Individuals with genetic profiles that favor efficient protein digestion and a gut microbiota resilient to diet-induced changes may experience more favorable outcomes on a carnivore diet.

While some may thrive on a carnivore diet, genetic predispositions to certain health conditions, such as cardiovascular diseases or certain cancers, warrant careful consideration. Genetic markers associated with cholesterol and blood pressure regulation, for example, may signal increased risk factors that need monitoring for individuals pursuing an all-meat diet. The decision to adopt a carnivore diet should be informed by an understanding of one's genetic makeup, considering the potential benefits and risks. Genetic testing can offer valuable insights into metabolic tendencies, nutrient processing, and health risk predispositions, guiding personalized dietary choices that align with an individual's unique physiological needs.

Macronutrient Profile - Not Standardized; protein-centric

Goals

- Autoimmune support



- Weight loss

Guidelines

- Eat: Meat, fish, animal products
- Avoid: Non-animal products

Carnivore Diet Fit



Avoid

Understanding what this may mean

Likely to respond less effectively to a carnivore-style nutrition plan. Consider alternatives.

Saturated Fat Response



Poor Response

Understanding what this may mean

Individuals with this genetic result may have a poor response to saturated fats. Genetic variations associated with this result suggest that their bodies may have difficulty metabolizing or processing saturated fats efficiently. Consuming high amounts of saturated fats may increase the risk of adverse health outcomes. It is important for individuals with this result to limit their intake of foods high in saturated fats, such as fatty meats, full-fat dairy products, fried foods, and coconut oil.

Dietary Fat Response



Limit intake

Understanding what this may mean

Individuals with this genetic result may have a higher sensitivity to dietary fat and may need to limit their fat intake. Genetic variations associated with this result suggest that the body may not efficiently process or metabolize dietary fats, potentially leading to adverse health effects. It is important to review more specific fat sections to determine ideal ratios of fat sources.

Plant Sterol Risk



Typical

Understanding what this may mean

Individuals with this genetic result have a typical risk associated with plant sterol supplementation. Plant sterols can help lower cholesterol absorption in the intestines, which may reduce the risk of coronary artery disease (CAD) in individuals with elevated cholesterol levels. However, it is essential for individuals with this result to use plant sterol supplements as part of a comprehensive approach to heart health, including a balanced diet, regular physical activity, and other lifestyle practices that support cardiovascular well-being.

Plant Sterol Benefit



Increased

Understanding what this may mean

Individuals with this genetic result may experience an increased benefit from plant sterol supplementation in reducing triglycerides and cholesterol levels. As a result, they are more likely to experience significant reductions in blood triglycerides and cholesterol levels when using plant sterol supplements. One study showed a 4x greater decrease in LDL cholesterol from consuming plant sterols compared to controls. However, it is essential for individuals with this result to use plant sterol supplements as part of a well-rounded heart health plan, and not solely rely on supplementation.

Protein Benefit



Neutral

Understanding what this may mean

Likely to have the standard benefits from Protein. Protein intake recommendations vary, but are generally between 0.8-1g/lb (1.8-2.2g/kg) of ideal bodyweight.

Ketogenic Diets

The Ketogenic Diet, which emphasizes a drastic reduction in carbohydrate intake in favor of fats, aims to induce ketosis, a metabolic state where fat is burned for fuel instead of glucose. This section explores how genetic variations influence an individual's response to the ketogenic diet, highlighting personalized approaches to enhance its metabolic and therapeutic benefits.

Individual responses to entering and maintaining a state of ketosis can vary significantly, influenced by genetic differences in fat metabolism and energy production. For example, variations in genes that regulate fatty acid transport and mitochondrial function can impact how efficiently one can utilize fat as a primary energy source, affecting the ease and effectiveness of the diet. Genetic markers associated with lipid profiles, cardiovascular health, and diabetes risk can influence the long-term health impacts of a ketogenic lifestyle, guiding more personalized dietary modifications and monitoring.

While the ketogenic diet offers potential benefits, including weight loss and improved metabolic markers, integrating genetic insights ensures a comprehensive approach to health management. It allows individuals to navigate potential risks, customize their eating patterns, and align their diet more closely with their health goals and genetic predispositions.

Macronutrient Profiles

- Atkins - 5% carb , 70% fat, 25% protein
- Modified Atkins - 10% carb, 30% protein, 60% fat
- Standard Keto - 10-15% Carbs, 20-25% protein, 65-70% fat

Goals

- Weight Loss
- Metabolic support



Keto Diet Fit



Avoid

Understanding what this may mean

Unlikely to respond effectively to ketogenic diets over time.

APOe Status



APOe 3/4 status

Understanding what this may mean

Individuals with this APOe status have one copy of the APOe3 allele and one copy of the APOe4 allele. This genetic combination is associated with a higher risk of developing certain age-related conditions compared to individuals with other APOe status. It is important for individuals with this APOe status to focus on brain health by adopting beneficial lifestyle habits, including regular physical and mental exercise, and limiting risk factors for APOe 4 including saturated fat and alcohol consumption, and avoiding smoking.

Saturated Fat Response



Poor Response

Understanding what this may mean

Individuals with this genetic result may have a poor response to saturated fats. Genetic variations associated with this result suggest that their bodies may have difficulty metabolizing or processing saturated fats efficiently. Consuming high amounts of saturated fats may increase the risk of adverse health outcomes. It is important for individuals with this result to limit their intake of foods high in saturated fats, such as fatty meats, full-fat dairy products, fried foods, and coconut oil.

Weight Loss from Low-Carb Diet



Low

Understanding what this may mean

Individuals with this genetic result may experience a lower response to weight loss from a low-carbohydrate (low-carb) diet. Genetic variations associated with this result suggest that their bodies may not efficiently respond to the weight loss benefits typically observed in others following a low-carb diet. It is important for individuals with this result to explore other dietary approaches or consider seeking guidance from healthcare professionals or registered dietitians to find a weight loss strategy that suits their specific needs and genetic profile.

Dietary Fat Response



Limit intake

Understanding what this may mean

Individuals with this genetic result may have a higher sensitivity to dietary fat and may need to limit their fat intake. Genetic variations associated with this result suggest that the body may not efficiently process or metabolize dietary fats, potentially leading to adverse health effects. It is important to review more specific fat sections to determine ideal ratios of fat sources.

Complex Carb Utilization



Neutral

Understanding what this may mean

Those with a typical ability to utilize complex carbohydrates have an average efficiency in processing and extracting energy from these nutrients, similar to the general population. Complex carbs are essential for providing sustained energy, supporting digestive health, and maintaining stable blood sugar levels. Including a variety of complex carbohydrates in the diet, alongside proteins and healthy fats, can support overall health and well-being. Regular physical activity can also enhance metabolic health, complementing a balanced diet.

Mediterranean Diet

The Mediterranean Diet, celebrated for its correlation with longevity and reduced risk of chronic diseases, emphasizes fruits, vegetables, whole grains, olive oil, and fish. This section explores how genetic predispositions can influence the effectiveness of the Mediterranean Diet, offering insights into the symbiosis between genetics and one of the world's healthiest dietary patterns.

Individuals with specific genetic variants related to lipid metabolism may find the Mediterranean Diet particularly beneficial. For example, variations in the APOE gene, which influences cholesterol transport and metabolism, can affect how dietary fats are processed, potentially moderating the diet's protective effects against cardiovascular disease. Genetic predispositions that affect inflammation and oxidative stress response also play a role in the diet's effectiveness. Individuals with variants in genes associated with anti-inflammatory and antioxidant pathways might experience enhanced benefits from the high levels of polyphenols and omega-3 fatty acids found in the Mediterranean diet, contributing to reduced risk of chronic conditions such as type 2 diabetes and Alzheimer's disease.

Understanding one's genetic predispositions can guide the tailoring of the Mediterranean Diet to optimize health outcomes. Adjustments in specific components, like increasing omega-3 rich foods for those with certain genetic markers, can enhance the diet's effectiveness, aligning it more closely with individual health goals and nutritional needs.

General Goals

- Longevity
- Cardiometabolic Support
- Inflammation Reduction
- Overall Wellness

Food Guidelines



- Eat: Vegetables, Fruits, whole grains, fish, nuts, lentils, olive oil
- Avoid: Refined Grains, Trans fats, processed foods (especially processed meat), added sugar,

Mediterranean Diet Fit



Mediterranean

Understanding what this may mean

Likely to have strong benefits to Mediterranean-style Nutrition plans beyond the standard population. This may be the ideal nutrition plan for this combination of genetics.

Saturated Fat Response



Poor Response

Understanding what this may mean

Individuals with this genetic result may have a poor response to saturated fats. Genetic variations associated with this result suggest that their bodies may have difficulty metabolizing or processing saturated fats efficiently. Consuming high amounts of saturated fats may increase the risk of adverse health outcomes. It is important for individuals with this result to limit their intake of foods high in saturated fats, such as fatty meats, full-fat dairy products, fried foods, and coconut oil.

Complex Carb Utilization



Neutral

Understanding what this may mean

Those with a typical ability to utilize complex carbohydrates have an average efficiency in processing and extracting energy from these nutrients, similar to the general population. Complex carbs are essential for providing sustained energy, supporting digestive health, and maintaining stable blood sugar levels. Including a variety of complex carbohydrates in the diet, alongside proteins and healthy fats, can support overall health and well-being. Regular physical activity can also enhance metabolic health, complementing a balanced diet.

Omega-6 Risk



Neutral

Understanding what this may mean

Individuals with this genetic result have a neutral response to omega-6 fatty acids. Their bodies can process and metabolize omega-6 fatty acids in a normal manner. It is recommended to consume omega-6 fatty acids in moderation and ensure a well-balanced diet that includes other types of fats, such as omega-3 fatty acids, for optimal health benefits. Blood testing can assist in measuring and managing omega levels.

Omega-3 Need



Much Increased

Understanding what this may mean

Individuals with this genetic result may have a much higher need for omega-3 fatty acids. Genetic variations associated with this result suggest a significant requirement for omega-3s to support overall health and reduced conversion of plant-based omega-3s to the beneficial EPA and DHA. It is crucial for individuals with this result to prioritize food sources rich in omega-3s such as fatty fish. Omega-3 supplements may also be considered under the guidance of healthcare professionals.

APOe Status



APOe 3/4 status

Understanding what this may mean

Individuals with this APOe status have one copy of the APOe3 allele and one copy of the APOe4 allele. This genetic combination is associated with a higher risk of developing certain age-related conditions compared to individuals with other APOe status. It is important for individuals with this APOe status to focus on brain health by adopting beneficial lifestyle habits, including regular physical and mental exercise, and limiting risk factors for APOe 4 including saturated fat and alcohol consumption, and avoiding smoking.

DASH Diet

The DASH Diet, designed to combat hypertension and reduce the risk of heart disease, focuses on reducing sodium intake while increasing consumption of fruits, vegetables, whole grains, and lean proteins. This section examines the role of genetics in the efficacy of the DASH Diet, highlighting how genetic variations can impact blood pressure responses and cardiovascular health outcomes.

Genetic variations affecting salt sensitivity and blood pressure regulation play a critical role in determining an individual's response to the DASH Diet. For instance, variants in genes related to sodium transport and kidney function can influence how effectively dietary sodium reduction impacts blood pressure levels, making the diet more or less beneficial for specific individuals.

By understanding genetic predispositions, individuals can more effectively tailor the DASH Diet to their needs, potentially adjusting the emphasis on certain nutrients or dietary components to optimize blood pressure control and cardiovascular health.

General Goal - treat or prevent hypertension (high blood pressure)

Guidelines

- Eat: vegetables, fruit, whole grains, minimal dairy, minimal lean meats, some nuts/seeds
- Avoid; Added salt, high sodium foods



Dash Diet Fit



Good Fit

Understanding what this may mean

Potential for benefits in cases of hypertension

Hypertension Propensity



Increased

Understanding what this may mean

Those with an increased risk are more likely to develop hypertension than the average population (up to 2-3x). Given this heightened genetic susceptibility, it's particularly important to engage in preventive health behaviors, closely monitor blood pressure, and consult healthcare providers for personalized risk management strategies.

Magnesium Deficiency Risk



Neutral

Understanding what this may mean

Individuals with this genetic result have a neutral risk of experiencing magnesium deficiency. It is important to consume a balanced diet that includes magnesium-rich foods or consider supplementation to prevent deficiency.

Potassium Sensitivity and Benefit



Neutral

Understanding what this may mean

Individuals with this genetic result have a neutral sensitivity to the blood pressure-lowering effects of potassium. Adequate potassium intake can help support healthy blood pressure levels in these individuals.

Sodium Sensitivity



Reduced

Understanding what this may mean

Individuals with this genetic result may have a reduced sensitivity to sodium, which means they may be able to tolerate higher levels of sodium intake without negative health effects. However, it is still important to consume sodium in moderation and according to individual needs.

Vegetarian Diet

The Vegetarian Diet, eliminating meat but often including dairy and eggs, offers various health benefits, including reduced risks of heart disease, hypertension, and certain cancers. This section delves into how genetic factors influence the adaptation to and benefits derived from a vegetarian lifestyle, emphasizing the importance of personalized nutrition.

Genetic variations can affect the absorption and metabolism of key nutrients in a vegetarian diet, such as vitamin B12, iron, and omega-3 fatty acids. Identifying these genetic predispositions can help mitigate potential nutrient deficiencies through targeted dietary strategies and supplementation. Differences in genes related to protein utilization may also influence the dietary protein requirements for individuals on a vegetarian diet. Understanding these genetic factors can assist in optimizing protein intake from plant sources, ensuring adequate muscle maintenance and overall health.

Incorporating genetic insights into the planning of a vegetarian diet can enhance its health benefits and address personal health goals and nutritional needs. Customizing nutrient intake based on genetic predispositions supports a more effective and health-aligned dietary approach.

Common deficiencies to be watchful for include:

- Protein (resulting in reduced muscle/bone)
- Choline
- B Vitamins
- Iron
- Omega-3 (EPA/DHA)

Goals

- Avoid animal products



Food guidelines

- Eat: fruit, vegetables, legumes, nuts/seeds, breads/rice/pasta, vegetable oils
- Avoid: Meat, Fish

Vegetarian Diet Fit



Minimal Fit

Understanding what this may mean

Individuals with this result have some additional risks for micronutrient deficiencies which are common for vegetarian-style diets.

Choline Deficiency Severity



Increased

Understanding what this may mean

Individuals with this genetic result may have an increased risk of experiencing severe health consequences associated with choline deficiency such as DNA Damage, muscle damage, and organ dysfunction. It is particularly important to consume adequate amounts of choline through their diet or supplementation to prevent deficiency.

Iron Deficiency Risk



Low

Understanding what this may mean

Individuals with this genetic result have a lower risk of iron deficiency compared to the general population. It is still important to consume adequate amounts of iron through their diet to maintain healthy iron levels.

Choline Need



Increased

Understanding what this may mean

This result corresponds with a higher than average need for choline. It is important to consume sufficient amounts of choline through dietary sources such as eggs or liver, as choline plays a critical role in various physiological processes such as brain function, methylation, nerve function, and metabolism. Additionally, supplementation with choline may be beneficial. 500-1000mg of Alpha GPC or 1000+mg of Phosphatidylcholine are likely to be most effective.

Vitamin B9 Need



Neutral

Understanding what this may mean

Individuals with a neutral genetic propensity for Vitamin B9 (Folate) may have average requirements for this nutrient. It is important to consume a balanced diet that includes folate-rich foods such as leafy green vegetables, legumes, and fortified cereals to meet their daily needs.

Vitamin B12 Level Propensity



Reduced

Understanding what this may mean

This result corresponds with a lower genetic propensity for sufficient levels of vitamin B12. Low levels of vitamin B12 can lead to a range of symptoms, including fatigue, weakness, and even anemia. To optimize vitamin B12 levels, individuals with this result may benefit from consuming more foods that are high in vitamin B12, such as fish, eggs, meat, and dairy products. Individuals who follow a vegan or vegetarian diet and those with this genetic propensity likely benefit from supplementation of B vitamins including B12, specifically, the methylcobalamin form.

Omega-3 Need



Much Increased

Understanding what this may mean

Individuals with this genetic result may have a much higher need for omega-3 fatty acids. Genetic variations associated with this result suggest a significant requirement for omega-3s to support overall health and reduced conversion of plant-based omega-3s to the beneficial EPA and DHA. It is crucial for individuals with this result to prioritize food sources rich in omega-3s such as fatty fish. Omega-3 supplements may also be considered under the guidance of healthcare professionals.

Omega-6 Risk



Neutral

Understanding what this may mean

Individuals with this genetic result have a neutral response to omega-6 fatty acids. Their bodies can process and metabolize omega-6 fatty acids in a normal manner. It is recommended to consume omega-6 fatty acids in moderation and ensure a well-balanced diet that includes other types of fats, such as omega-3 fatty acids, for optimal health benefits. Blood testing can assist in measuring and managing omega levels.

Plant Sterol Risk



Typical

Understanding what this may mean

Individuals with this genetic result have a typical risk associated with plant sterol supplementation. Plant sterols can help lower cholesterol absorption in the intestines, which may reduce the risk of coronary artery disease (CAD) in individuals with elevated cholesterol levels. However, it is essential for individuals with this result to use plant sterol supplements as part of a comprehensive approach to heart health, including a balanced diet, regular physical activity, and other lifestyle practices that support cardiovascular well-being.

Plant Sterol Benefit



Increased

Understanding what this may mean

Individuals with this genetic result may experience an increased benefit from plant sterol supplementation in reducing triglycerides and cholesterol levels. As a result, they are more likely to experience significant reductions in blood triglycerides and cholesterol levels when using plant sterol supplements. One study showed a 4x greater decrease in LDL cholesterol from consuming plant sterols compared to controls. However, it is essential for individuals with this result to use plant sterol supplements as part of a well-rounded heart health plan, and not solely rely on supplementation.

Low Carb Diets

The Low Carb Diet, characterized by reduced carbohydrate intake in favor of proteins and fats, has gained popularity for its potential benefits in weight loss, blood sugar control, and improved metabolic health. This section explores the relationship between genetic predispositions and the effectiveness of low carb diets, aiming to shed light on personalized nutritional strategies that align with individual metabolic profiles.

Individual variations in genes related to carbohydrate digestion, insulin sensitivity, and glucose metabolism can significantly influence how one responds to a low carb diet. For instance, individuals with certain genetic variants may experience more pronounced benefits from reduced carbohydrate intake, including improved blood sugar levels and more efficient fat burning, due to their bodies' inherent metabolic efficiencies or inefficiencies. This personalization can lead to more sustainable weight management, enhanced metabolic health, and a reduced risk of diet-related diseases.

For individuals with a predisposition to lipid metabolism disorders or cardiovascular risks, closely monitoring lipid levels while on a low carb diet is crucial. Genetic insights can guide the adjustment of dietary fat sources and quantities to ensure health markers remain within optimal ranges, emphasizing the importance of a balanced approach to low carb eating.

Incorporating genetic insights into dietary planning does not negate the importance of other lifestyle factors such as physical activity, sleep, and stress management. A holistic approach that combines a genetically compatible diet with a healthy lifestyle can amplify the benefits of a low carb diet, contributing to overall well-being and disease prevention.

General Goals for Low-Carb:

- Weight Loss
- Prep for Keto

Common Macronutrient profiles: (not standardized)



- 10-25% carb
- 30-50% fat
- 30-40% protein

Food Guidelines:

- Avoid/Limit high-carb foods such as sugar, sweets, pasta, bread, rice, cereal.

Low Carb Diet Fit



Unlikely Fit

Understanding what this may mean

Low-carb diets are unlikely to be beneficial for individuals with these results

Insulin Resistance Propensity



Neutral

Understanding what this may mean

Individuals with this genetic result have a neutral risk of insulin resistance. Their genetic profile suggests a standard likelihood of developing insulin resistance, which can be influenced by various factors including diet, physical activity, and overall health. It is important for individuals with this result to focus on maintaining a healthy lifestyle, including a balanced diet, along with regular physical activity, to support insulin sensitivity and metabolic health.

Weight Loss from Low-Carb Diet



Low

Understanding what this may mean

Individuals with this genetic result may experience a lower response to weight loss from a low-carbohydrate (low-carb) diet. Genetic variations associated with this result suggest that their bodies may not efficiently respond to the weight loss benefits typically observed in others following a low-carb diet. It is important for individuals with this result to explore other dietary approaches or consider seeking guidance from healthcare professionals or registered dietitians to find a weight loss strategy that suits their specific needs and genetic profile.

Complex Carb Utilization



Neutral

Understanding what this may mean

Those with a typical ability to utilize complex carbohydrates have an average efficiency in processing and extracting energy from these nutrients, similar to the general population. Complex carbs are essential for providing sustained energy, supporting digestive health, and maintaining stable blood sugar levels. Including a variety of complex carbohydrates in the diet, alongside proteins and healthy fats, can support overall health and well-being. Regular physical activity can also enhance metabolic health, complementing a balanced diet.

Low Fat Diets

Low fat diets, which reduce the intake of dietary fats, are often recommended for weight loss and to improve heart health. However, the effectiveness and health benefits of low fat diets can vary significantly among individuals, influenced by specific genetic factors. This section explores how genetic variations can impact the response to low fat diets, emphasizing the importance of personalized dietary recommendations to maximize health benefits.

Certain genetic variants affect how individuals metabolize and respond to dietary fats. For instance, variations in the APOA5 gene, which plays a role in triglyceride metabolism, can influence how effectively a low fat diet reduces lipid levels. Similarly, variants in the FTO gene, associated with fat mass and obesity, can modify the impact of low fat diets on weight loss and body composition.

Understanding these genetic predispositions can help tailor low fat diets to individual needs, improving outcomes in weight management and cardiovascular health. For example, individuals with specific genetic variants that affect cholesterol metabolism may see more significant improvements in lipid profiles on a low fat diet compared to others.

While low fat diets can be beneficial, they are not universally optimal for everyone. Genetic testing can provide insights into whether a low fat diet is suitable for an individual or if adjustments are needed to ensure adequate nutrient intake and health outcomes. It's also important to balance macronutrient ratios and include a variety of foods to meet all nutritional needs.



Low Fat Diet Fit



Good Fit

Understanding what this may mean

Likely to have some benefit from limiting certain forms of fat. Review each fat section for more information

Weight Gain from Dairy Fat



Neutral

Understanding what this may mean

Individuals with this genetic result can generally expect a typical response to weight gain from consuming dairy fat. This means that their bodies respond to dairy fat intake in a manner similar to the average population. While dairy fat can contribute to overall calorie intake, it is important to maintain a balanced diet and monitor portion sizes to support weight management.

Saturated Fat Response



Poor Response

Understanding what this may mean

Individuals with this genetic result may have a poor response to saturated fats. Genetic variations associated with this result suggest that their bodies may have difficulty metabolizing or processing saturated fats efficiently. Consuming high amounts of saturated fats may increase the risk of adverse health outcomes. It is important for individuals with this result to limit their intake of foods high in saturated fats, such as fatty meats, full-fat dairy products, fried foods, and coconut oil.

Dietary Fat Response



Limit intake

Understanding what this may mean

Individuals with this genetic result may have a higher sensitivity to dietary fat and may need to limit their fat intake. Genetic variations associated with this result suggest that the body may not efficiently process or metabolize dietary fats, potentially leading to adverse health effects. It is important to review more specific fat sections to determine ideal ratios of fat sources.

Omega-6 Risk



Neutral

Understanding what this may mean

Individuals with this genetic result have a neutral response to omega-6 fatty acids. Their bodies can process and metabolize omega-6 fatty acids in a normal manner. It is recommended to consume omega-6 fatty acids in moderation and ensure a well-balanced diet that includes other types of fats, such as omega-3 fatty acids, for optimal health benefits. Blood testing can assist in measuring and managing omega levels.
