Sample

Date Created: March 27, 2023

DIET & LIFESTYLE REPORT

Diet And LifeStyle Recommendations

These general recommendations for good health are based on your genetic analysis. We use

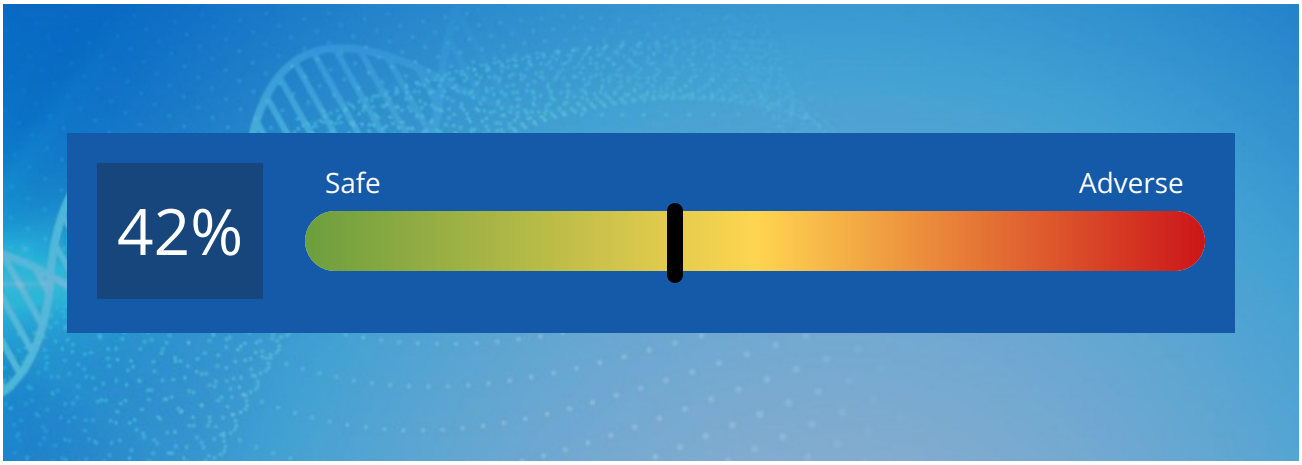
an algorithm that calculates the most probable best diet for you. Much information is still to be discovered in the genetic field that could change the response of your genetic analysis. Update your report occasionally to get a more current diet list according to new research.

In general, most people would benefit from some dietary changes such as eating less processed foods, considering organic whenever possible, avoiding sugar. Other things are very individual and can very much depend on the genes you inherited. The optimal diet is tricky as some genes will indicate one way of eating while another may indicate the opposite. We have tried to tally the genes you inherited and come up with a consensus that should help you achieve healthier bodies and minds.

Before starting any dietary changes recommended in this report, please consult your health care professional. There may be contraindications to your specific situation or with certain medications.

Personalized Diet and Lifestyle Recommendations

Alcohol



This slider indicates a risk of health issues associated with your dietary choices. If the arrow is in the green area, the associated choice is safe, If it is in the yellow area, the associated choice is neutral, if it is in the red area, the associated choice is adverse.

If your slider is close to or greater than 50% you may have some difficulty metabolizing alcohol. Some genetic variants make it difficult for your body to process alcohol. These variants will lead to increased levels of toxicity and increased risk of side effects of alcohol consumption. There is a link between alcohol use disorders and major depression; increasing use of alcohol increases risk of depression.

Genes associated with decreased ability to process alcohol:

SULT, ALDH2, ADH7, ADH1A, ADH1B, ADH1C, ADH4

Caffeine

This slider indicates a risk of health issues associated with your dietary choices. If the arrow is in the green area, the associated choice is safe, If it is in the yellow area, the associated choice is neutral, if it is in the red area, the associated choice is adverse.

Like that morning coffee? Can't walk past chocolate? Certain genetic variants can affect your ability to break down caffeine. Those with XDH variants would benefit from avoiding all forms of foods with xanthine, including coffee, tea, and chocolate, while those with NAT variants will want to avoid only coffee, as it will be difficult to break down. Green tea and coffee also inhibit the COMT enzyme and decrease its function, that of breaking down adrenaline. This can lead to increased anxiety and inhibition of estrogen clearance. So looking at your unique genetic profile, which you can see on the Brain Chemistry report, you can get an idea of whether or not caffeine is good or bad for you and which forms are your best.

Genes involved in the ability to process caffeine efficiently include:
COMT, NAT1, NAT2, ADORA2, ADA, ADH7

Fermented Foods

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If your slider shows close to or greater than 50% you may have some difficulty processing fermented foods. Some people do much better with fermented foods while others may not be able to tolerate them. In general they cause an increase in histamine and or Tyramine levels which some cannot tolerate and may cause digestive issues.

If your slider level is low, you may benefit from adding fermented foods to your diet, as they increase levels of good flora in those who are deficient in general. In addition, they help the body produce more vitamin K. Some of the most beneficial fermented foods include: Kefir, Yogurt, Sauerkraut, pickles, Kimchi, Kombucha, Natto, Miso and Tempe.

Click here to learn more about fermented foods.

Genetic variants associated with imbalances in fermented food tolerance include:

DAO, HNMT, MAO-A, MAO-B

Food Allergy (Susceptibility)

This slider indicates a risk of health issues associated with your dietary choices. If the arrow is in the green area, the associated choice is safe, If it is in the yellow area, the associated choice is neutral, if it is in the red area, the associated choice is adverse.

The presence of certain genetic variants can lead to increased risk of food allergy reactions. Common reactions can occur to peanuts, eggs, milk, gluten, etc.

Genes involved in susceptibility to food allergies or sensitivities include:

HLA-DRA, HLA-DRB1, HLA-DQB1, HLA-DQB2, HLA-DQA2

Gluten (Wheat, Rye, Oats, Barley)

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If your risk slider shows close to or greater than 50% it's likely that you will have the inability to digest gluten in foods. This can lead to symptoms of digestive stress, diarrhea and other symptoms when consuming gluten containing foods. Gluten ingestion has been associated with a significantly increase in depression symptoms and schizophrenic symptoms.

If your slider level is low, your ability to handle gluten in your diet without symptoms is likely to be increased. However, if you have digestive complaints a trial of gluten free diet can reveal whether it is truly a problem for you or not. Gluten containing foods include: Wheat, rye, barley, and oats (some). More about gluten foods.

Genetic variants associated with an increased risk of gluten intolerance include:

HLA-DQA1, CCR3, HNMT, DAO, RGS1, MTHFR

Histamine Foods

This slider indicates a risk of health issues associated with your dietary choices. If the arrow is in the green area, the associated choice is safe, If it is in the yellow area, the associated choice is neutral, if it is in the red area, the associated choice is adverse.

If your risk slider shows close to or greater than 50%, you may have the inability to break down histamine containing or histamine inducing foods in your diet. Variants in certain genes can increase inability to break down histamine efficiently. In addition, those who have difficulty producing methyl groups (such as in the MTHFR gene) will have more difficulty breaking down histamine. Imbalances can lead to inflammation, agitation, anxiety and other brain imbalances along with the traditional symptoms of high histamine such as allergic reactions to pollen, etc. A low histamine, low gluten diet can greatly benefit those with these variants. Click here to learn more.

Genetic variants associated with increased risk of histamine imbalances include:

HNMT, MAO-B, DAO, MTHFR, MTRR, MTR, DHFR, MTHFD

Intermittent Fasting

This slider indicates a risk of health issues associated with your dietary choices. If the arrow is in the green area, the associated choice is safe, If it is in the yellow area, the associated choice is neutral, if it is in the red area, the associated choice is adverse.

If your risk slider shows close to or greater than 50% you may have difficulty going for long periods without eating. Some people are intolerant of going for long periods of time without calorie intake, others can greatly benefit from intermittent fasting. Common intermittent fasting methods involve daily 16-hour fasts or fasting for 24 hours, twice per week. Some people do not burn their fat stores as a fuel efficiently and must take in calories on a more regular basis to maintain blood sugar levels. Genetic variants can have a very strong influence on how well you tolerate long periods of time with no calorie intake.

If your risk slider is less than 50% you may benefit from intermittent fasting protocols which have been shown to be highly beneficial in some cases. Intermittent fasting and caloric restriction have been shown to extend lifespan and increase resistance to age-related diseases and improve the health of overweight humans. It has been shown to enhance cardiovascular and brain functions and improve several risk factors for coronary artery disease and stroke including a reduction in blood pressure and increased insulin sensitivity.

Click here to learn more about intermittent fasting.

Genes involved in the ability to tolerate long periods without eating include:

DIO2, ACAT1, ACAT2, NDUFS3, NDUFS7, NDUFS8, MMAB, MUT, SLC22A4, SLC22A5

Lactose (Milk sugar)

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If your risk slider shows close to or greater than 50% you may have inherited certain genes that prevent your from producing lactase, the enzyme that helps you digest lactose contained in many dairy products. Common symptoms include abdominal pain and bloating, excessive gas, and diarrhea following the ingestion of foods containing lactose. Lactase deficiency is present in up to 15 percent of persons of northern European descent, up to 80 percent of blacks and Latinos, and up to 100 percent of American Indians and Asians. If your slider is low and you feel you have reactions to dairy products, it may be due to a sensitivity to casein, the protein in dairy products. A trial of lactose free dairy products can reveal whether it is truly lactose or casein. Probiotic supplementation has been shown to help in some cases with the ability to digest lactose. Substitution of dairy for plant based milks might be helpful, for

example, from soy, rice, almond, or oat.

Avoid: Milk, Cheese, Ice cream, and yogurt. Click here to learn more.

Genes involved in the ability to produce lactase to break down lactose sugar include:

MCM6, LCT

Monosodium Glutamate (MSG)

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Genetic variants in certain genes can lead to increased sensitivity to excitotoxins such as glutamate, aspartame, etc. High glutamate levels can lead to anxiety, irritability, damage to the pancreas, blood sugar issues and a risk of seizures. Avoiding foods with those ingredients is very helpful particularly for those with these genetic variants. Common symptoms reported with a sensitivity to MSG include headaches, chest pain, flushing, sweating, heart palpitations, nausea, numbness or tingling in the face or neck.

Reduction in the function of the adrenal, thyroid and pituitary glands was seen in one study. Excess levels of glutamate have been associated with obsessive compulsive tendencies. MSG is primarily found in processed foods. Click here to learn more.

Genetic variants associated with increased sensitivity to glutamate and other excitotoxins include:

GAD1, GAD2

Nightshade Foods (Tomatoes, Potatoes, Eggplant, Peppers, Tobacco)

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Nightshade foods include tomato, potato, eggplant, pepper and tobacco. Some people may have a minor intolerance to nightshade plants. This is because they aren't able to digest them fully. People with a food intolerance may experience gas, bloating, and diarrhea. In more extreme cases, they may experience fatigue and joint pain.

If your sliders are in the green zone, these foods are likely to be beneficial for you if they are closer to the red end of the slider, it would be wise to largely avoid these foods.

Genetic variants associated with increased risk of nightshade sensitivity include:

BCHE

Salt

This slider indicates a risk of health issues associated with your dietary choices. If the arrow is in the green area, the associated choice is safe, If it is in the yellow area, the associated choice is neutral, if it is in the red area, the associated choice is adverse.

If your slider shows close to or greater than 50% you may have increased sensitivity to salt that can lead to hypertension risk in some people. Others can tolerate salt without repercussions. Salt can be highly addictive. Salt need and cravings may be linked to the same brain pathways as those related to drug addiction and abuse. The type of salt consumed can make a difference as well.

Consuming salt that contains minerals such as sea salt and earth salt can be a more

healthy choice as they contain higher levels of minerals that are beneficial. Here is a good article on the different types of salt and their benefits.

Genes involved in salt sensitivity include:

ATP2B1, BCAT1, FGF5

Serotonin and Tryptophan

This slider indicates a risk of health issues associated with your dietary choices. If the arrow is in the green area, the associated choice is safe, If it is in the yellow area, the associated choice is neutral, if it is in the red area, the associated choice is adverse.

If your risk slider shows close to or greater than 50% you may have issues with a build up of tryptophan in your body. Those persons with MAO and TPH genetic variants have difficulty processing tryptophan and serotonin and are highly susceptible to mood imbalances, irritability and aggressive behavior. The TPH enzyme breaks down tryptophan and the MAO enzyme breaks down serotonin, variants impair the ability to break these down, so low levels of serotonin tryptophan in the diet are suggested. This includes the precursors to serotonin such as tryptophan and tyramine. These persons might benefit from avoiding chocolate, wine, hard cheeses, turkey, spinach, and other

foods high in tryptophan. In addition, spicy food can increase irritability in those with MAO variants. Click here for a list of high tryptophan foods

Learn more about tryptophan side effects

Another good article on the adverse effects of Tryptophan and Serotonin for some Click here

Genes involved in intolerance to Tryptophan and/or Serotonin include:

MAO-A, MAO-B, TPH1, TPH2

Soy Foods (Soybeans, Tofu, Edamame, etc)

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If your slider shows close to or greater than 50% you may have an issue with consuming soy products. Those with certain genetics variants would benefit from avoiding foods that contain soy. These persons have a harder time getting rid of those foods that are estrogenic such as soy products. They would also be wise to avoid

hormone replacement therapy or birth control pills that contain estrogens as they have difficulty eliminating estrogens and their metabolites from the body. Soy allergies are fairly common as well. Symptoms may include diarrhea, vomiting and colitis with the ingestion of soy products.

Soy protein is not an ideal protein because it is deficient in the essential amino acid methionine. In addition, the practice of growing soy in this country is now largely GMO based (94%). The results of most studies with GM foods indicate that they may cause some common toxic effects such as hepatic, pancreatic, renal, or reproductive effects and may alter the hematological, biochemical, and immunologic parameters.

Read more here on the controversy over GMO foods.

Click here for more information on soy intolerance or allergies and which foods to avoid.

Genes involved in soy intolerance include:

COMT, UGT, SULT, CYP1B1

Sulfur Foods

This slider indicates a risk of health issues associated with your dietary choices. If the arrow is in the green area, the associated choice is safe, If it is in the yellow area, the associated choice is neutral, if it is in the red area, the associated choice is adverse.

If your risk slider shows close to or greater than 50% you may have issues with the ingestion of sulfur foods and additives. Those with certain genetic variants might benefit from a low sulfur diet as these variants would slow the clearance of sulfurs in the body. This can lead to imbalances in brain chemistry, anxiety, allergic reactions, lung problems and digestive distress. Foods that are high in sulfur include wine, beer, eggs, onions, garlic, broccoli, cauliflower, and coconut products.

Sulfite sensitivities occur on occasion as well. Adverse symptoms may include flushing, dermatitis, urticaria, hypotension and diarrhea to life-threatening anaphylactic and asthmatic reactions.

Click here to learn more about sulfur allergies.

Genes involved in sensitivity to Sulfur imbalances or sensitivities include:

SULT, SUOX, NDUFS

Tyramine Containing Foods

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Certain genetic variants can lead to something called "Tyramine Intolerance". Learn more. Tyramine is a naturally occurring substance found in many foods. It may elevate your blood pressure and heart rate, which can be an issue for some people. Most people can consume tyramine-containing foods without experiencing any negative side effects. However, for some, the ingestion of Tyramine can cause life threatening blood pressure spikes, heart palpitations, migraines, mood changes, nausea, and vomiting. In addition, some people will experience "early waking syndrome".

Foods containing Tyramine include: Wine, Beer, Chocolate, aged cheeses, fermented foods (tempe, soy, sauerkraut, Kimchi, Kombucha, etc.), leftover foods, grapes, cured meats and more. CLICK HERE FOR MORE INFO

Your Healthy Diet: Complex Carbohydrate Diet

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Some genetic variants will do better and be healthier on a high complex carbohydrate diet with lower amounts of protein and fat. If your slider is in the green, complex carbohydrates may be your best food and should make up the better part of your diet. Complex vs simple carbs is important to understand as well. Simple carbs will be contraindicated for all people as the increase in calories and insulin resistance is a significant health risk. Stick with whole grain food choices if you decide to include grains as processed grains are converted to sugar more readily than the whole or sprouted grain choices.

If your slider is closer to the red end of the slider, you would do best avoiding carbohydrates.

NOTE: Check your gluten risk slider to be sure you can tolerate gluten containing foods on this diet.

NOTE: Check your sulfur risk slider to see if you can tolerate sulfur containing foods well. These include onions, garlic, cruciferous vegetables, eggs, wine and beer.

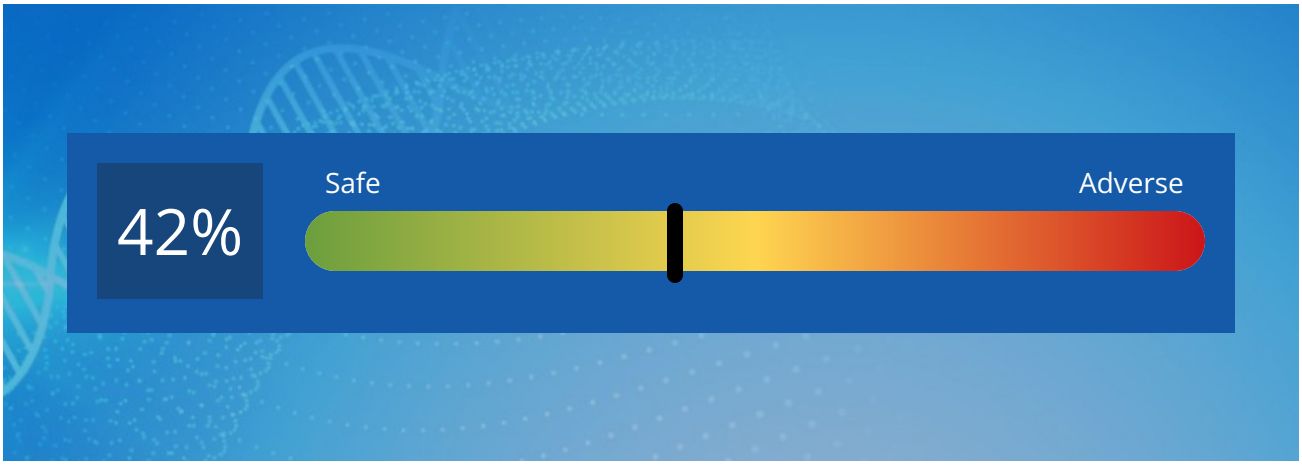
To lose weight on this diet: Be aware of the amount of food and the amount of calories in your food choices, avoid simple carbohydrates and hidden sugars.

For a list of simple vs complex carbohydrates CLICK HERE.

Genetic variants associated with complex carbohydrate diets

NDUFS, IRS1, PDHA1, PDHX, MUT, MMAB, CoQ6, CoQ9, PER3, TCF7L2, RXRA, GC, SRD5A2

Your Healthy Diet: High Fat Diet



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If your slider is in the green zone, a high fat diet might be your best choice for overall health. A ketogenic diet is a very low carb high fat diet, which turns on fat burning in the body. It involves reducing carbohydrate intake and replacing it with fat. The reduction in carbs puts your body into a metabolic state called ketosis. Some people will not do well on this diet if they have genetic imbalances in gallbladder function and reduced bile production.

If your slider shows close to or greater than 50%, you may have difficulty burning fats

as a fuel. Your ability to absorb fats and burn them as fuel may be difficult due to the presence of certain genetic variants: if you have inherited some of these variants, it would be beneficial for you to avoid excess fats including fried foods, fatty meats, avocado, dairy products. While these foods are not inherently harmful for most, you would likely feel better on a low-fat diet. Adding beets to your diet might be beneficial to helping the body make more bile to break down fats. While certain fats are important to brain health, an accumulation of unhealthy fats or unmetabolized fats can lead to brain chemistry imbalances and inflammation. The addition of Omega 3 Fatty acids can be helpful to manage brain chemistry imbalances along with the reduction of fried foods, and foods high in saturated fats.

NOTE: If your gallbladder has been removed, this diet would not be a good choice for you.

NOTE: Check your risk sliders to see if lactose is safe for you, otherwise avoid dairy products with your diet.

To lose weight on this diet: Make sure to keep your overall carbohydrate consumption fairly low. Include good sources of fats including avocados, grass fed sources of butter, and meats. Avoid grains, beans, starchy vegetables, most fruits and sugars.

Click here for more info on good fats vs bad fats to avoid.

Genes involved in difficulty with processing fats in the diet include:

PEMT, DIO2, ACAT1, ACAT2, MMAB, SLC22A4, SLC22A5, NDUFS3, FADS, IL12A-AS1

Your Healthy Diet: High Protein Diet

This slider indicates a risk of health issues associated with your dietary choices. If the arrow is in the green area, the associated choice is safe, If it is in the yellow area, the associated choice is neutral, if it is in the red area, the associated choice is adverse.

If your risk slider is in the green area, this diet might work well for you. This is a diet in which high amounts of protein are consumed with lower amounts of carbohydrates and fat.

NOTE: Check the dairy intolerance slider to see if you can safely include dairy products in your diet.

NOTE: Check the tryptophan slider above to see if high tryptophan foods are contraindicated for you.

To lose weight on this diet: Keep your meat choices lower in fat and calories. Best choices are bison, lean beef, chicken, and fish.

Genes involved in high protein diet benefits include:

MMAB, TPH1, TPH2, TH, HFE, VDR, MTRR, MTHFR