VIOME



CHARLES WARDEN'S SCORES & RECOMMENDATIONS

\'IOME

Dear Charles Warden,

The information on this report is for educational and informational use only. The information is not intended to be used by the customer for any diagnostic purpose and is not a substitute for professional medical advice. You should always seek the advice of your physician or other healthcare providers with any questions you may have regarding diagnosis, cure, treatment, mitigation, or prevention of any disease or other medical condition or impairment or the status of your health.



DOB: 04/05/1985

Test Name: Gut Intelligence Test

Authorized Order Person: Charles Warden

Customer Name: Charles Warden

DOB: 04/05/1985 **Gender:** Male

Customer Id: e16bdd01
Sample Source: Fecal

Date Collected: 05/06/2022

Date Received: 05/13/2022

Date Issued: 06/18/2022

Sample ID: 14CD3DFEF4E1

DOB: 04/05/1985

All My Scores

Let's improve these.

Active Microbial Diversity

Not Optimal

The score is your percentile for total count of active microbial species detected and sequenced from your sample. A good score translates to more richness, which in turn can provide more resilience to your microbial gut ecosystem and your body. This score could use some improvement when the count of active microbes is relatively low and your gut flora could use additional microbes in its active composition. Your recommendations may include certain supplements or fermented foods that address this score.

Gut Microbiome Health

Not Optimal

Your Gut Microbiome Health score integrates over 20 microbial functional scores. When this score is low it means that your gut microbiome may be producing chemicals that are causing inflammation (such as LPS, sulfide, or ammonia) or not producing enough nutrients that your body needs (such as butyrate, serotonin, and other vitamins). Our food and supplement recommendations are designed specifically for you to optimize your microbial functions and bring your gut microbiome into balance. Scroll down below to the section titled "How We Calculate This Score" to learn more. Did you know? In many ways, your gut bacteria are as vast and mysterious as the Milky Way. About 100 trillion bacteria, both good and bad, live inside your digestive system. Optimizing your microbial functions can help you achieve a healthy weight, boost energy, reduce stress, improve sleep, and strengthen your immunity.

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Inflammatory Activity

Good

This score measures the activities of your microbes that can contribute to or reflect inflammation in your gut environment. Inflammation in your gut can be caused by harmful things your microbes produce when you are either inefficiently digesting your proteins, have excessive microbial gas production, or simply have a gut environment that your microbes perceive as threatening. A score in the red zone (not optimal) means that there are relatively more pro-inflammatory activities, as opposed to anti-inflammatory or protective ones. Everyone's pattern is unique, so if your score is in the red, some of your recommendations may focus on boosting more of the protective and healing anti-inflammatory functions, while others may focus more on controlling and balancing out the more harmful pro-inflammatory microbes and functions. Follow your recommendations to maintain a good range or improve this score.

Metabolic Fitness

Good

This score represents active microbial organisms and functions that are associated with your blood sugar, insulin resistance, or weight control. A good score (in the green zone) means high activity of microbes and their functions favorably associated with your metabolic fitness. It is important to note that a Metabolic Fitness score that falls within the red zone does not necessarily translate to excessive weight loss or gain. Follow your recommendations to support or improve healthy metabolic functions.



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LPS Biosynthesis Pathways

Good

This score assesses the levels of activity of all microbial pathways leading to the production of LPS (lipopolysaccharides) in your gut. LPS is a pro-inflammatory molecule that gut microbes make, which can trigger your immune system response, especially if it passes to the bloodstream through the gut lining. This score is an important factor in assessing your inflammatory activity patterns.

Uric Acid Production Pathways

Good

This score assesses the levels of activity of all microbial pathways that lead to the production of uric acid (or urate). Uric Acid is a normal byproduct that comes from the breakdown of compounds called purines, which can be found in beer, sugary sodas, seafood and shellfish, turkey, veal, bacon, and organ meats. Excessive amounts of uric acid can contribute to gout. A good score means that your uric acid production pathway levels are low.



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Bile Acid Metabolism Pathways

Good

This score assesses the levels of activity of all metabolic pathways that include bile acids. Normally bile acids are made by the liver to help with fat digestion. Bile acids enter the colon in the form of bile salts. Your gut microbiota can change them back into bile acids, after which they can even be recycled back to the liver. If this activity is relatively high or excessive, it may be an indicator of your inability to break down fat or absorb nutrients properly, which can contribute to a pro-inflammatory environment or negative liver-related effects, as microbiome's bile acid pathways have been implicated in fatty deposits in the liver. A good score means these pathway activity levels are low in your sample.

Digestive Efficiency

Average

This score is a comprehensive microbial reflection of your gastrointestinal (GI) tract functions. The score consists of multiple activity patterns related to digestion, such as the movement of food, specific macronutrient breakdown ability, and your gut lining health from your first bite of food to the time it leaves your body. When this score is suboptimal, it means that some of your digestive functions need support.



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Gut Lining Health

Average

This score focuses on your gut lining (or intestinal barrier) and the health of the mucosal layer that protects it. When your gut lining is compromised, things from the outside environment, like toxins, medications, and harmful bacteria, can make their way into your bloodstream from your gut and negatively affect your immune system and overall wellbeing. A good score (in the green zone) means more optimal microbial functions that support your intestinal barrier and fewer disruptive or harmful functions are active in your gut. Follow your recommendations to address your specific pattern of microbial functions, and to prevent any intestinal permeability known as 'leaky gut'.

Protein Fermentation

Average

This score reflects whether or not you are digesting your proteins properly. Protein digestion begins when you first start chewing and continues down in your stomach. If the protein is not fully broken down through this process, your microbes will digest the excess protein available and may convert it into harmful byproducts. Overly high microbial protein fermentation translates into a score within the red zone, suggesting your protein digestion is suboptimal.



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Gas Production

Average

This score is an assessment of your overall gas production activity by the microbes in your gut. Overall high microbial gas production has been associated with digestive difficulties, discomfort, and gut inflammation. A good score means that your microbes are not actively engaged in gas production functions.

Butyrate Production Pathways

Average

This score assesses the levels of activity of all microbial pathways that lead to the production of a beneficial nutrient - butyrate. Butyrate is a short-chain fatty acid known to beneficially affect many wellness areas from gut lining to insulin sensitivity and satiety (feeling full). A score that is not optimal means that your microbial butyrate production could really use a good boost! Individuals with low butyrate production activity would benefit from supplements or foods that either feed or add butyrate producing microbes into your gut ecosystem.



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Methane Gas Production Pathways

Average

This score assesses the levels of activity of all microbial pathways that result in giving off methane gas in your gut. This kind of activity, when high, has been linked with some motility issues in the gut (how your food moves along the digestive tract), as well as pro-inflammatory patterns that can negatively affect your intestinal lining. A good score means that the activity of methane production pathways is low.

Sulfide Gas Production Pathways

Average

This score assesses the levels of activity of all microbial pathways that result in the production of hydrogen sulfide gas. It can be made from some proteins that contain sulfur amino acids or from ingested sulfate or sulfite molecules found in foods like dried fruit, preserved meats, and some alcoholic beverages. This kind of activity, when high, contributes to pro-inflammatory patterns potentially harmful to the gut lining, as well as slowing of your motility (moving the food down your digestive tract). A good score means that the activity of sulfide production pathways is low.



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Flagellar Assembly Pathways

Average

This score assesses the levels of activity of all microbial pathways leading to the making of a structure called flagella. Flagellar structures serve as "fins" or "tails" for various microbes to help them move. A score that is not optimal suggests that these signaling pathway activities are high, indicating unrest in your microbiome as flagellar structures are helping beneficial organisms move away from a perceived threat. Higher than usual activity can also signal the presence of opportunistic organisms that are known to have these flagellar structures. This score is an important factor in assessing your inflammatory activity patterns.

Ammonia Production Pathways

Average

This score assesses the levels of activity of all microbial pathways that result in the production of ammonia. Ammonia gas can be made from amino acids as a byproduct of the breaking down of protein or from ingested nitrate or nitrite molecules found in things like food preservatives or additives, preserved meats, and dried fruit. This kind of activity, when high, contributes to pro-inflammatory patterns potentially harmful to the gut lining, as well as slowing of your motility (moving the food down your digestive tract), and is also one of the signs that your proteins may not be digested properly. A good score means that the activity of ammonia production pathways is low.



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Putrescine Production Pathways

Average

This score assesses the levels of activity of all microbial pathways that lead to putrescine production. Putrescine is a molecular byproduct of protein fermentation - a microbial breakdown of protein. If the activities of putrescine production pathways are too high, it can be harmful to the gut environment and the intestinal barrier lining. It is also one of the signs that you may be eating too much protein that may not be digested properly.

Oxalate Metabolism Pathways

Average

This score assesses the levels of activity of all microbial pathways needed to break down or metabolize oxalate. Oxalates are a major contributor to kidney stones. Oxalate-metabolizing microbes can help you by removing and digesting oxalate that you ingested from food. A good score means oxalate-metabolizing activities are high in your microbiome. When this score is not optimal, you may see some of the foods high in oxalate content on your list to minimize or even avoid.



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Salt Stress Pathways

Average

This score assesses the levels of activity of all microbial pathways that signal excessive salt in the gut environment. This kind of signaling activity, when high, suggests that you may need to adjust your salt or sodium intake and/or your hydration levels. Too much salt for your gut microbiome makes your gut environment less favorable for some beneficial or probiotic organisms to thrive. A good score means that that pathway levels that signal microbial salt stress are low.

Biofilm, Chemotaxis, and Virulence Pathways

Average

This score assesses the levels of all activity of all metabolic pathways that suggest a pro-inflammatory or hostile environment in the gut. This includes virulence factors, biofilm formation, and chemotaxis signaling, which are all important parts of your overall inflammatory activity patterns. When this score is relatively high it means that there is some threat in the environment and your microbes are trying to either defend themselves, attack each other, or move. This type of a "microbial war zone" can negatively impact your gut environment, and some of the "bullets" secreted by the microbes may trigger an immune response. A good score means that these pathway activities are at low levels.



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TMA Production Pathways

Average

This score assesses the levels of all activity of metabolic pathways that result in TMA production. TMA (trimethylamine) is a molecule that gets converted to TMAO (Trimethylamine N-oxide) in the liver. TMAO is associated with unfavorable metabolic and cardiovascular effects. Since one of the substances used for microbial TMA production is choline, reducing high-choline-containing foods in the diet may be one of the options for improving this pattern. A good score means these TMA production pathway activity levels are low.

Microbiome-Induced Stress

Average

Your Microbiome-Induced Stress score offers insights about those microbial activities that can lead to stress or inflammatory response not only in your gut, but also in your body. Toxins and other molecules produced by the gut microbiome may enter the bloodstream and contribute to cellular stress and pro-inflammatory pathways throughout your body. If this score is not optimal, it may suggest that these microbial activities need to be mitigated by either suppressing them, balancing them out with beneficial and protective microbial activities, or by strengthening your gut lining to prevent them from crossing the gut lining and affecting the rest of your body.



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Recommendations

It's here! Your personalized Viome recommendations.

Your recommendations

Your personalized recommendations are based on the activity of microbes in your gut and the information you' ve provided. Your recommendations are aimed at balancing your overall microbiome. Let's put it this way: Your food list highlights foods that will be transformed by your microbes into beneficial substances while limiting foods that will be transformed into harmful metabolites.

Remember, you and your microbiome are unique, and no single recommendation applies to everyone. The same foods can be beneficial for one person, neutral for another, and harmful for others. Ready to dig in?

Your foods

Your food recommendations have been classified into 4 ranks to help you achieve optimum health and well-being. These are:

- 1. **Superfoods.** Meet your food destiny. These are your most beneficial foods.
- 2. Enjoy. Build a strong foundation with these nutrient dense foods.
- **3. Minimize.** You should still eat these foods (but within limits).
- 4. Avoid. These foods are your personal kryptonite.

Your recommended servings

We all struggle to figure out serving sizes on food labels because they only act as measurement tools, they are not personalized for you.

With your food list, you get personalized servings to inform you on how much you should eat from each food category in a given day. And under each food, you'll find Viome's serving size, so you know the exact amount of that food to eat.

Tip: If you are very active in a day, you can increase your servings from each food category proportionally for that day.

Once you master your total servings per day, you can aim to achieve diversity by eating your recommended servings for each food rank.

Before you get started

Your success means a lot to us. Read our tips below before you begin.



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What About Allergies?

You may notice some foods that you are allergic or sensitive to in your recommended food lists. Err on the side of caution. If you know you have a reaction or dislike to a recommended food, please do not consume it.

Foods are specifically chosen based on your unique microbiome rather than on allergies.

What about viruses?

You may see some foods placed on your avoid list due to viruses. Viruses are known to infect foods and have been associated with an inflammatory response. Internal Viome studies suggest that temporarily avoiding the virus-related foods for 3 to 4 weeks may be sufficient to reduce or eliminate activity of the viruses. You do not have to avoid all virus-related foods at once. After temporarily removing any virus-related food, you may choose to reintroduce that food back into your diet.

When is it best to eat?

Aim to eat 3 meals a day, and you may also need to snack in between meals. Avoid eating 1 hour before you go to bed.

Go for variety

Explore foods that you haven't tried and since we're at it, alternate choices instead of eating the same food every day. Choose different foods from each of your superfood, enjoy, and minimize food categories based on your recommended amounts.

Listen to your body



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Your recommended amounts are a guideline on the quantity of foods you should aim for. Stop eating once you are comfortably satiated or 80% full. Monitor how you feel, including your **hunger**, **energy level**, and **mood** or other forms of discomfort 1-3 hours after eating. If you consistently feel worse in any of these areas, you may need to adjust your food choices.

What else?

In addition to your food plan, your microbiome and your metabolism will gain an extra benefit from interval training at least 3 times per week.

Caloric restriction may provide more benefit than intermittent fasting.



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My Foods



Vegetables

66 recommended vegetables

2 avoid vegetables

6 servings of vegetables per day



Proteins & Fats

107 recommended proteins & fats

0 avoid proteins & fats

7 servings of proteins & fats per day



Fruits & Grains

71 recommended fruits & grains

0 avoid fruits & grains

4 servings of fruits & grains per day



Herbs, Spices & Other

59 recommended herbs, spices & other

1 avoid herbs, spices & other

7 servings of herbs, spices & other per day

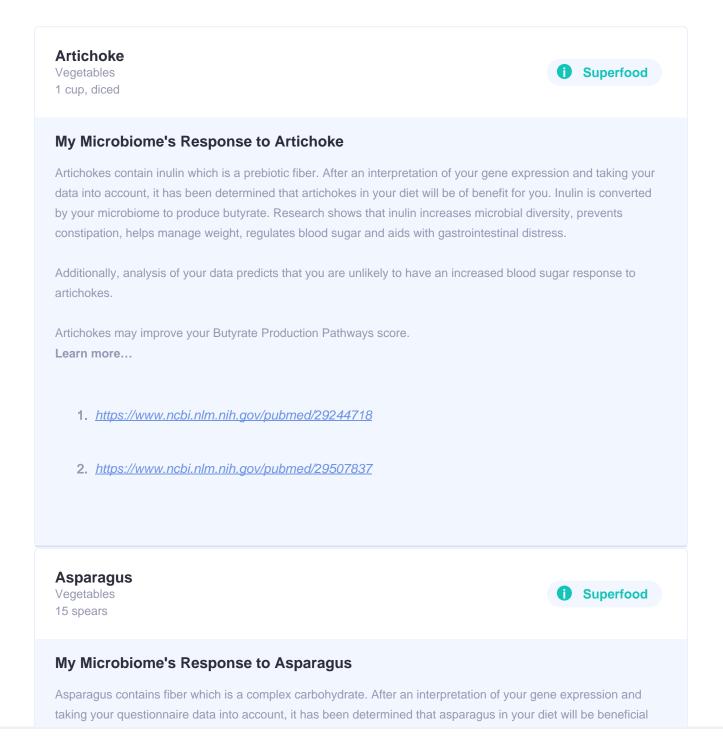


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My Superfoods

We recommend you eat more of these foods

These foods are specially forumulated to prioritize your gut's health and biodiversity.





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for you. Fiber is converted by your microbiome to produce butyrate. It has been reported that fiber increases microbial diversity, prevents constipation, helps manage weight, regulates blood sugar and aids with gastrointestinal distress.

Additionally, analysis of your data predicts that you are unlikely to have an increased blood sugar response to asparagus.

Asparagus may improve your gut lining health score.

Learn more...

- 1. https://www.ncbi.nlm.nih.gov/pubmed/11889319
- 2. https://www.ncbi.nlm.nih.gov/pubmed/28230737
- 3. https://www.ncbi.nlm.nih.gov/pubmed/29902436

Avocado

Proteins & Fats 1 half



Superfood

My Microbiome's Response to Avocado

Avocado contains essential fatty acids which are a class of unsaturated fatty acids. After analyzing your gene expression and taking your questionnaire data into account, it has been determined that avocado in your diet will be beneficial for you. Essential fatty acids are critical for a stable microbiome. They increase microbial diversity and beneficial butyrate-producing bacteria. Butyrate is anti-inflammatory and promotes a strong gut lining by tightening the junctions between cells. Research shows that essential fatty acids nourish your brain, enhance gut health and decrease inflammation.

Additionally, analysis of your data predicts that you are unlikely to have an increased blood sugar response to avocado.

Learn more...

1. https://www.ncbi.nlm.nih.gov/pubmed/25773775



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- 2. https://www.ncbi.nlm.nih.gov/pubmed/18568054
- 3. https://www.ncbi.nlm.nih.gov/pubmed/29215589

Bone Broth (Mammal)

Proteins & Fats

1 cup



Superfood

My Microbiome's Response to Bone Broth (Mammal)

Mammal bone broth contains amino acids which are a type of amine. After an interpretation of your gene expression and taking your wellness goals into account, it has been determined that mammal bone broth in your diet will be optimal for you. Amino acids are protein building blocks and important for energy regulation. Your gut bacteria ferment dietary amino acids and produce molecules which modulate your immune system, cell function, metabolism and nourish your gut lining.

Mammal bone broth may improve your gut lining health score.

Learn more...

- 1. https://www.ncbi.nlm.nih.gov/pubmed/26475342
- 2. https://www.ncbi.nlm.nih.gov/pubmed/18670730

Cabbage

Vegetables
1 cup

Superfood

My Microbiome's Response to Cabbage

Cabbage contains glutamine which is an amino acid. After an analysis of your gene expression and taking your questionnaire data into account, it has been determined that cabbage in your diet will be of benefit for you.



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Glutamine is used by specific bacteria in your gut, such as Bacteroidetes and Firmicutes species. It is a precursor to the anti-inflammatory short-chain fatty acid butyrate. Studies indicate that glutamine increases gut health by strengthening the mucosal barrier which limits allergic responses, decreases inflammation and enhances digestion.

Additionally, analysis of your data predicts that you are unlikely to have an increased blood sugar response to cabbage.

Cabbage may improve your gut lining health score.

Learn more...

- 1. https://www.ncbi.nlm.nih.gov/pubmed/28498331
- 2. https://www.ncbi.nlm.nih.gov/pubmed/20613941
- 3. https://www.ncbi.nlm.nih.gov/pubmed/21196263

Capers

Herbs, Spices & Other 1 teaspoon



Superfood

My Microbiome's Response to Capers

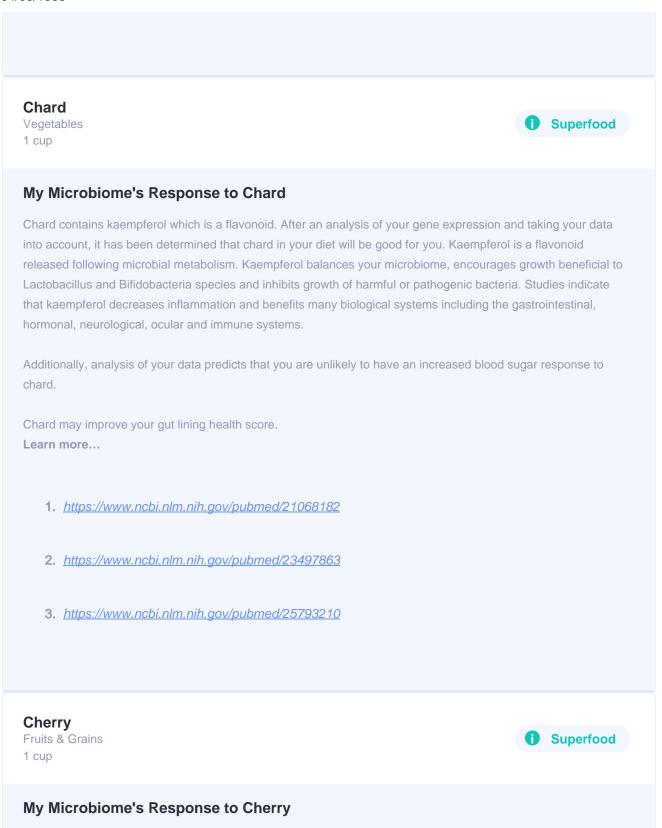
Capers contain Quercetin which is a flavonol. After an analysis of your gene expression and taking your data into account, it has been determined that capers in your diet will be good for you. Quercetin influences bacterial function and leads to the activation of specific antioxidant biological pathways that decrease inflammation and contribute to microbial detoxification. Studies indicate that Quercetin promotes hormone production and cardiovascular wellness. In fact, low plasma levels of Quercetin have been associated with increased risk of heart disease.

Learn more...

- 1. https://www.ncbi.nlm.nih.gov/pubmed/27070643
- 2. https://www.ncbi.nlm.nih.gov/pubmed/26999194



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Cherries contain flavonoids which are a class of polyphenols. After an interpretation of your gene expression and taking your data into account, it has been determined that cherries in your diet will be helpful for you. Polyphenols are a complex group of many compounds released following microbial metabolism. Polyphenols balance your microbiome, encourage growth of beneficial Lactobacillus and Bifidobacteria species and inhibit growth of harmful or pathogenic bacteria. Research shows that polyphenols decrease inflammation and benefit many biological systems including the gastrointestinal, hormonal, neurological, ocular, and immune systems.

Additionally, analysis of your data predicts that you are unlikely to have an increased blood sugar response to cherries.

Learn more...

- 1. https://www.sciencedirect.com/science/article/pii/S0306987714003077
- 2. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7070237/

Egg Yolk (Chicken or Duck)

Proteins & Fats 3 eggs



My Microbiome's Response to Egg Yolk (Chicken or Duck)

Chicken egg yolk contains phospholipids which are membrane fats. After an interpretation of your gene expression and taking your data into account, it has been determined that chicken egg yolk in your diet will be beneficial for you. Phospholipids are broken down by enzymes called phospholipases produced by your microbes in the Bacteroidetes and Firmicutes phyla. Research shows that phospholipid digestion creates metabolites like phosphatidylcholine which promote neurological function, muscle growth, nerve conduction and improved fat metabolism.

Learn more...

- 1. https://www.sciencedirect.com/science/article/pii/S0005273617301220
- 2. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4080731/
- 3. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4086534/



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Flax Oil

Proteins & Fats 1 tablespoon



My Microbiome's Response to Flax Oil

Flax oil contains gamma-linolenic acid which is an omega-3-fatty acid. After an analysis of your gene expression and taking your questionnaire data into account, it has been determined that flax oil in your diet will be good for you. Gamma-linolenic acids is metabolized by specific microbes in your gut, including Roseburia and Clostridium species. It has been reported that these metabolites act to decrease inflammation, enhance lipid metabolism, and improve skin dryness, redness and itchiness.

Learn more...

- 1. https://www.ncbi.nlm.nih.gov/pubmed/23886520
- 2. https://www.ncbi.nlm.nih.gov/pubmed/17209019

Flax Seeds

Proteins & Fats 2 tablespoons



My Microbiome's Response to Flax Seeds

Flax seeds contain essential fatty acids which are a class of unsaturated fatty acids. After an interpretation of your gene expression and taking your data into account, it has been determined that flax seeds in your diet will be good for you. Essential fatty acids are critical for a stable microbiome. They increase microbial diversity and beneficial butyrate-producing bacteria. Butyrate is anti-inflammatory and promotes a strong gut lining by tightening the junctions between cells. Research shows that essential fatty acids nourish your brain, enhance gut health and decrease inflammation.

Additionally, analysis of your data predicts that you are unlikely to have an increased blood sugar response to flax seeds.



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Learn more...

- 1. https://www.ncbi.nlm.nih.gov/pubmed/21472114
- 2. https://www.ncbi.nlm.nih.gov/pubmed/29215589

Garlic

Herbs, Spices & Other 1 clove



My Microbiome's Response to Garlic

Garlic contains allicin which is a thiosulfinate. After an analysis of your gene expression and taking your questionnaire data into account, it has been determined that garlic in your diet will be of benefit for you. Allicin promotes richness and diversity of your microbiome, specifically by promoting the activity of Bacteroidetes and Firmicutes species. Studies indicate that allicin is anti-viral, anti-bacterial and antioxidant. Allicin also has many health benefits ranging from cancer prevention to neurological health.

Garlic may improve your Butyrate Production Pathways and gut lining health scores. **Learn more...**

- 1. https://www.ncbi.nlm.nih.gov/pubmed/10594976
- 2. https://www.ncbi.nlm.nih.gov/pubmed/29785173
- 3. https://www.ncbi.nlm.nih.gov/pubmed/29756325
- 4. https://www.ncbi.nlm.nih.gov/pubmed/29477429

Ghee



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Proteins & Fats 1 teaspoon



My Microbiome's Response to Ghee

Ghee contains butyrate which is a short-chain fatty acid. After analyzing your gene expression and taking your questionnaire data into account, it has been determined that ghee in your diet will be optimal for you. Butyrate is amazing for your microbiome. Many of your microbes are capable of making butyrate but you will benefit from more in your diet. Research shows that butyrate reduces inflammation, helps with oxidative damage, increases motility, balances blood sugar, and nourishes the gut lining.

Ghee may improve your gut lining health score.

Learn more...

- 1. https://www.ncbi.nlm.nih.gov/pubmed/26582965
- 2. https://www.ncbi.nlm.nih.gov/pubmed/21472114

Hemp Hearts

Proteins & Fats 3 tablespoons



Superfood

My Microbiome's Response to Hemp Hearts

Hemp hearts contain Vitamin B3 (Niacin) which is a B vitamin. After analyzing your gene expression and taking your data into account, it has been determined that hemp hearts in your diet will be optimal for you. Vitamin B3 (Niacin) is converted to nicotinic acid and niacinamide by specific organisms in your microbiome. These compounds are co-enzymes that help your microbiome synthesize more Vitamin B3 (Niacin). It has been reported that Vitamin B3 (Niacin) metabolites feed microbes and help them perform many metabolic functions such as maintaining intestinal balance, decreasing inflammation and synthesizing neurotransmitters.

Additionally, analysis of your data predicts that you are unlikely to have an increased blood sugar response to hemp hearts.

Learn more...



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1. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3658370/

Jerusalem Artichoke

Vegetables 1 cup



My Microbiome's Response to Jerusalem Artichoke

Jerusalem artichoke contains inulin which is a prebiotic fiber. After analyzing your gene expression and taking your questionnaire data into account, it has been determined that jerusalem artichoke in your diet will be of benefit for you. Inulin is converted by your microbiome to produce butyrate. Research shows that inulin increases microbial diversity, prevents constipation, helps manage weight, regulates blood sugar and aids with gastrointestinal distress.

Additionally, analysis of your data predicts that you are unlikely to have an increased blood sugar response to jerusalem artichoke.

Jerusalem artichoke may improve your Butyrate Production Pathways score.

Learn more...

- 1. https://www.ncbi.nlm.nih.gov/pubmed/29244718
- 2. https://gut.bmj.com/content/early/2017/02/17/gutjnl-2016-313271
- 3. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5835350/
- 4. https://www.ncbi.nlm.nih.gov/pubmed/?term=26500686

Leek

Vegetables 1/2 cup, sliced





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My Microbiome's Response to Leek

Leeks contain inulin which is a prebiotic fiber. After an interpretation of your gene expression and taking your data into account, it has been determined that leeks in your diet will be optimal for you. Inulin is converted by your microbiome to produce butyrate. Research shows that inulin increases microbial diversity, prevents constipation, helps manage weight, regulates blood sugar and aids with gastrointestinal distress.

Leeks may improve your Butyrate Production Pathways score.

Learn more...

- 1. https://www.ncbi.nlm.nih.gov/pubmed/29244718
- 2. https://www.ncbi.nlm.nih.gov/pubmed/29507837

Lentils

Proteins & Fats 4 ounces, cooked



Superfood

My Microbiome's Response to Lentils

Lentils contain magnesium which is a mineral. After analyzing your gene expression and taking your questionnaire data into account, it has been determined that lentils in your diet will be of benefit for you. Magnesium is great for your microbiome - it can increase the abundance of Bifidobacterium species. These microbes help digest fiber, which produces butyrate, a short-chain fatty acid that balances inflammation and some Bifidobacteria further promote the release of nutrients like magnesium from dietary sources. It has been reported that magnesium decreases inflammation, protects your heart, and is an essential cofactor for many different enzymes.

Additionally, analysis of your data predicts that you are unlikely to have an increased blood sugar response to lentils.

Learn more...

- 1. https://www.ncbi.nlm.nih.gov/pubmed/19359148
- 2. https://www.ncbi.nlm.nih.gov/pubmed/18568054



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3. https://www.ncbi.nlm.nih.gov/pubmed/20089787

Olive Oil

Proteins & Fats 1 tablespoon



Superfood

My Microbiome's Response to Olive Oil

Olive oil contains essential fatty acids which are a class of unsaturated fatty acids. After an analysis of your gene expression and taking your questionnaire data into account, it has been determined that olive oil in your diet will be optimal for you. Essential fatty acids are critical for a stable microbiome. They increase microbial diversity and beneficial butyrate-producing bacteria. Butyrate is anti-inflammatory and promotes a strong gut lining by tightening the junctions between cells. Studies indicate that essential fatty acids nourish your brain, enhance gut health and decrease inflammation.

Olive oil may improve your gut lining health score.

Learn more...

- 1. https://www.ncbi.nlm.nih.gov/pubmed/26582965
- 2. https://www.ncbi.nlm.nih.gov/pubmed/21472114
- 3. https://www.ncbi.nlm.nih.gov/pubmed/29215589

Pumpkin

Vegetables 1 cup



Superfood

My Microbiome's Response to Pumpkin



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Pumpkin contains magnesium which is a mineral. After an interpretation of your gene expression and taking your wellness goals into account, it has been determined that pumpkin in your diet will be beneficial for you. Magnesium is great for your microbiome - it can increase the abundance of Bifidobacterium species. These microbes help digest fiber, which produces butyrate, a short-chain fatty acid that balances inflammation and some Bifidobacteria further promote the release of nutrients like magnesium from dietary sources. Studies indicate that magnesium decreases inflammation, protects your heart, and is an essential cofactor for many different enzymes.

Additionally, analysis of your data predicts that you are unlikely to have an increased blood sugar response to pumpkin.

Learn more...

- 1. https://www.ncbi.nlm.nih.gov/pubmed/19359148
- 2. https://www.ncbi.nlm.nih.gov/pubmed/18568054
- 3. https://www.ncbi.nlm.nih.gov/pubmed/20089787

Raspberry

Fruits & Grains 1 cup



Superfood

My Microbiome's Response to Raspberry

Raspberries contain Quercetin which is a flavonol. After an analysis of your gene expression and taking your wellness goals into account, it has been determined that raspberries in your diet will be good for you. Quercetin influences bacterial function and leads to the activation of specific antioxidant biological pathways that decrease inflammation and contribute to microbial detoxification. It has been reported that Quercetin promotes hormone production and cardiovascular wellness. In fact, low plasma levels of Quercetin have been associated with increased risk of heart disease.

Additionally, analysis of your data predicts that you are unlikely to have an increased blood sugar response to raspberries.

Raspberries may improve your gut lining health score.



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Learn more...

1. https://www.ncbi.nlm.nih.gov/pubmed/19297429

Sage Herbs, Spices & Other

1/4 teaspoon

Superfood

My Microbiome's Response to Sage

Sage contains rosmarinic acid which is a phenolic acid. After an analysis of your gene expression and taking your data into account, it has been determined that sage in your diet will be of benefit for you. Rosmarinic acid is a great anti-inflammatory. By decreasing inflammation, you alter the environment of your gut allowing your microbes to thrive and strengthen the integrity of your gut lining.

Learn more...

- 1. https://www.researchgate.net/publication
 /49719303 Amino acid metabolism in intestinal bacteria links between gut ecology and host health
- 2. https://www.nature.com/articles/1300907
- 3. https://link.springer.com/article/10.1007/s40268-016-0157-5

Sauerkraut

Vegetables

1 cup



My Microbiome's Response to Sauerkraut

Sauerkraut contains probiotics which are beneficial microbes. After an analysis of your gene expression and taking your data into account, it has been determined that sauerkraut in your diet will be optimal for you. Probiotics



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restore and promote diversity and balance in your microbiome. This helps to decrease and prevent inflammation, manage symptoms of gastrointestinal distress, promote regularity, and balance your immune responses. A diverse microbiome also optimizes conversion of dietary nutrients to enhance your health.

Learn more...

- 1. https://www.ncbi.nlm.nih.gov/pubmed/23320049
- 2. https://www.hindawi.com/journals/ifg/2017/5123572/

Spinach

Vegetables
1 cup



My Microbiome's Response to Spinach

Spinach contains magnesium which is a mineral. After analyzing your gene expression and taking your data into account, it has been determined that spinach in your diet will be optimal for you. Magnesium is great for your microbiome - it can increase the abundance of Bifidobacterium species. These microbes help digest fiber, which produces butyrate, a short-chain fatty acid that balances inflammation and some Bifidobacteria further promote the release of nutrients like magnesium from dietary sources. Research shows that magnesium decreases inflammation, protects your heart, and is an essential cofactor for many different enzymes.

Additionally, analysis of your data predicts that you are unlikely to have an increased blood sugar response to spinach.

Learn more...

- 1. https://www.ncbi.nlm.nih.gov/pubmed/29389872
- 2. https://www.ncbi.nlm.nih.gov/pubmed/25533715
- 3. https://www.ncbi.nlm.nih.gov/pubmed/20089787



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Spirulina

Vegetables 2 teaspoon



Superfood

My Microbiome's Response to Spirulina

Spirulina contains essential fatty acids which are a class of unsaturated fatty acids. After analyzing your gene expression and taking your data into account, it has been determined that spirulina in your diet will be beneficial for you. Essential fatty acids are critical for a stable microbiome. They increase microbial diversity and beneficial butyrate-producing bacteria. Butyrate is anti-inflammatory and promotes a strong gut lining by tightening the junctions between cells. It has been reported that essential fatty acids nourish your brain, enhance gut health and decrease inflammation.

Learn more...

- 1. https://www.ncbi.nlm.nih.gov/pubmed/25773775
- 2. https://www.ncbi.nlm.nih.gov/pubmed/18568054
- 3. https://www.ncbi.nlm.nih.gov/pubmed/29215589

Turkey (White Meat)

Proteins & Fats 3 ounces



Superfood

My Microbiome's Response to Turkey (White Meat)

White turkey meat contains tryptophan which is an amino acid. After analyzing your gene expression and taking your data into account, it has been determined that white turkey meat in your diet will be of benefit for you. Your microbes are capable of producing some tryptophan, but they also use it to make a large number of compounds including neurotransmitters like serotonin and indole-3-propionate which is anti-inflammatory and promotes brain health. Adding tryptophan-rich foods makes sure you are getting enough of it everyday.

Additionally, analysis of your data predicts that you are unlikely to have an increased blood sugar response to white turkey meat.



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Learn more...

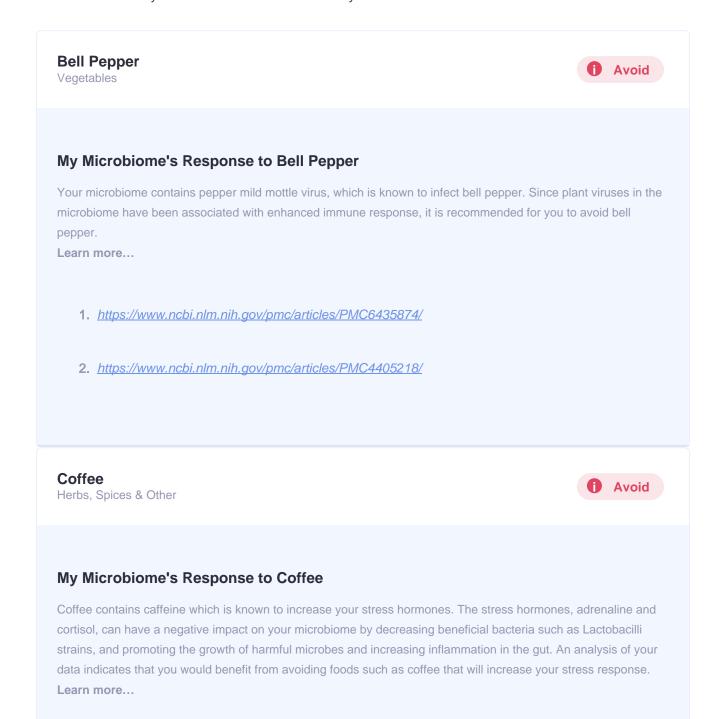
- 1. https://www.ncbi.nlm.nih.gov/pubmed/29276734
- 2. https://www.ncbi.nlm.nih.gov/pubmed/29941795
- 3. https://www.ncbi.nlm.nih.gov/pubmed/29686603

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My Foods to Avoid

We recommend you avoid these foods

These are commonly known foods that will not benefit your overall wellness.





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- 1. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2257922/
- 2. https://pubmed.ncbi.nlm.nih.gov/12140349/

Tomato

Vegetables



My Microbiome's Response to Tomato

Your microbiome contains tomato brown rugose fruit virus, which is known to infect tomatoes. Since plant viruses in the microbiome have been associated with enhanced immune response, it is recommended for you to avoid tomatoes.

Learn more...

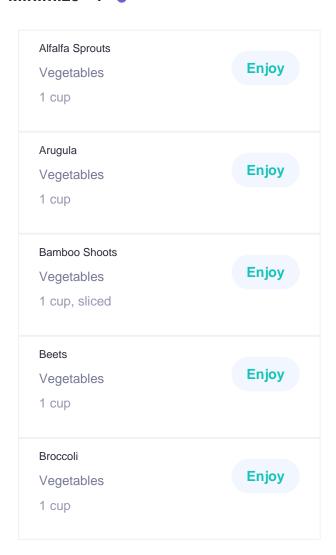
- 1. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6435874/
- 2. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4405218/

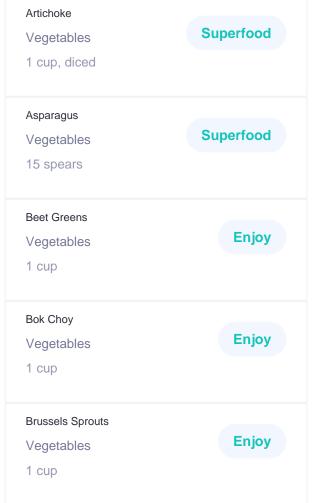
DOB: 04/05/1985

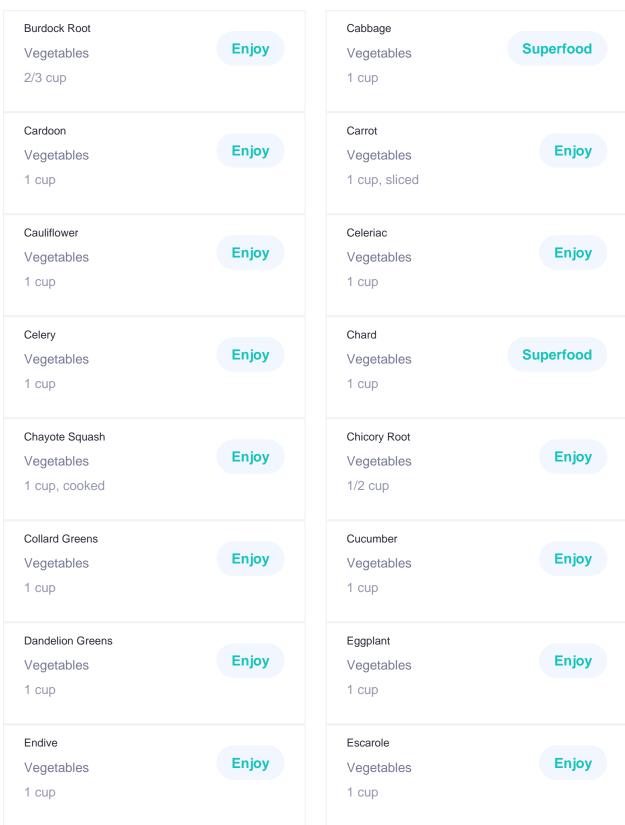
My Foods

Vegetables 6 per day

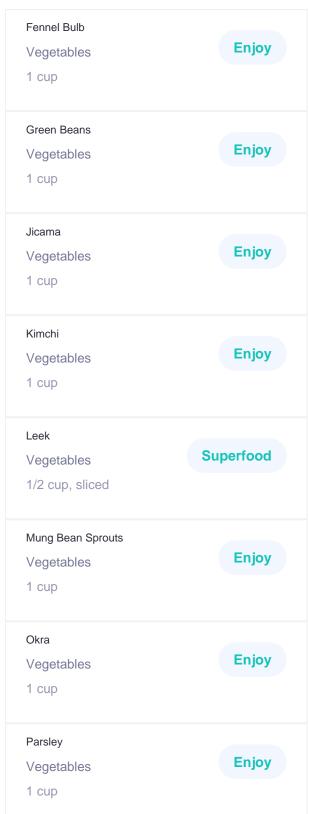
We recommend you break your daily Vegetables intake by the following servings

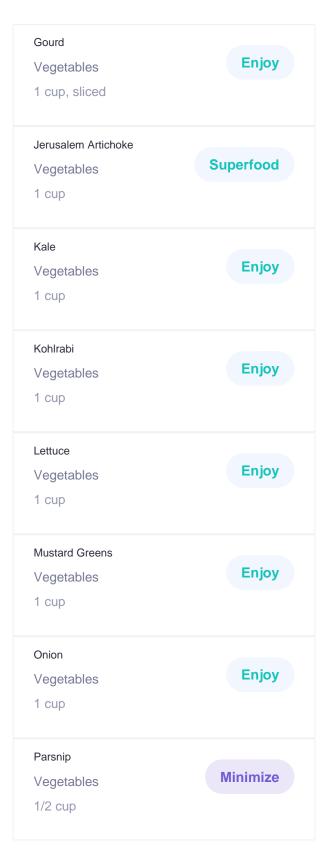




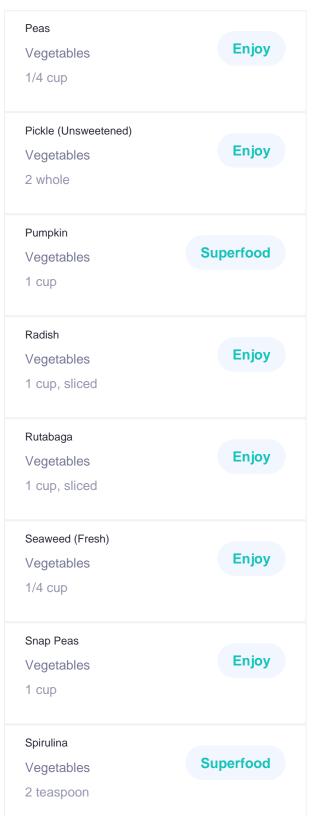






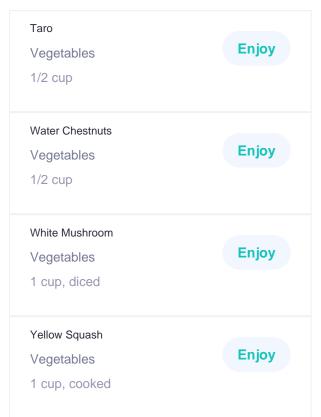


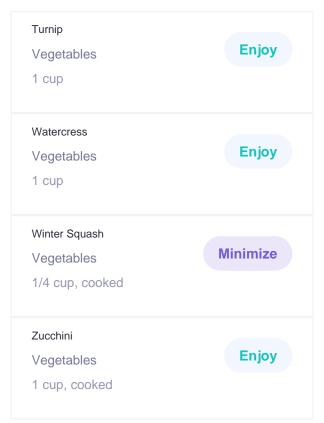




Pepino Melon Vegetables 1 cup	Enjoy
Potato Vegetables 1 half	Enjoy
Radicchio Vegetables 1 cup, sliced	Enjoy
Radish Sprouts Vegetables 1 cup	Enjoy
Sauerkraut Vegetables 1 cup	Superfood
Shallot Vegetables 1 tablespoon	Enjoy
Spinach Vegetables 1 cup	Superfood
Sweet Potato or Yam Vegetables 1/2 cup	Minimize







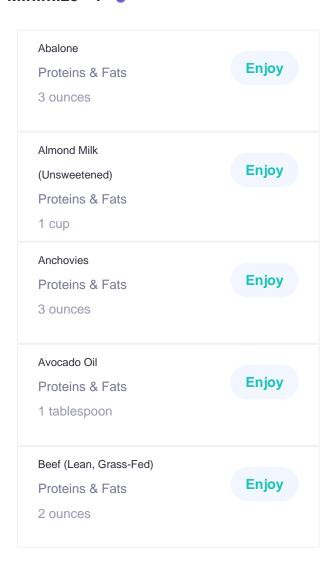
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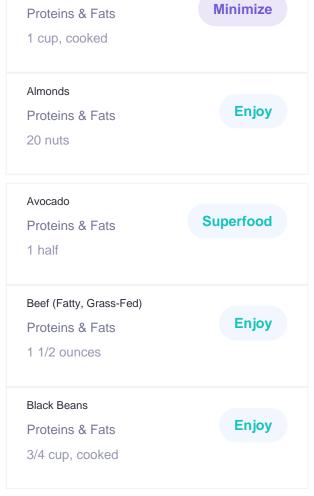
My Foods

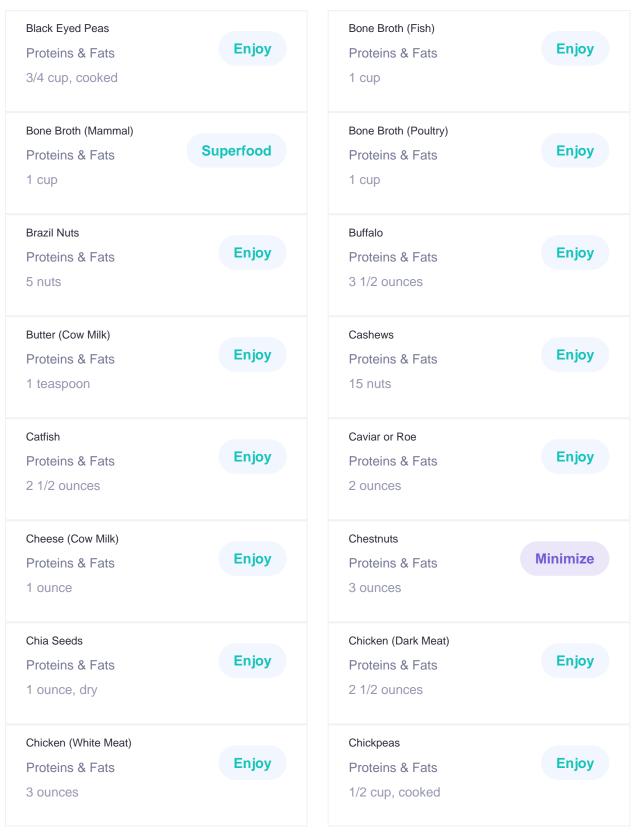
Proteins & Fats 7 per day

We recommend you break your daily Proteins & Fats intake by the following servings

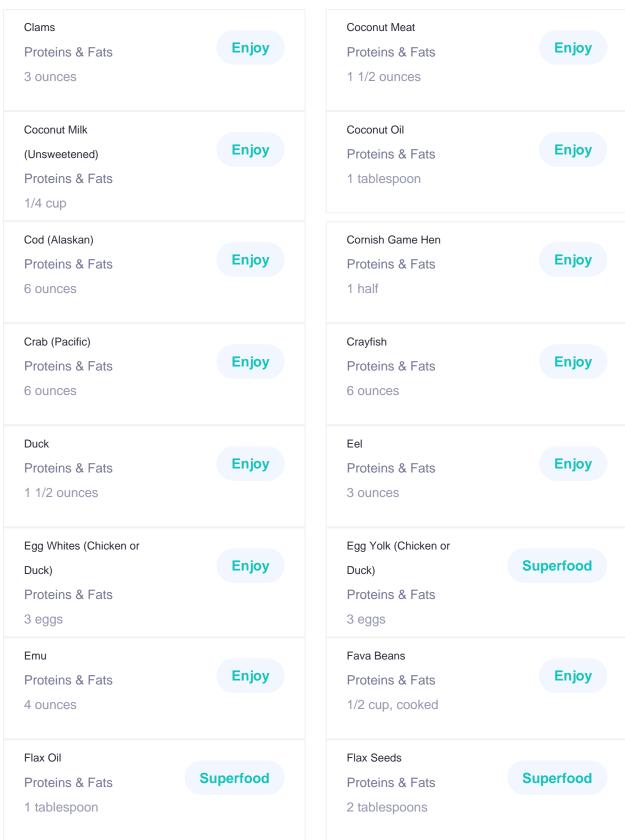
Adzuki Beans



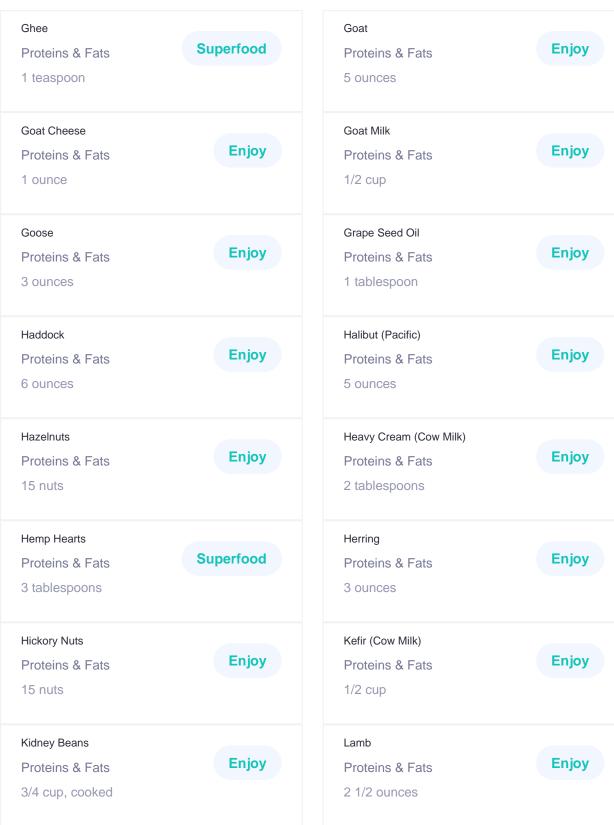




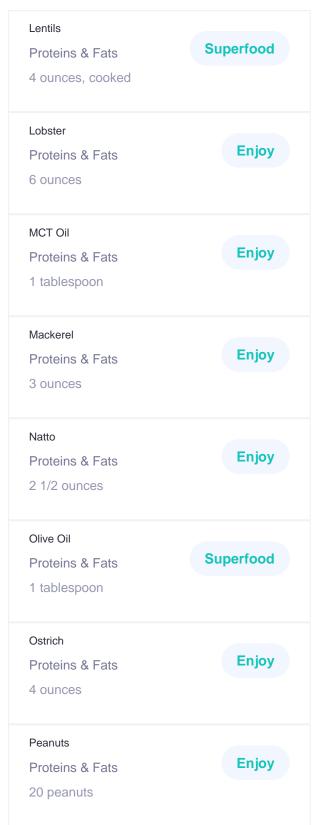






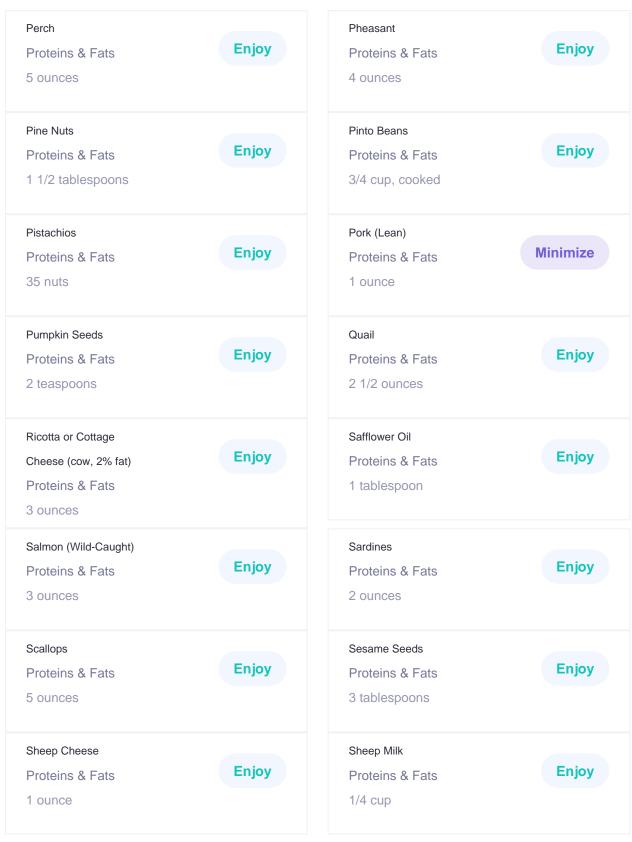




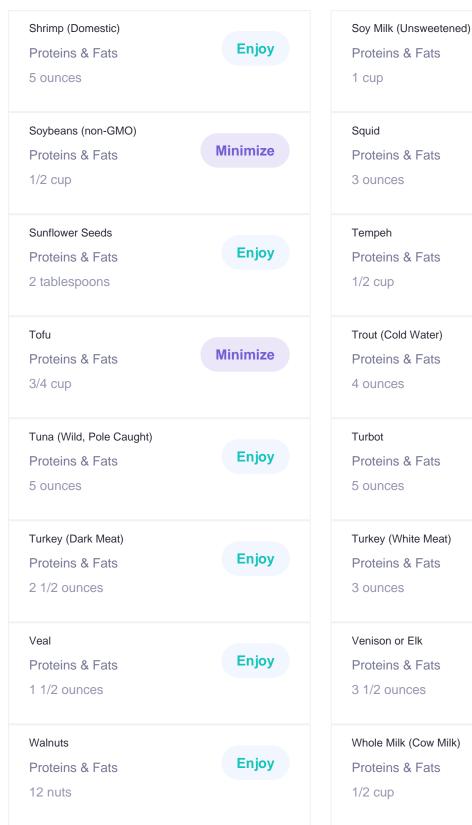


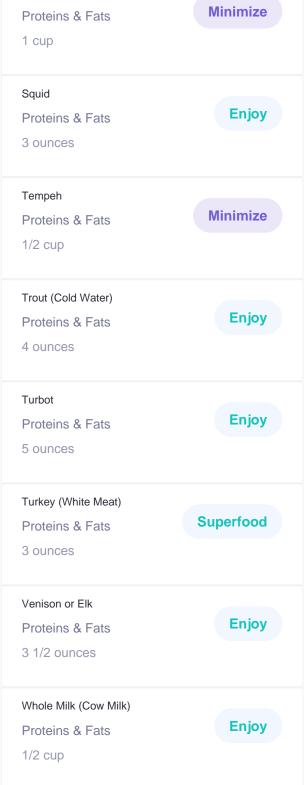
Lima Beans Proteins & Fats 1/2 cup, cooked	Minimize
Lotus Seeds Proteins & Fats 4 ounces	Enjoy
Macadamia Nuts Proteins & Fats 10 nuts	Enjoy
Mussels Proteins & Fats 3 ounces	Enjoy
Navy Beans Proteins & Fats 1/2 cup, cooked	Enjoy
Olives Proteins & Fats 20 olives	Enjoy
Oysters Proteins & Fats 3 ounces	Enjoy
Pecans Proteins & Fats 15 nuts	Enjoy













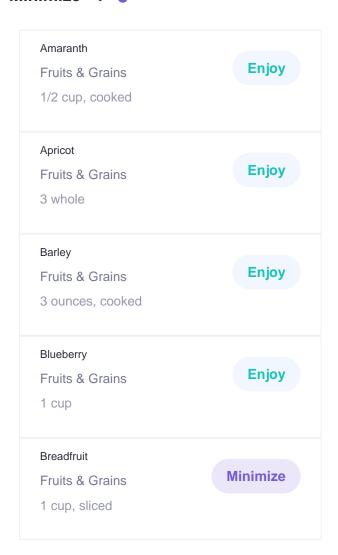


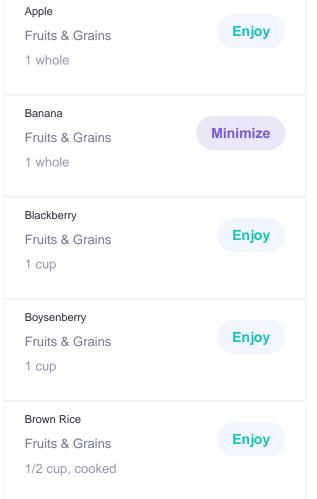
DOB: 04/05/1985

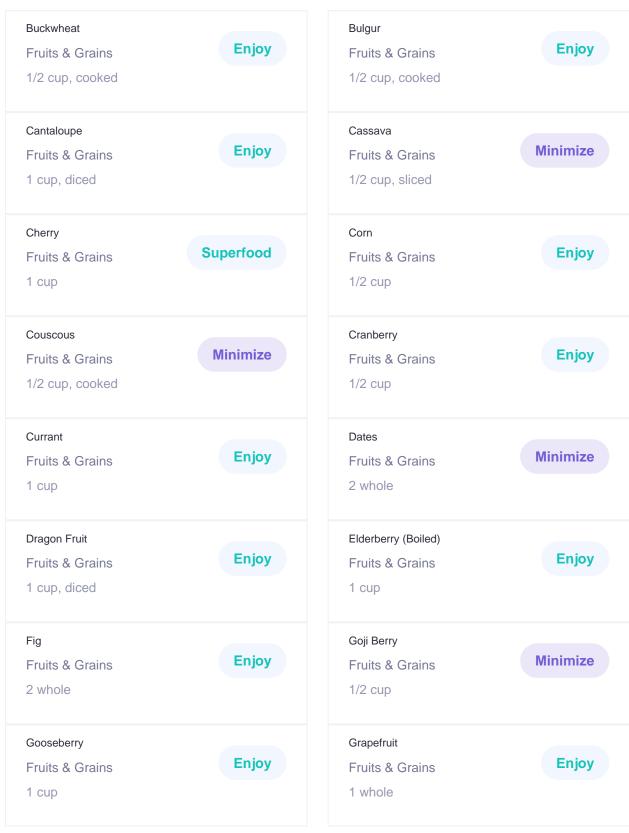
My Foods

Fruits & Grains 4 per day

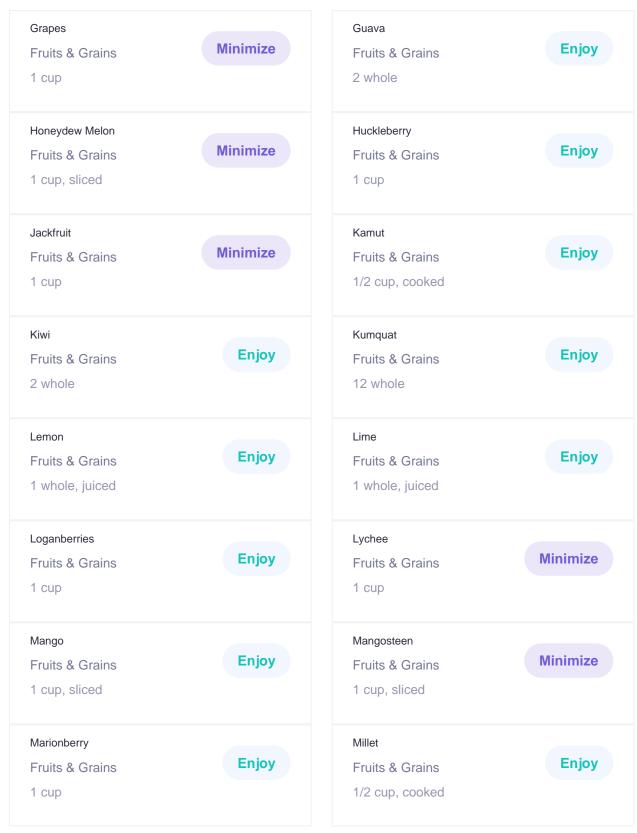
We recommend you break your daily Fruits & Grains intake by the following servings



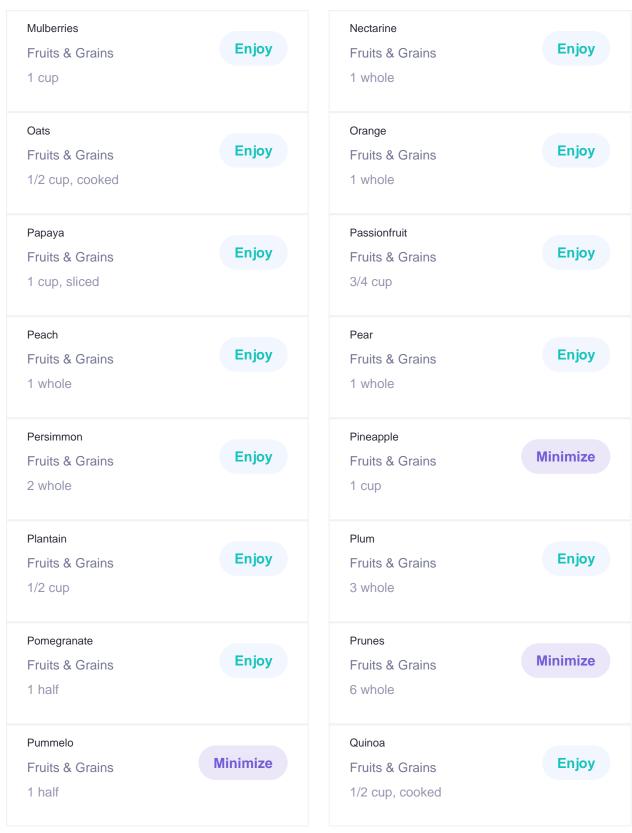




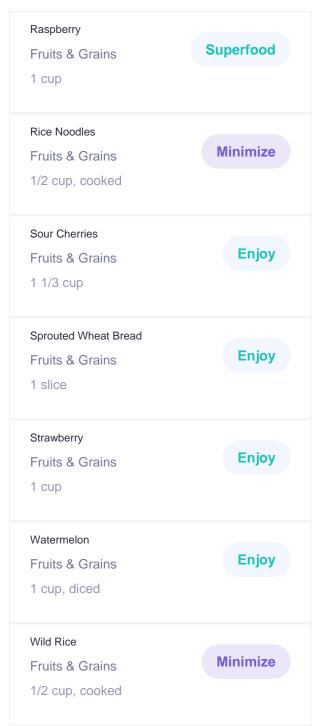


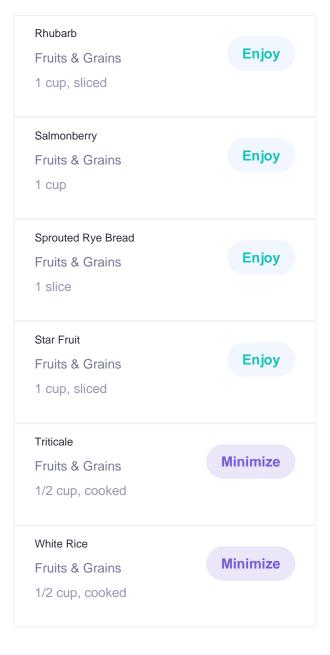












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My Foods

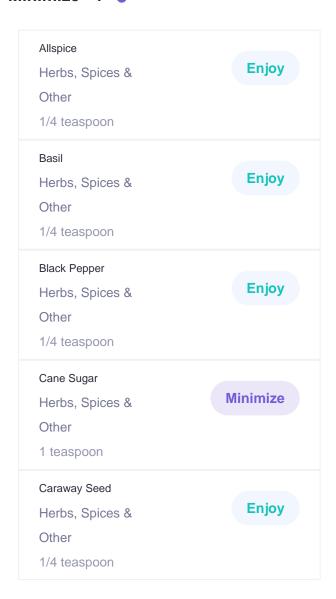
Herbs, Spices & Other 7 per day

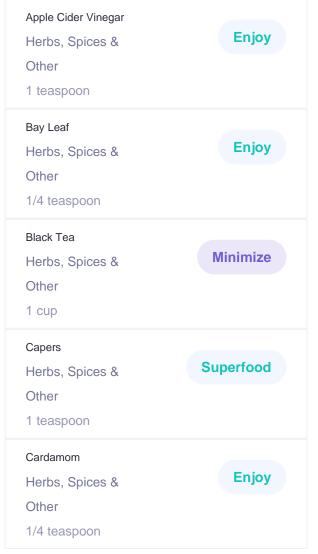
We recommend you break your daily Herbs, Spices & Other intake by the following servings

Superfood + •••••

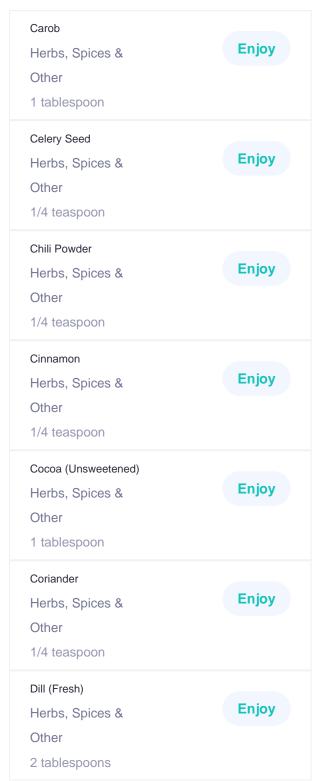
Enjoy 6

Minimize 1 •

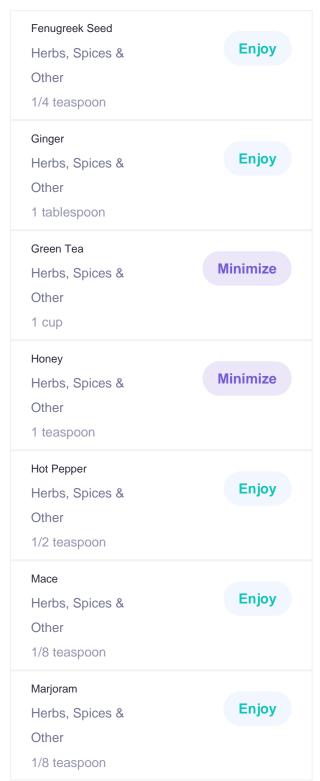




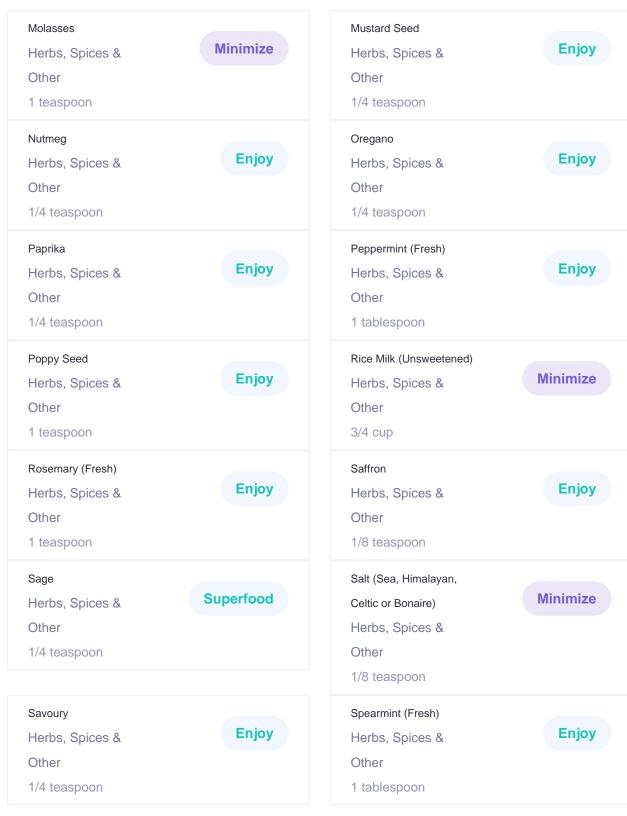


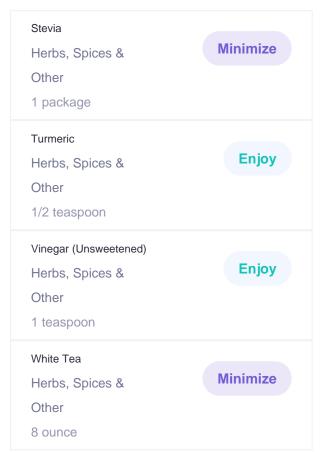


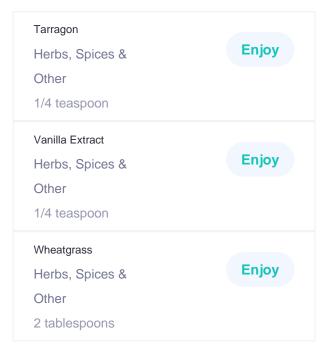
Cayenne Pepper Herbs, Spices & Other 1/8 teaspoon	Enjoy
Chervil Herbs, Spices & Other 1/4 teaspoon	Enjoy
Cilantro Herbs, Spices & Other 2 tablespoons	Enjoy
Cloves Herbs, Spices & Other 1/8 teaspoon	Enjoy
Coconut Water Herbs, Spices & Other 1 cup	Enjoy
Cumin Herbs, Spices & Other 1/4 teaspoon	Enjoy
Fennel Seed Herbs, Spices & Other 1/4 teaspoon	Enjoy



Garlic Herbs, Spices & Other 1 clove	Superfood
Grape Leaves Herbs, Spices & Other 4 leaves	Enjoy
Herbal Tea Herbs, Spices & Other 1 cup	Enjoy
Horseradish Herbs, Spices & Other 1 teaspoon	Enjoy
Kombucha Herbs, Spices & Other 1 cup	Minimize
Maple Syrup Herbs, Spices & Other 1 teaspoon	Minimize
Miso Herbs, Spices & Other 1 teaspoon	Minimize







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Supplements

Look for supplements with the following ingredients:



Probiotics

Look for supplements with the following ingredients:

L. bulgaricus, L. rhamnosus, L. plantarum, Strep thermophilus, and Bifidobacterium species (lactis, bifidum)

Offered by Klaire Labs, or other vendors.

To support the growth and activity of beneficial microorganisms and enhance the balance in your microbial ecosystem



Prebiotic

Look for supplements with the following ingredients:

Fiber with jerusalem artichoke and acacia

Offered by Hyperbiotics, or other vendors.

To help specific microbes in your gut produce short-chain fatty acids, like butyrate, and other beneficial nutrients that can balance the microbiome or counter some of the pro-inflammatory or opportunistic activities



Curcumin

Look for supplements with the following ingredients:

Curcumin

Offered by Thorne, or other vendors.

To boost the activities of anti-inflammatory functions for your microbiome and your gut wellness



Viome Inc. https://support.viome.com

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Zinc Carnosine

Look for supplements with the following ingredients:

Zinc Carnosine

Offered by Integrative Therapeutics, Metagencis, or other vendors.

To support or improve your gut microbial ecosystem and nourish the gut lining

Viome recommendations are not evaluated or approved by FDA and are not required to be approved by FDA. The recommended food and supplements are intended to support general wellbeing and are not intended to treat, diagnose, mitigate, prevent, or cure any condition or disease. Please seek advice from your medical doctor and check all ingredients for contraindications, known allergies or sensitivities. Viome does not endorse or partner with any supplement manufacturers. There may be several brands or vendors listed as examples. However, Viome does not take any responsibility for the quality of any commercial products, which contain but are not limited to the ingredients recommended for you.



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Viome Methodology

Microbial total RNA is extracted, ribosomal RNA molecules are removed from total RNA, and the remaining RNA molecules are sequenced on Illumina NextSeq or NovaSeq. Proprietary bioinformatics algorithms are used to perform taxonomic classification and functional analysis of the sequencing data.

Method Limitation

Viome's results and recommendations are based on our ability to identify and quantify thousands of microbial taxa. Such vast diversity has not been captured in the genomic databases, so it is impossible to assess it comprehensively. There are microorganisms that thrive in the gut whose genomes have not been sequenced. Viome is unable to identify those specific organisms, but can identify their near neighbors, which have similar homology. There are also taxa that we cannot discriminate because of their sequence similarity, for example at the strain level. There are some RNA transcripts that may not always align and match to specific known organisms, which may be due to the fact that these sequences are poorly characterized, reliable consensus sequence may not be available for reference. Viome monitors the growth of public genomic databases and will update its own databases when there is sufficient new information to be worthy of incorporation.

Detection of a microorganism by this test does not imply having a disease. Similarly, not detecting a microorganism by this test does not exclude the presence of a disease-causing microorganism. Further, other organisms may be present that are not detected by this test. This test is not a substitute for established methods for identifying microorganisms or their antimicrobial susceptibility prole. Results are qualitative and identify the presence or absence of identified annotated organisms.

The Gut Intelligence Test was developed by, and its performance characteristics determined by Viome Inc. It has not been cleared or approved by the US Food and Drug Administration. The FDA has determined that such clearance or approval is not necessary. This laboratory is registered under CLIA (50D2224932) to perform high complexity testing. Sequencing was performed at Viome Inc. CLIA (50D2224932). Contact Viome for any further questions.

Y I O M E

CHARLES WARDEN'S RECOMMENDATIONS

VERSION: 1.14.2

