VIOME



**CHARLES WARDEN'S 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: 05/03/2021 Date Received: 05/07/2021 Date Issued: 06/17/2021 Sample ID: 1669248A4941

# 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).
- 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.



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#### Before you get started

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

#### 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 a small snack daily. Avoid eating 1-2 hours 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

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.



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#### What else?

In addition to your food plan, your microbiome and your metabolism will benefit from a variety of stretching, strength training, interval training, and aerobic exercise at least 3 times per week.



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# My Foods



# **Vegetables**

65 recommended vegetables3 avoid vegetables

10 servings of vegetables per day



#### **Proteins & Fats**

105 recommended proteins & fats2 avoid proteins & fats

6 servings of proteins & fats per day



# **Fruits & Grains**

69 recommended fruits & grains

2 avoid fruits & grains

5 servings of fruits & grains per day



# Herbs, Spices & Other

60 recommended herbs, spices & other

1 avoid herbs, spices & other

8 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.

#### **Alfalfa Sprouts**

Vegetables 1 cup

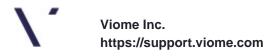


## My Microbiome's Response to Alfalfa Sprouts

Alfalfa sprouts contain amino acids which are elemental components of proteins that are easy for our bodies to digest and absorb. After an interpretation of your gene expression and taking your questionnaire data into account, it has been determined that alfalfa sprouts in your diet will be beneficial for you.

Alfalfa sprouts may improve your Protein Fermentation score. **Learn more...** 

1. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5908832



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Fruits & Grains 1 whole



Superfood

#### My Microbiome's Response to Apple

Apples contain pectin which is a soluble fiber. After analyzing your gene expression and taking your data into account, it has been determined that apples in your diet will be optimal for you. Pectin enriches the mucus layer and protects your gut lining and supports healthy digestive movement.

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

Apples may improve your Digestive Efficiency and Protein Fermentation scores. Learn more...

1. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3257631



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#### **Artichoke**

Vegetables 1 cup, diced



#### My Microbiome's Response to Artichoke

Artichokes contain inulin which is a prebiotic fiber. After analyzing your gene expression and taking your data into account, it has been determined that artichokes in your diet will be good for you. Inulin is converted by your microbiome to produce butyrate. It has been reported 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 artichokes.

Artichokes 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



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#### Avocado

Proteins & Fats

1 half



#### My Microbiome's Response to Avocado

Avocado contains 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 avocado 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. It has been reported 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. <a href="https://www.ncbi.nlm.nih.gov/pubmed/25773775">https://www.ncbi.nlm.nih.gov/pubmed/25773775</a>
- 2. https://www.ncbi.nlm.nih.gov/pubmed/18568054
- 3. https://www.ncbi.nlm.nih.gov/pubmed/29215589



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#### Banana

Fruits & Grains 1 whole



#### My Microbiome's Response to Banana

Bananas contain pyridoxine which is a B vitamin. After an interpretation of your gene expression and taking your questionnaire data into account, it has been determined that bananas in your diet will be helpful for you. Pyridoxine has low bioavailability until metabolized by residents of your microbiome from the bacterial families Streptococcus and Lactobacillus. Although some of your microbes are able to produce pyridoxine on their own, dietary supplementation ensures you are getting your recommended dose. Studies indicate that pyridoxine is important for brain development, immune system function and skin collagen production.

Additionally, analysis of your data predicts that you are unlikely to have an increased blood sugar response to bananas. **Learn more...** 

- 1. https://www.ncbi.nlm.nih.gov/pubmed/17066209
- 2. https://www.ncbi.nlm.nih.gov/pubmed/6651795
- 3. https://www.ncbi.nlm.nih.gov/pubmed/6651795



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#### **Capers**

Herbs, Spices & Other 1 teaspoon



# My Microbiome's Response to Capers

Capers contain Quercetin which is a flavonol. After an interpretation of your gene expression and taking your wellness goals 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. Research shows 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
- 3. https://www.ncbi.nlm.nih.gov/pubmed/25762527



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#### Cherry

Fruits & Grains

1 cup



# My Microbiome's Response to Cherry

Cherries contain flavonoids which are a class of polyphenols. After an interpretation of your gene expression and taking your questionnaire data into account, it has been determined that cherries in your diet will be of benefit 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.ncbi.nlm.nih.gov/pubmed/22701758
- 2. https://www.ncbi.nlm.nih.gov/pubmed/25793210

#### **Chicory Root**

Vegetables 1/2 cup



Superfood

#### My Microbiome's Response to Chicory Root

Chicory contains sesquiterpene lactone which is a type of terpenoids. After an analysis of your gene expression and taking your data into account, it has been determined that chicory in your diet will be of benefit for you. Sesquiterpene lactone provides the bitter taste in chicory and promotes the production of necessary digestive juices to aid in digestion and absorption of nutrients.

Chicory may improve your Butyrate Production Pathways, Digestive Efficiency, and Protein Fermentation scores. **Learn more...** 

1. <a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3836359">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3836359</a>



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#### **Dandelion Greens**

Vegetables 1 cup



# My Microbiome's Response to Dandelion Greens

Dandelion greens contain sesquiterpene lactone which is a type of terpenoids. After an interpretation of your gene expression and taking your data into account, it has been determined that dandelion greens in your diet will be helpful for you. Sesquiterpene lactone provides the bitter taste in dandelion greens and promotes the production of necessary digestive juices to aid in digestion and absorption of nutrients.

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

Dandelion greens may improve your Digestive Efficiency and Protein Fermentation scores. **Learn more...** 

1. https://www.ncbi.nlm.nih.gov/pubmed/22010973



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# Egg Yolk (Chicken)

Proteins & Fats 3 eggs



# My Microbiome's Response to Egg Yolk (Chicken)

Chicken egg yolk contains phospholipids which are membrane fats. After an interpretation of your gene expression and taking your questionnaire 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. It has been reported that phospholipid digestion creates metabolites like phosphatidylcholine which promote neurological function, muscle growth, nerve conduction and improved fat metabolism.

Learn more...

- 1. https://www.ncbi.nlm.nih.gov/pubmed/20592216
- 2. https://www.ncbi.nlm.nih.gov/pubmed/25801291/
- 3. https://www.ncbi.nlm.nih.gov/pubmed/23518648



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Vegetables 1 cup



#### My Microbiome's Response to Fennel Bulb

Fennel bulbs contain histidine which is an amino acid. After an analysis of your gene expression and taking your questionnaire data into account, it has been determined that fennel bulbs in your diet will be optimal for you. Histidine is used to produce histamine, a neurotransmitter needed for healthy digestion and gut lining.

Fennel bulbs may improve your Digestive Efficiency and Protein Fermentation scores. **Learn more...** 

1. https://www.ncbi.nlm.nih.gov/pubmed/22010973

#### Flax Oil

Proteins & Fats 1 tablespoon



#### My Microbiome's Response to Flax Oil

Flax oil contains essential fatty acids which are a class of unsaturated fatty acids. After an interpretation of your gene expression and taking your wellness goals into account, it has been determined that flax oil in your diet will be helpful 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.

Learn more...

- 1. <a href="https://www.ncbi.nlm.nih.gov/pubmed/25790022">https://www.ncbi.nlm.nih.gov/pubmed/25790022</a>
- 2. https://www.ncbi.nlm.nih.gov/pubmed/29215589

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#### Flax Seeds

Proteins & Fats 2 tablespoons



#### My Microbiome's Response to Flax Seeds

Flax seeds contain magnesium which is a mineral. After an interpretation of your gene expression and taking your questionnaire data into account, it has been determined that flax seeds in your diet will be helpful 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. 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 flax seeds. **Learn more...** 

- 1. https://www.ncbi.nlm.nih.gov/pubmed/29389872
- 2. https://www.ncbi.nlm.nih.gov/pubmed/25533715
- 3. <a href="https://www.ncbi.nlm.nih.gov/pubmed/20089787">https://www.ncbi.nlm.nih.gov/pubmed/20089787</a>



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#### **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 data into account, it has been determined that garlic in your diet will be helpful 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 score. **Learn more...** 

1. https://www.ncbi.nlm.nih.gov/pubmed/10594976



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Herbs, Spices & Other 1 tablespoon



Superfood

# My Microbiome's Response to Ginger

Ginger contains gingerol which is a polyphenol. After an analysis of your gene expression and taking your questionnaire data into account, it has been determined that ginger in your diet will be good for you. Gingerol like other polyphenols is metabolized by your microbiome. Research shows that once converted by your microbes, gingerol reduces inflammation and improves digestion.

Learn more...

1. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3665023

#### Grapefruit

Fruits & Grains 1 whole



Superfood

## My Microbiome's Response to Grapefruit

Grapefruit contains naringenin which is a type of flavonoid. After analyzing your gene expression and taking your wellness goals into account, it has been determined that grapefruit in your diet will be optimal for you. Naringenin provides the bitter taste in grapefruit which promotes the production of necessary digestive juices to aid in digestion and absorption of necessary nutrients.

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

Grapefruit may improve your Digestive Efficiency and Protein Fermentation scores. **Learn more...** 

1. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4085189



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#### **HazeInuts**

Proteins & Fats 15 nuts



#### My Microbiome's Response to Hazelnuts

Hazelnuts contain fiber which is a complex carbohydrate. After an interpretation of your gene expression and taking your wellness goals into account, it has been determined that hazelnuts in your diet will be beneficial for you. Fiber is converted by your microbiome to produce butyrate. Studies indicate 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 hazelnuts. **Learn more...** 

- 1. https://www.ncbi.nlm.nih.gov/pubmed/28230737
- 2. <a href="https://www.ncbi.nlm.nih.gov/pubmed/15173415">https://www.ncbi.nlm.nih.gov/pubmed/15173415</a>
- 3. https://www.ncbi.nlm.nih.gov/pubmed/29902436



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### Jerusalem Artichoke

Vegetables 1 cup



#### My Microbiome's Response to Jerusalem Artichoke

Jerusalem artichoke contains inulin which is a prebiotic. After an interpretation of your gene expression and taking your questionnaire data into account, it has been determined that jerusalem artichoke in your diet will be beneficial for you. Inulin is converted by your microbiome to produce butyrate. It has been reported 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. <a href="https://www.ncbi.nlm.nih.gov/pubmed/29244718">https://www.ncbi.nlm.nih.gov/pubmed/29244718</a>
- 2. https://www.ncbi.nlm.nih.gov/pubmed/28213610
- 3. https://www.ncbi.nlm.nih.gov/pubmed/29507837



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#### Kale

Vegetables 1 cup



#### My Microbiome's Response to Kale

Kale contains B vitamins which are water-soluble vitamins. After an analysis of your gene expression and taking your questionnaire data into account, it has been determined that kale in your diet will be optimal for you. B vitamins undergo phosphorylation, oxidation and hydrolysis by your gut microbiome. Research shows that B vitamins are important in synthesizing neurotransmitters, promoting sleep, aiding in nutrient cycling and boosting liver function.

Additionally, analysis of your data predicts that you are unlikely to have an increased blood sugar response to kale. **Learn more...** 

- 1. https://www.ncbi.nlm.nih.gov/pubmed/4284235
- 2. <a href="https://www.ncbi.nlm.nih.gov/pubmed/25941533">https://www.ncbi.nlm.nih.gov/pubmed/25941533</a>
- 3. https://www.ncbi.nlm.nih.gov/pubmed/13630913
- 4. https://www.ncbi.nlm.nih.gov/pubmed/28393285



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#### Lamb

Proteins & Fats 2 1/2 ounces



#### My Microbiome's Response to Lamb

Lamb contains cobalamin which is a B vitamin. After analyzing your gene expression and taking your wellness goals into account, it has been determined that lamb in your diet will be beneficial for you. Cobalamin is transformed by your microbiome and also produced by specific microbes. Cobalamin is extremely important in energy production and nerve health.

Additionally, analysis of your data predicts that you are unlikely to have an increased blood sugar response to lamb. **Learn more...** 

- 1. https://www.ncbi.nlm.nih.gov/pubmed/15896807
- 2. <a href="https://www.ncbi.nlm.nih.gov/pubmed/28393285">https://www.ncbi.nlm.nih.gov/pubmed/28393285</a>
- 3. <a href="https://www.ncbi.nlm.nih.gov/pubmed/25440056">https://www.ncbi.nlm.nih.gov/pubmed/25440056</a>



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#### Leek

Vegetables 1/2 cup, sliced



Superfood

#### My Microbiome's Response to Leek

Leeks contain inulin which is a prebiotic. After analyzing your gene expression and taking your wellness goals into account, it has been determined that leeks in your diet will be good for you. Inulin is converted by your microbiome to produce butyrate. It has been reported 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. <a href="https://www.ncbi.nlm.nih.gov/pubmed/29244718">https://www.ncbi.nlm.nih.gov/pubmed/29244718</a>
- 2. <a href="https://www.ncbi.nlm.nih.gov/pubmed/29507837">https://www.ncbi.nlm.nih.gov/pubmed/29507837</a>



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#### Lentils

Proteins & Fats 4 ounces, cooked



#### 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 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. 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
- 3. <a href="https://www.ncbi.nlm.nih.gov/pubmed/20089787">https://www.ncbi.nlm.nih.gov/pubmed/20089787</a>



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# **Mung Bean Sprouts**

Vegetables 1 cup



# My Microbiome's Response to Mung Bean Sprouts

Mung bean sprouts contain pectin which is a soluble fiber. After an interpretation of your gene expression and taking your wellness goals into account, it has been determined that mung bean sprouts in your diet will be good for you. Pectin enriches the mucus layer and protects your gut lining and supports healthy digestive movement.

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

Mung bean sprouts may improve your Protein Fermentation score. **Learn more...** 

1. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3257631

#### Oregano

Herbs, Spices & Other 1/4 teaspoon



#### My Microbiome's Response to Oregano

Oregano contains 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 oregano in your diet will be beneficial 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. It has been reported that polyphenols decrease inflammation and benefit many biological systems including the gastrointestinal, hormonal, neurological, ocular, and immune systems.

Learn more...

1. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4227268



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Fruits & Grains 1 cup, sliced



#### My Microbiome's Response to Papaya

Papaya contains papain which is a proteolytic enzyme. After an interpretation of your gene expression and taking your data into account, it has been determined that papaya in your diet will be optimal for you. Papain helps breakdown proteins into amino acids.

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

Papaya may improve your Digestive Efficiency and Protein Fermentation scores. **Learn more...** 

1. <a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4540030">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4540030</a>



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#### **Pumpkin**

Vegetables 1 cup



#### My Microbiome's Response to Pumpkin

Pumpkin contains magnesium which is a mineral. After analyzing your gene expression and taking your wellness goals into account, it has been determined that pumpkin 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 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



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Herbs, Spices & Other 1/4 teaspoon



Superfood

# My Microbiome's Response to Sage

Sage contains amino acids which are a type of amine. After an analysis of your gene expression and taking your questionnaire data into account, it has been determined that sage in your diet will be good 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.

Learn more...

1. https://www.ncbi.nlm.nih.gov/pubmed/21196263

#### **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 an interpretation of your gene expression and taking your data into account, it has been determined that spirulina 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. 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



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#### **Sunflower Seeds**

Proteins & Fats 2 tablespoons



#### My Microbiome's Response to Sunflower Seeds

Sunflower seeds contain vitamin E which is a fat-soluble vitamin. After an interpretation of your gene expression and taking your data into account, it has been determined that sunflower seeds in your diet will be helpful for you. Vitamin E keeps your microbiome balanced. Vitamin E promotes gut barrier strength, prevents dysbiosis, alters immune responses, and decreases inflammation. It has been reported that your microbiota transforms vitamin E into different isomers, each with its own health benefits. Some of these benefits include neuronal protection, enhanced athletic performance and better cardiovascular fitness.

Learn more...

- 1. <a href="https://www.ncbi.nlm.nih.gov/pubmed/10701711">https://www.ncbi.nlm.nih.gov/pubmed/10701711</a>
- 2. <a href="https://www.ncbi.nlm.nih.gov/pubmed/27548249">https://www.ncbi.nlm.nih.gov/pubmed/27548249</a>
- 3. <a href="https://www.ncbi.nlm.nih.gov/pubmed/25177163">https://www.ncbi.nlm.nih.gov/pubmed/25177163</a>



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#### **Tarragon**

Herbs, Spices & Other 1/4 teaspoon



Superfood

# My Microbiome's Response to Tarragon

Tarragon contains apigenin which is a bioflavonoid. After an analysis of your gene expression and taking your questionnaire data into account, it has been determined that tarragon in your diet will be good for you. Your microbiome plays an important role in breaking down bioflavonoids. Studies indicate that apigenin influences the diversity of your microbiome by increasing the activity of Enterococcus species and their ability to participate in DNA repair and modulation of the stress and immune responses.

Learn more...

- 1. https://www.ncbi.nlm.nih.gov/pubmed/22975493/
- 2. <a href="https://www.ncbi.nlm.nih.gov/pubmed/28771188">https://www.ncbi.nlm.nih.gov/pubmed/28771188</a>

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# **Turkey (White Meat)**

Proteins & Fats 3 ounces



### 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 questionnaire data into account, it has been determined that white turkey meat in your diet will be helpful 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.

Learn more...

- 1. https://www.ncbi.nlm.nih.gov/pubmed/25078296
- 2. https://www.ncbi.nlm.nih.gov/pubmed/29941795
- 3. <a href="https://www.ncbi.nlm.nih.gov/pubmed/29686603">https://www.ncbi.nlm.nih.gov/pubmed/29686603</a>



**DOB:** 04/05/1985

#### **Watercress**

Vegetables 1 cup



Superfood

# My Microbiome's Response to Watercress

Watercress contains thiols which are organo-sulfur containing compounds. After an interpretation of your gene expression and taking your questionnaire data into account, it has been determined that watercress in your diet will be of benefit for you. Thiols contain sulfur which can be metabolized by specific gut microbes to remove the sulfur side chain. By removing sulfur, thiols act as an antioxidant, helping minimize oxidative stress, inflammation and cell damage. Learn more...

- 1. <a href="https://www.ncbi.nlm.nih.gov/pubmed/28465675">https://www.ncbi.nlm.nih.gov/pubmed/28465675</a>
- 2. https://www.ncbi.nlm.nih.gov/pubmed/24787548
- 3. https://www.ncbi.nlm.nih.gov/pubmed/23226130



**DOB:** 04/05/1985

# My Foods to Avoid

## We recommend you avoid these foods

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

# Barley Fruits & Grains 1 Avoid

# My Microbiome's Response to Barley

Your microbiome contains brome mosaic virus, which is known to infect barley. Since plant viruses in the microbiome have been associated with Immune System Activation, it is recommended for you to avoid barley. **Learn more...** 

- 1. <a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6435874/">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6435874/</a>
- 2. <a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4405218/">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4405218/</a>

**DOB:** 04/05/1985

# **Bell Pepper**

Vegetables



# My Microbiome's Response to Bell Pepper

Your microbiome contains pepper mild mottle virus, which is known to infect bell pepper. Since plant viruses in the microbiome have been associated with immune stimulation, it is recommended for you to avoid bell pepper.

Learn more...

- 1. <a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6435874/">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6435874/</a>
- 2. <a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4405218/">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4405218/</a>



**DOB:** 04/05/1985



Fruits & Grains



# My Microbiome's Response to Blueberry

Your microbiome contains blueberry shock virus, which is known to infect blueberries. Since plant viruses in the microbiome have been associated with Immune System Activation, it is recommended for you to avoid blueberries.

Learn more...

- 1. <a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6435874/">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6435874/</a>
- 2. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4405218/

#### Coffee

Herbs, Spices & Other



# My Microbiome's Response to Coffee

Coffee contains caffeine which is known to increase your stress hormones. The stress hormones, adrenaline and cortisol, can have a negative impact on your microbiome by decreasing beneficial bacteria such as Lactobacilli strains, and promoting the growth of harmful microbes and increasing inflammation in the gut. An analysis of your data indicates that you would benefit from avoiding foods such as coffee that will increase your stress response.

Learn more...

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



**DOB:** 04/05/1985

### Kefir (Cow Milk)

Proteins & Fats



### My Microbiome's Response to Kefir (Cow Milk)

An analysis of your data indicates that histamine, contained in kefir (cow milk), is likely to increase inflammation and may worsen your inflammatory score.

Try having white tea instead. **Learn more...** 

- 1. <a href="https://journals.plos.org/plospathogens/article?id=10.1371/journal.ppat.1003726">https://journals.plos.org/plospathogens/article?id=10.1371/journal.ppat.1003726</a>
- 2. <a href="https://www.frontiersin.org/articles/10.3389/fendo.2019.00504/full">https://www.frontiersin.org/articles/10.3389/fendo.2019.00504/full</a>
- 3. https://pubmed.ncbi.nlm.nih.gov/24286351/



**DOB:** 04/05/1985

#### Sauerkraut

Vegetables



### My Microbiome's Response to Sauerkraut

An analysis of your data indicates that histamine, contained in sauerkraut, is likely to increase inflammation and may worsen your inflammatory score.

Try having onion instead. **Learn more...** 

- 1. <a href="https://journals.plos.org/plospathogens/article?id=10.1371/journal.ppat.1003726">https://journals.plos.org/plospathogens/article?id=10.1371/journal.ppat.1003726</a>
- 2. <a href="https://www.frontiersin.org/articles/10.3389/fendo.2019.00504/full">https://www.frontiersin.org/articles/10.3389/fendo.2019.00504/full</a>
- 3. https://pubmed.ncbi.nlm.nih.gov/24286351/



**DOB:** 04/05/1985

#### **Tomato**

Vegetables



### My Microbiome's Response to Tomato

Your microbiome contains tomato mosaic 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. <a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6435874/">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6435874/</a>
- 2. <a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4405218/">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4405218/</a>

**DOB:** 04/05/1985

### Yogurt (Cow Milk, Plain)

Proteins & Fats



### My Microbiome's Response to Yogurt (Cow Milk, Plain)

An analysis of your data indicates that histamine, contained in yogurt (cow milk, plain), is likely to increase inflammation and may worsen your inflammatory score.

Try having coconut milk instead. **Learn more...** 

- 1. <a href="https://journals.plos.org/plospathogens/article?id=10.1371/journal.ppat.1003726">https://journals.plos.org/plospathogens/article?id=10.1371/journal.ppat.1003726</a>
- 2. <a href="https://www.frontiersin.org/articles/10.3389/fendo.2019.00504/full">https://www.frontiersin.org/articles/10.3389/fendo.2019.00504/full</a>
- 3. https://pubmed.ncbi.nlm.nih.gov/24286351/



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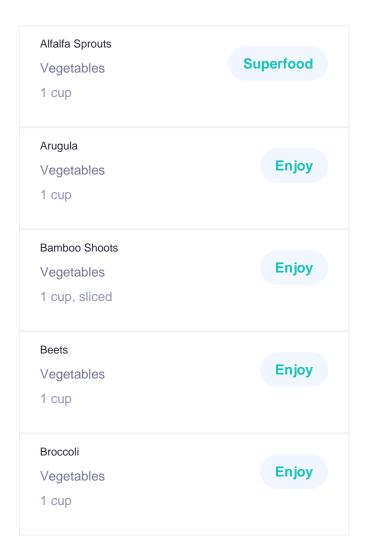
**My Foods** 

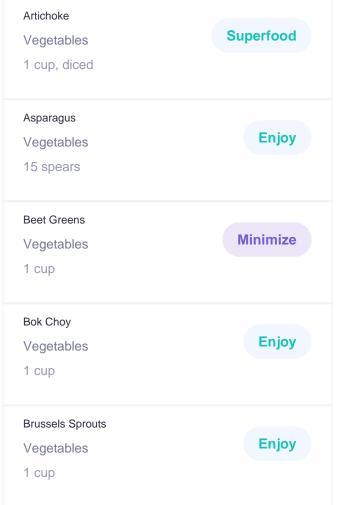
# Vegetables 10 per day

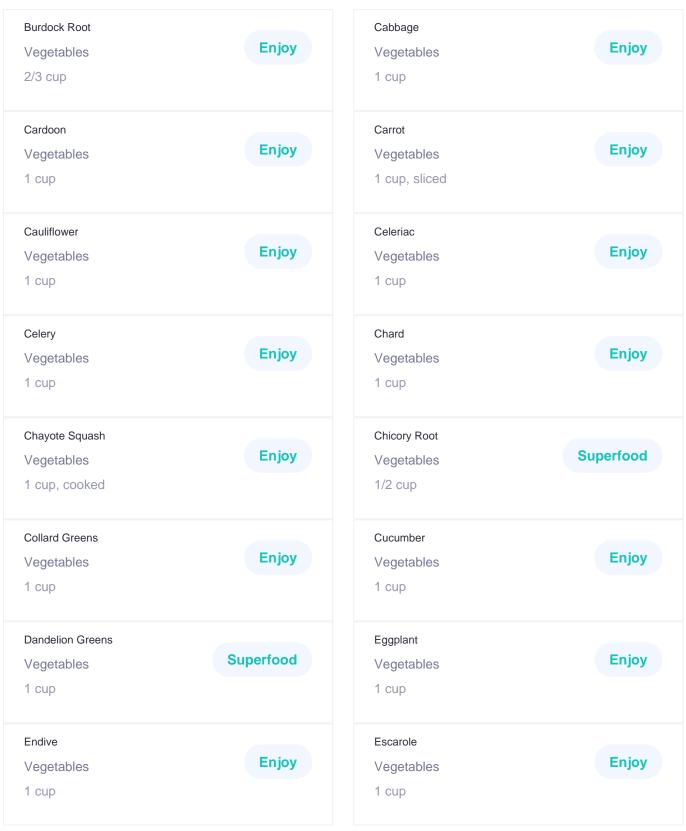
We recommend you break your daily Vegetables intake by the following servings

Superfood + Enjoy 8 •••••

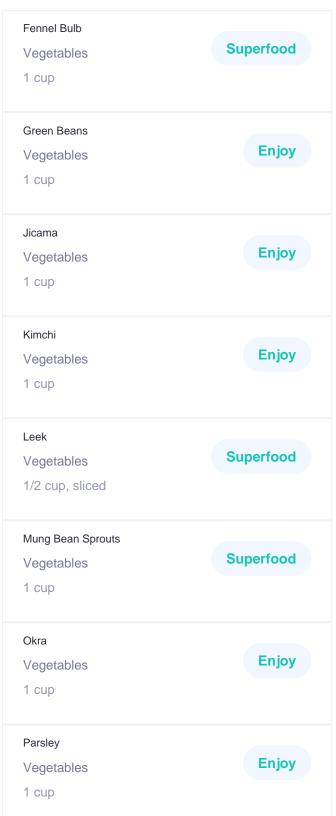
Minimize 2

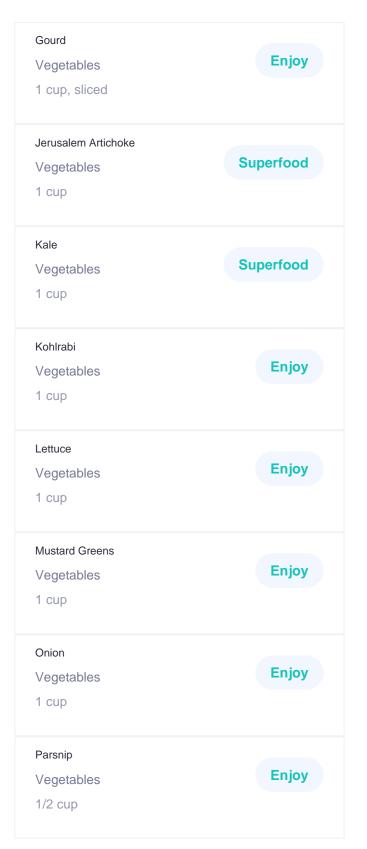




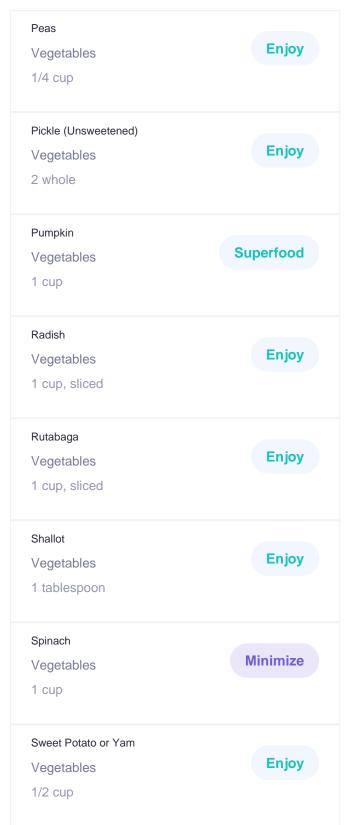






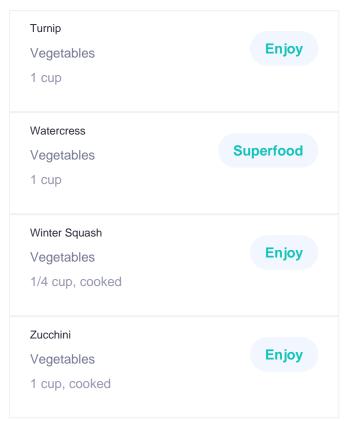


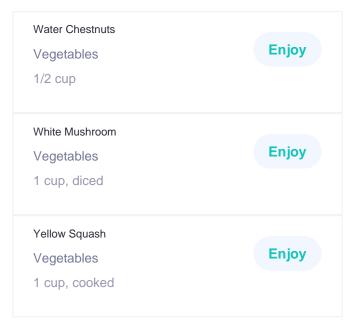




Pepino Melon Vegetables 1 cup	Enjoy
Potato Vegetables 1 half	Enjoy
Radicchio Vegetables 1 cup, sliced	Enjoy
Radish Sprouts Vegetables 1 cup	Enjoy
Seaweed (Fresh) Vegetables 1/4 cup	Enjoy
Snap Peas Vegetables 1 cup	Enjoy
Spirulina Vegetables 2 teaspoon	Superfood
Taro Vegetables 1/2 cup	Enjoy







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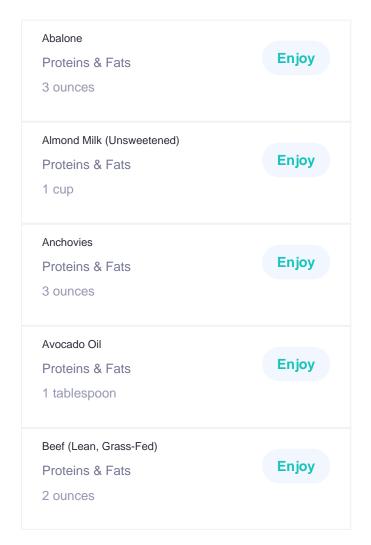
### My Foods

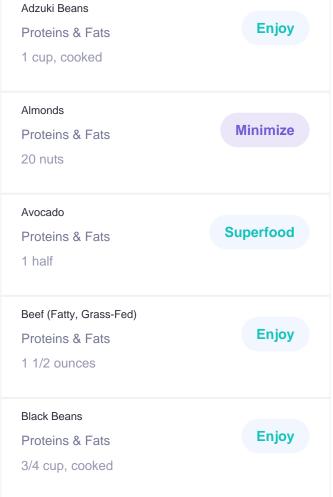
# Proteins & Fats 6 per day

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

Superfood + Enjoy 5 ••••

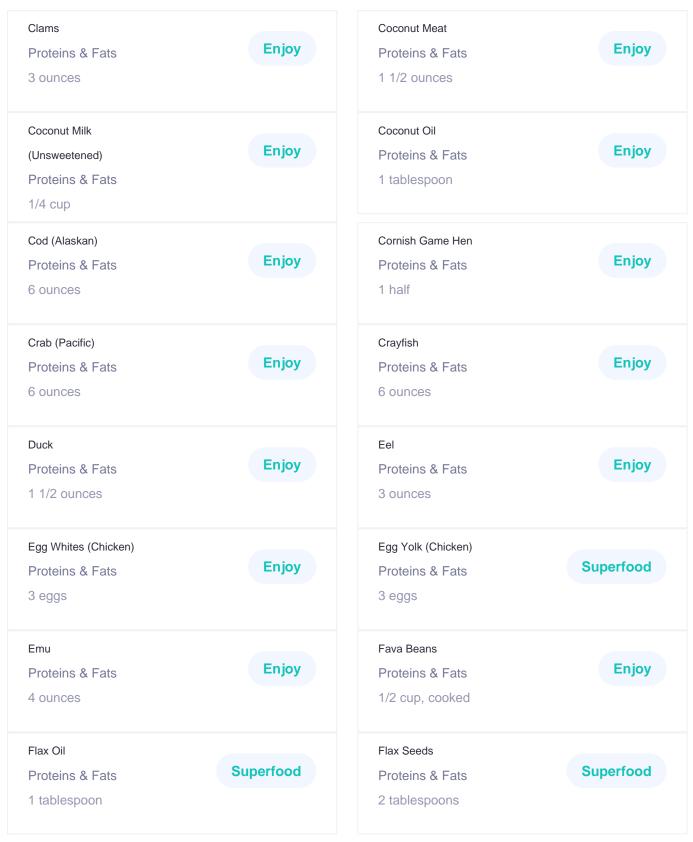
Minimize 1



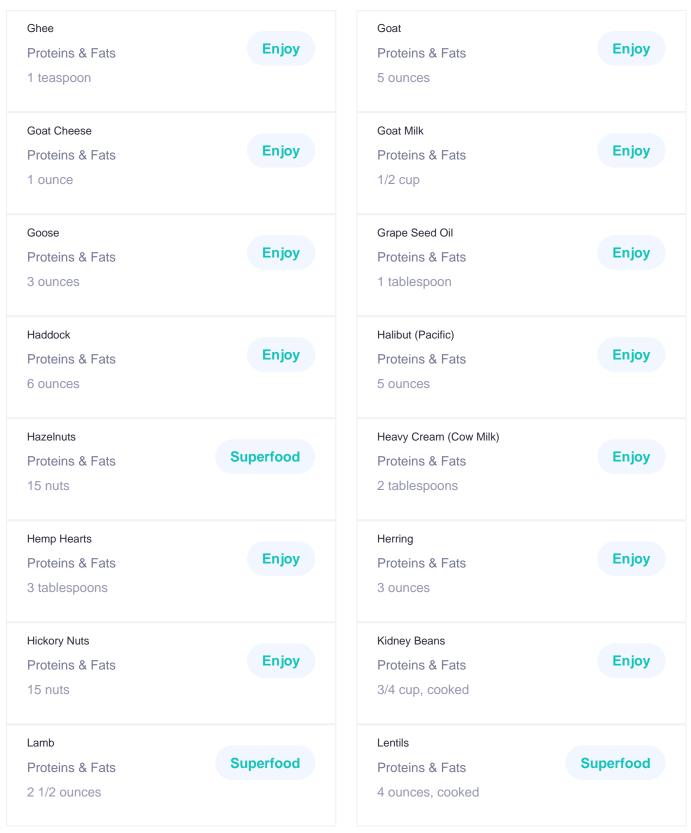


Black Eyed Peas		Bone Broth (Fish)	
Proteins & Fats	Enjoy	Proteins & Fats	Enjoy
3/4 cup, cooked		1 cup	
Bone Broth (Mammal)		Bone Broth (Poultry)	
Proteins & Fats	Enjoy	Proteins & Fats	Enjoy
1 cup		1 cup	
Brazil Nuts		Buffalo	
Proteins & Fats	Enjoy	Proteins & Fats	Enjoy
5 nuts		3 1/2 ounces	
Butter (Cow Milk)		Cashews	
Proteins & Fats	Enjoy	Proteins & Fats	Enjoy
1 teaspoon		15 nuts	
Catfish		Caviar or Roe	
Proteins & Fats	Enjoy	Proteins & Fats	Enjoy
2 1/2 ounces		2 ounces	
Cheese (Cow Milk)		Chestnuts	
Proteins & Fats	Enjoy	Proteins & Fats	Enjoy
1 ounce		3 ounces	
Chia Seeds		Chicken (Dark Meat)	
Proteins & Fats	Enjoy	Proteins & Fats	Enjoy
1 ounce, dry		2 1/2 ounces	
Chicken (White Meat)		Chickpeas	
Proteins & Fats	Enjoy	Proteins & Fats	Enjoy
3 ounces		1/2 cup, cooked	

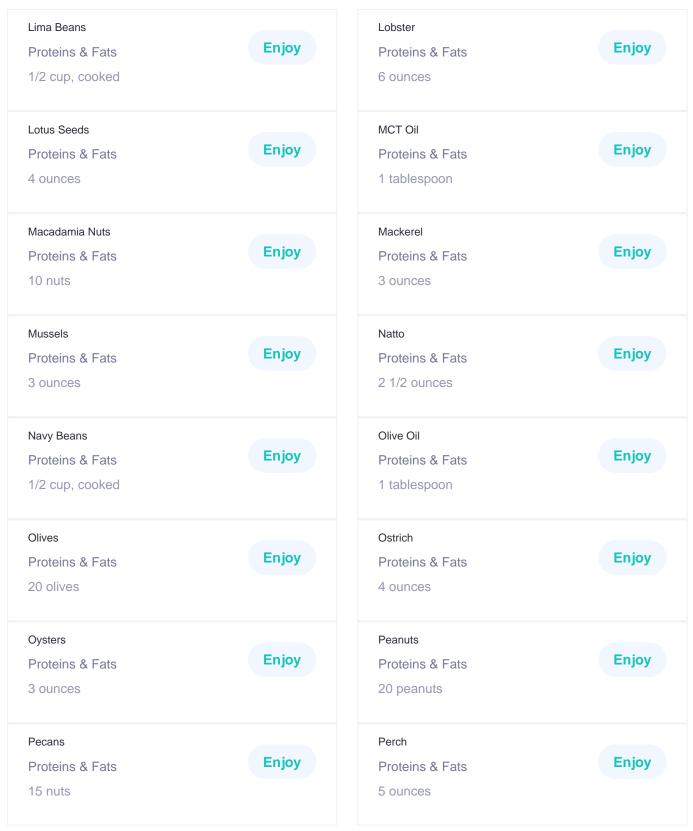




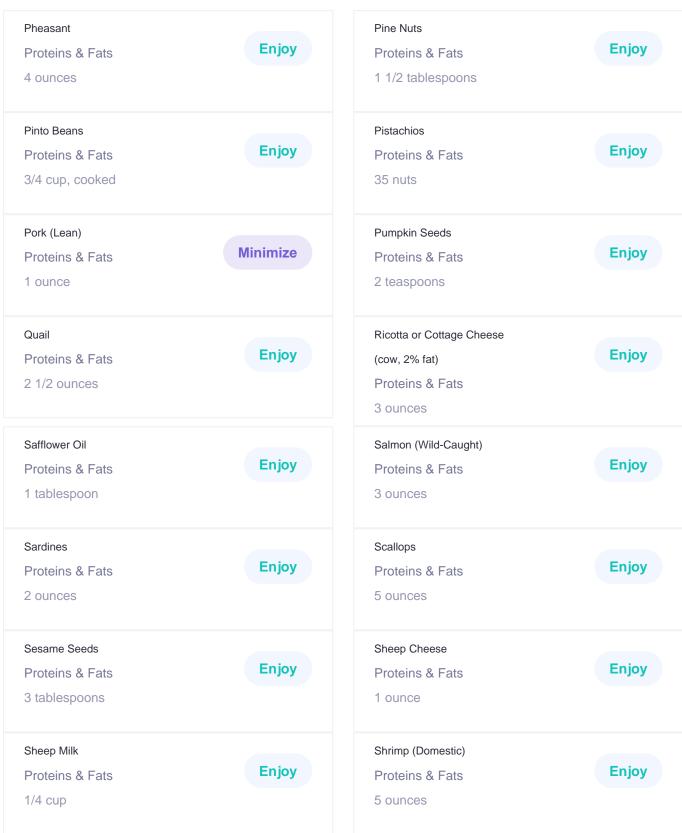




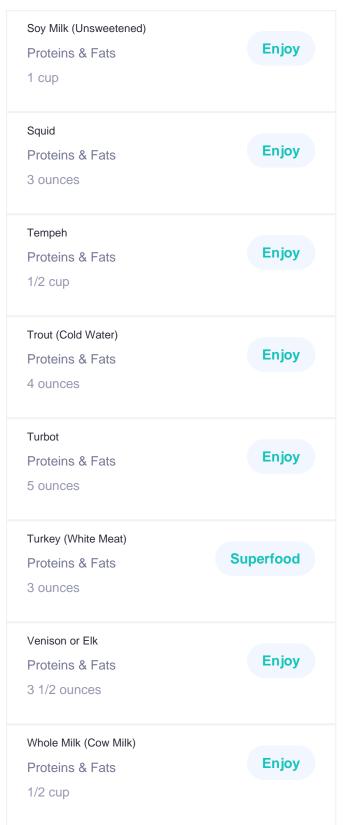


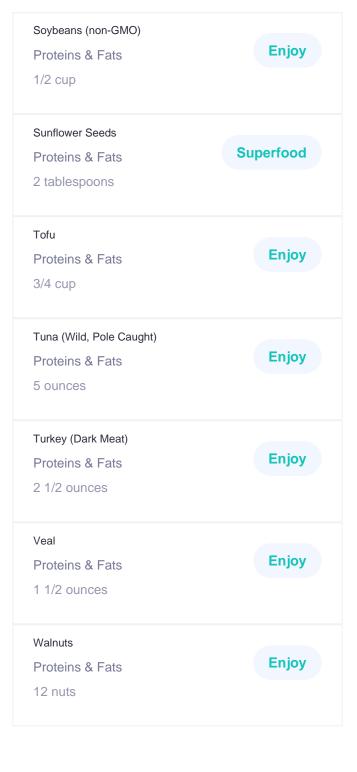














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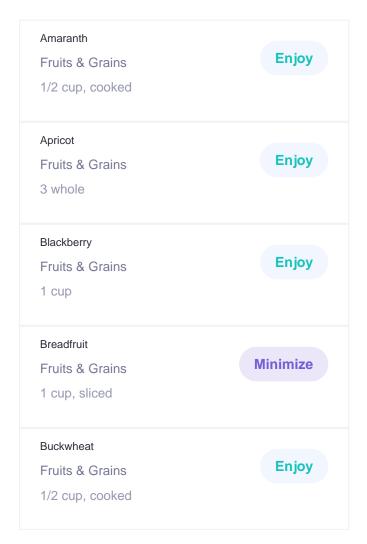
## My Foods

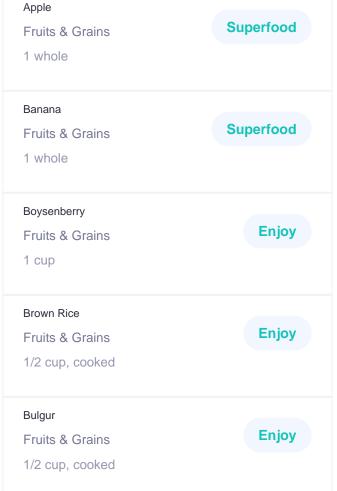
# Fruits & Grains 5 per day

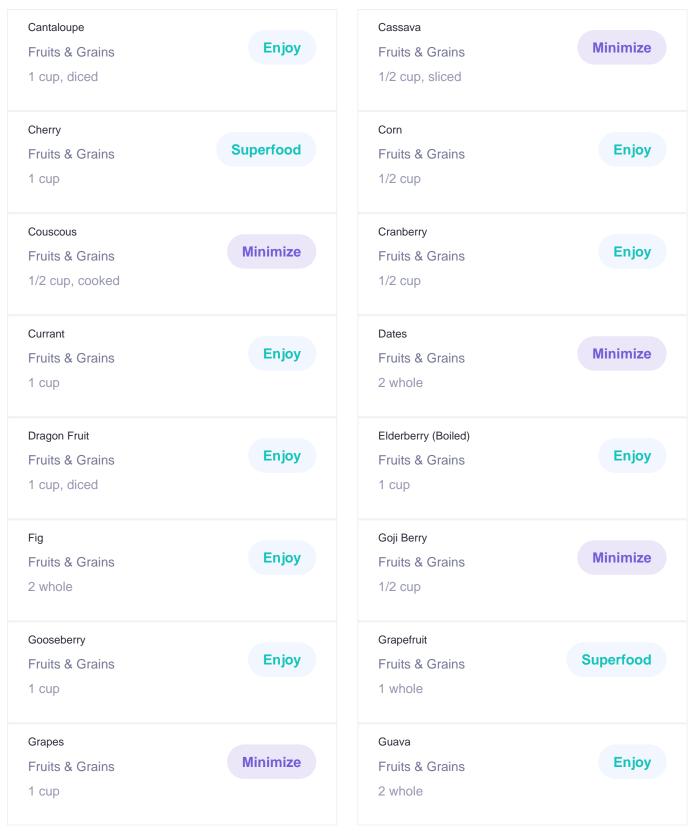
We recommend you break your daily Fruits & Grains intake by the following servings

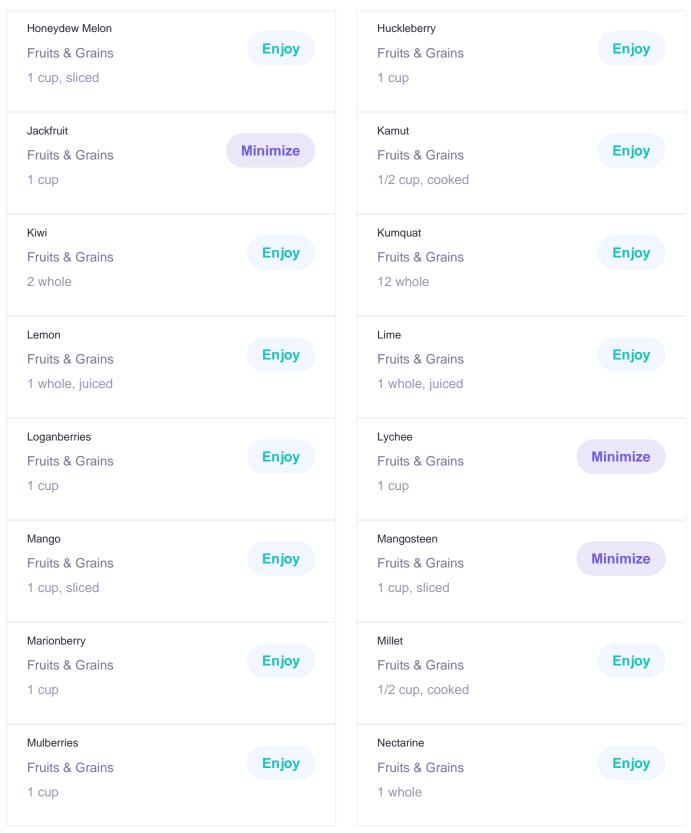
Superfood + Enjoy 4 ••••

Minimize 1

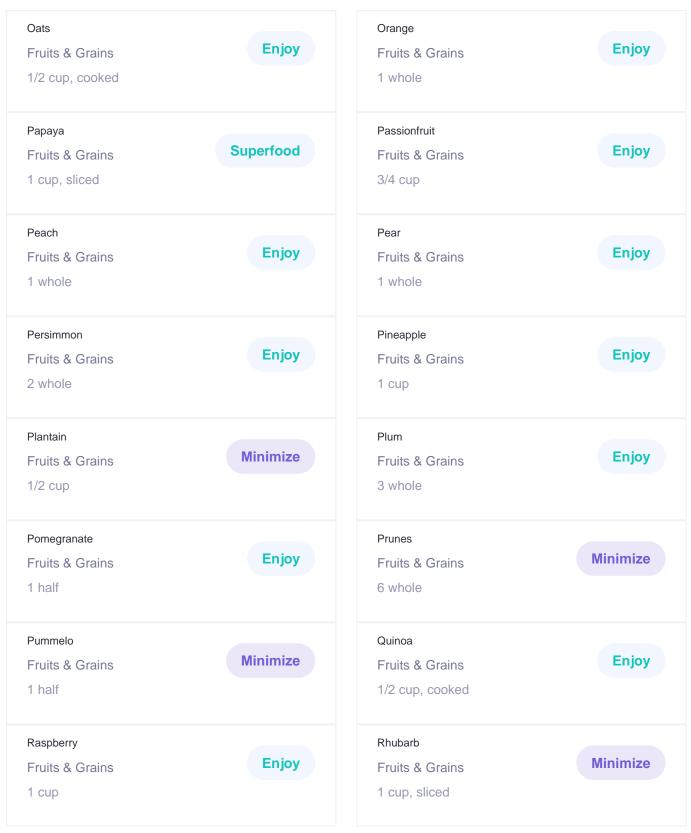




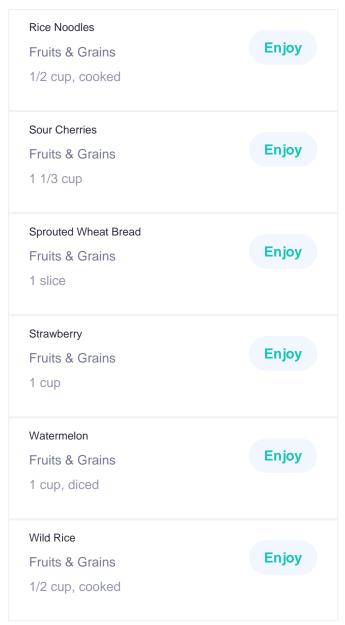


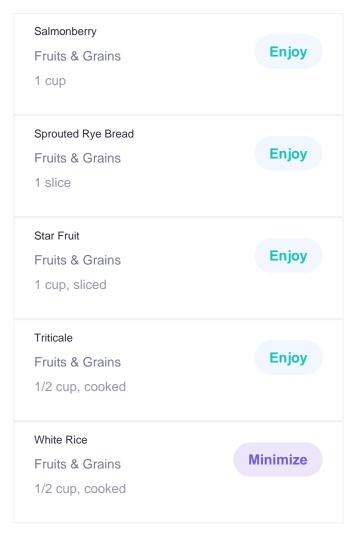












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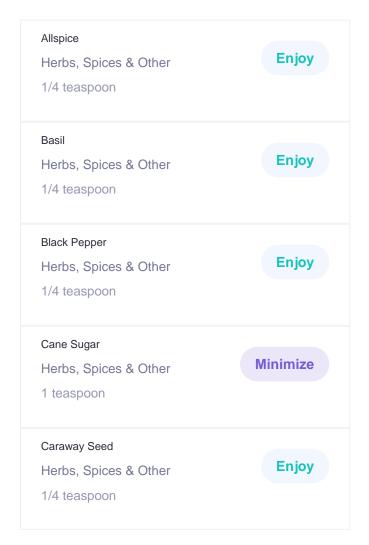
My Foods

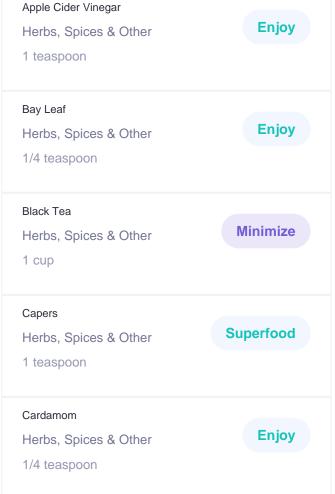
# Herbs, Spices & Other 8 per day

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

Superfood + Enjoy 7 •••••

Minimize 1





Carob		Cayenne Pepper	
Herbs, Spices & Other	Enjoy	Herbs, Spices & Other	Enjoy
tablespoon		1/8 teaspoon	
Celery Seed		Chervil	
Herbs, Spices & Other	Enjoy	Herbs, Spices & Other	Enjoy
/4 teaspoon		1/4 teaspoon	
chili Powder		Cilantro	
lerbs, Spices & Other	Enjoy	Herbs, Spices & Other	Enjoy
/4 teaspoon		2 tablespoons	
cinnamon		Cloves	
Herbs, Spices & Other	Enjoy	Herbs, Spices & Other	Enjoy
/4 teaspoon		1/8 teaspoon	
Cocoa (Unsweetened)		Coconut Water	
Herbs, Spices & Other	Enjoy	Herbs, Spices & Other	Minimize
tablespoon		1 cup	
Coriander		Cumin	
Herbs, Spices & Other	Enjoy	Herbs, Spices & Other	Enjoy
/4 teaspoon		1/4 teaspoon	
oill (Fresh)		Fennel Seed	
lerbs, Spices & Other	Enjoy	Herbs, Spices & Other	Enjoy
tablespoons		1/4 teaspoon	
enugreek Seed		Garlic	
Herbs, Spices & Other	Enjoy	Herbs, Spices & Other	Superfood
/4 teaspoon		1 clove	



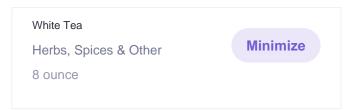
Ginger Herbs, Spices & Other 1 tablespoon	Superfood	Grape Leaves Herbs, Spices & Other 4 leaves	Enjoy
Green Tea Herbs, Spices & Other 1 cup	Minimize	Herbal Tea Herbs, Spices & Other 1 cup	Enjoy
Honey Herbs, Spices & Other 1 teaspoon	Enjoy	Horseradish Herbs, Spices & Other 1 teaspoon	Enjoy
Hot Pepper Herbs, Spices & Other 1/2 teaspoon	Enjoy	Kombucha Herbs, Spices & Other 1 cup	Minimize
Mace Herbs, Spices & Other 1/8 teaspoon	Enjoy	Maple Syrup Herbs, Spices & Other 1 teaspoon	Minimize
Marjoram Herbs, Spices & Other 1/8 teaspoon	Enjoy	Miso Herbs, Spices & Other 1 teaspoon	Enjoy
Molasses Herbs, Spices & Other 1 teaspoon	Minimize	Mustard Seed Herbs, Spices & Other 1/4 teaspoon	Enjoy
Nutmeg Herbs, Spices & Other 1/4 teaspoon	Enjoy	Oregano Herbs, Spices & Other 1/4 teaspoon	Superfood



Paprika		Peppermint (Fresh)	
Herbs, Spices & Other	Enjoy	Herbs, Spices & Other	Enjoy
1/4 teaspoon		1 tablespoon	
Poppy Seed		Rice Milk (Unsweetened)	
Herbs, Spices & Other	Enjoy	Herbs, Spices & Other	Minimize
I teaspoon		3/4 cup	
Rosemary (Fresh)		Saffron	
Herbs, Spices & Other	Enjoy	Herbs, Spices & Other	Enjoy
teaspoon		1/8 teaspoon	
Sage		Salt (Sea, Himalayan, Celtic	
lerbs, Spices & Other	Superfood	or Bonaire)	Minimize
/4 teaspoon		Herbs, Spices & Other	
		1/8 teaspoon	
Savoury		Spearmint (Fresh)	
Herbs, Spices & Other	Enjoy	Herbs, Spices & Other	Enjoy
1/4 teaspoon		1 tablespoon	
Stevia		Tarragon	
Herbs, Spices & Other	Minimize	Herbs, Spices & Other	Superfood
package		1/4 teaspoon	
hyme		Turmeric	
Herbs, Spices & Other	Enjoy	Herbs, Spices & Other	Enjoy
/4 teaspoon		1/2 teaspoon	
/anilla Extract		Vinegar (Unsweetened)	
Herbs, Spices & Other	Enjoy	Herbs, Spices & Other	Enjoy
/4 teaspoon		1 teaspoon	







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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



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### **Berberine**

Look for supplements with the following ingredients:

Berberine

Offered by Thorne, Integrative Therapeutics, or other vendors.

Take for 45 days to support healthy digestion and blood sugar control. If you are already taking diabetes medications, please do not take Berberine.



### 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



#### **Bromelain**

Look for supplements with the following ingredients:

Bromelain

Offered by <u>Pure Encapsulations</u>, <u>Thorne</u>, or other vendors.

To support optimal digestive functions and may help boost anti-inflammatory functions in your gut



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### **Digestive Enzymes**

Look for supplements with the following ingredients:

Protease, amylase, lipase

Offered by Metagenics, Integrative Therapeutics, or other vendors.

To support healthy protein digestion and optimal digestive processes and functions for you

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 (32D2156145) to perform high complexity testing. Sequencing was performed at CLIA (). Contact Viome for any further questions.

# Y I O M E

CHARLES WARDEN'S RECOMMENDATIONS

VERSION: 1.14.2