

VIOME

VIOME

NICHOLAS PERRY'S SCORES & RECOMMENDATIONS

V I O M E

Dear Nicholas Perry,

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.



Test Name: Gut Intelligence Test, Human Gene Expression Test

Customer Name: Nicholas Perry

DOB: 05/01/1987

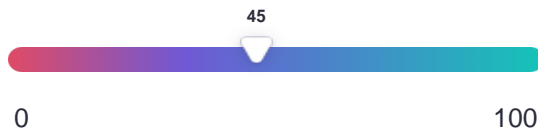
All My Scores

Let's improve these.

Digestive Efficiency




Not Optimal

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.



Digestive Efficiency Key

Reference Ranges:

-  **Not Optimal** 0 to 46 which represents 42.0% of the Viome population
-  **Average** 47 to 64 which represents 48.0% of the Viome population
-  **Good** 65 to 100 which represents 10.0% of the Viome population

**Scores are based on Viome's proprietary algorithm that incorporates relevant functional categories each consisting of multiple manually curated taxonomic and pathway scoring components.*

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Protein Fermentation




Not Optimal

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.



Protein Fermentation Key

Reference Ranges:

-  **Not Optimal** 65 to 100 which represents 59.0% of the Viome population
-  **Average** 36 to 64 which represents 32.0% of the Viome population
-  **Good** 0 to 35 which represents 9.0% of the Viome population

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LPS Biosynthesis Pathways

Not Optimal

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.



LPS Biosynthesis Pathways Key

Reference Ranges:

- Not Optimal** Represents 37.0% of the Viome population
- Average** Represents 53.0% of the Viome population
- Good** Represents 10.0% of the Viome population

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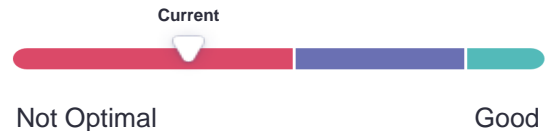


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Sulfide Gas Production Pathways

Not Optimal

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.



Sulfide Gas Production Pathways Key

Reference Ranges:

- Not Optimal** Represents 35.0% of the Viome population
- Average** Represents 58.0% of the Viome population
- Good** Represents 7.0% of the Viome population

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Oxalate Metabolism Pathways

Not Optimal

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.



Oxalate Metabolism Pathways Key

Reference Ranges:

- Not Optimal** Represents 70.0% of the Viome population
- Average** Represents 17.0% of the Viome population
- Good** Represents 13.0% of the Viome population

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Uric Acid Production Pathways

Not Optimal

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.



Uric Acid Production Pathways Key

Reference Ranges:

- Not Optimal** Represents 48.0% of the Viome population
- Average** Represents 42.0% of the Viome population
- Good** Represents 10.0% of the Viome population

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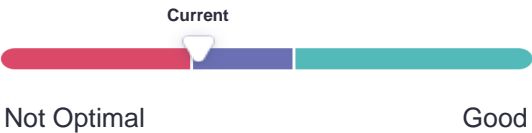


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Biofilm, Chemotaxis, and Virulence Pathways

Not Optimal

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.



Biofilm, Chemotaxis, and Virulence Pathways Key

Reference Ranges:

- Not Optimal** Represents 64.0% of the Viome population
- Average** Represents 24.0% of the Viome population
- Good** Represents 12.0% of the Viome population

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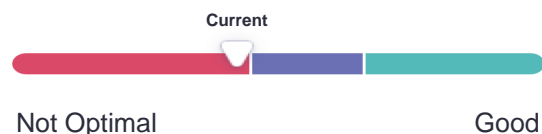
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Bile Acid Metabolism Pathways

Not Optimal

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.



Bile Acid Metabolism Pathways Key

Reference Ranges:

- Not Optimal** Represents 38.0% of the Viome population
- Average** Represents 50.0% of the Viome population
- Good** Represents 12.0% of the Viome population

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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.



Gut Microbiome Health Key

Reference Ranges:

-  **Not Optimal** 0 to 44 which represents 31.0% of the Viome population
-  **Average** 45 to 54 which represents 65.0% of the Viome population
-  **Good** 55 to 100 which represents 4.0% of the Viome population

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Cellular Health




Not Optimal

Your Cellular Health score offers a complete picture of what is happening in the human body on the cellular level and takes into account the aging of your cells, cellular stress, cellular inflammation, along with the health of your mitochondria. If your Cellular Health score is not optimal or low, this can mean that your cellular functions are not performing efficiently, your energy production is low, or your cells are undergoing stress due to oxidative stress, inflammation, or environmental toxins. To improve this score, we may recommend antioxidants or anti-inflammatory food and supplements specifically for you. Scroll down below to the section titled "How We Calculate This Score" to learn more. Did you know? The human body is composed of trillions of cells that provide structure for the body, converting nutrients into energy and carrying out specialized functions. Every single cell in your body carries the same DNA.



Cellular Health Key

Reference Ranges:

-  **Not Optimal** 0 to 38 which represents 20.0% of the Viome population
-  **Average** 39 to 64 which represents 78.0% of the Viome population
-  **Good** 65 to 100 which represents 2.0% of the Viome population

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Mitochondrial Health

Not Optimal

Your Mitochondrial Health score is an integrative score that assesses the efficiency of the functions of your mitochondria that are required to meet your body's energy and metabolic demands. If your Mitochondrial Health score is not optimal, it could mean that your cells are not receiving enough energy to function efficiently, resulting in accelerated aging, and poor metabolism, cardiovascular, and brain health. Your supplement recommendations may include nutrients to boost mitochondria production or other coenzymes needed to increase cellular energy (ATP). Scroll down below to the section titled "How We Calculate This Score" to learn more. Did you know? Mitochondria are considered the powerhouse of the cell, supplying energy for basic cellular functions like care and repair of cells in the body. Each cell contains hundreds to thousands of mitochondria that have their own DNA, known as mitochondrial DNA. In addition to analyzing microbial and human gene expression, Viome also analyzes the gene expression from your mitochondria.



Mitochondrial Health Key

Reference Ranges:

- Not Optimal** 0 to 40 which represents 19.0% of the Viome population
- Average** 41 to 65 which represents 79.0% of the Viome population
- Good** 66 to 100 which represents 2.0% of the Viome population

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Mitochondrial Biogenesis Pathways

Not Optimal

Your Mitochondrial Biogenesis Pathways score assesses the activity levels of molecular pathways needed to biologically generate and maintain the cellular functions of your mitochondria to meet your body's energy and metabolic demands. This includes PGC1-alpha signaling - known as the master regulator of mitochondrial biogenesis. If this score is not optimal it may imply insufficient activity in your mitochondria support functions, either due to too much oxidative stress or deficiency in specific nutrients that may serve as cofactors needed for your specific mitochondrial biogenesis pathways (such as PGC1-alpha activators or NAD+ precursors).



Mitochondrial Biogenesis Pathways Key

Reference Ranges:

- Not Optimal** Represents 24.0% of the Viome population
- Average** Represents 66.0% of the Viome population
- Good** Represents 10.0% of the Viome population

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Energy Production Pathways

Not Optimal

Your Energy Production Pathways score evaluates the efficiency of your cell's ability to convert carbohydrates (glucose) into energy molecules that fuels our cells (otherwise known as ATP). If this score is not optimal it suggests that your mitochondrial metabolic activity may be relatively sluggish and could use a little boost from specific molecular targets or vitamin and cofactor or coenzyme supplements, such as CoQ10, NAD+ precursors, L-Carnitine, or various activators of AMPK (an activator of metabolic pathways, which stimulates mitochondrial ATP production).



Energy Production Pathways Key

Reference Ranges:

- Not Optimal** Represents 35.0% of the Viome population
- Average** Represents 63.0% of the Viome population
- Good** Represents 2.0% of the Viome population

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Immune System Activation




Not Optimal

Your immune system keeps you alive by activating the right pathways and functions to fight off any threat. Too much immune system activation can be damaging to your body, while too little is not optimal either. When your Immune System Activation score is high (in the high red zone), it means there is too much immune system activation that could be due to stress, fighting some infection, something that immune cells recognize as foreign (even if it is own body cell components), an allergic reaction or food sensitivity, or there may be too many pro-inflammatory (and not enough anti-inflammatory) responses telling your immune system to “let the guard down.” When there is too little expression (in the low red zone), it is also not optimal because it may suggest that too little activity is happening from the immune system side. Pathway themes combined into the Immune System Activation score include: • Antiviral or antibacterial defense response, needed to combat any foreign threat to the body by specialized immune system cells • Proinflammatory cytokine signaling (including IL-1, IL-6, IL-8, TNF-alpha, and multiple pathways of activation of NF-kappa B gene expression) • Tissue remodeling and wound healing (this can occur even in the absence of any wounds, when cellular conditions signal damage) • Histamine signaling an allergic response • Prostaglandin Biosynthesis (COX2), which can lead to increased inflammation and pain in various parts of the body



Immune System Activation Key

Reference Ranges:

-  **Not Optimal** 0 to 35, 58 to 100 which represents 24.0% of the Viome population
-  **Average** 50 to 57 which represents 16.0% of the Viome population
-  **Good** 36 to 49 which represents 60.0% of the Viome population

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TMA Production Pathways

Good

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.



TMA Production Pathways Key

Reference Ranges:

- Not Optimal** Represents 10.0% of the Viome population
- Average** Represents 69.0% of the Viome population
- Good** Represents 21.0% of the Viome population

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Stress Response Health




Good

Your Stress Response Health score combines insights from your microbiome-induced stress factors as well as your cellular functions that get activated in response to various triggers of cellular stress. If your Stress Response score is low or not optimal, it could mean that your microbiome is under stress due to either excess salt or protein, or toxins produced by the microbiome as a result of an unbalanced diet. It could also mean that your cellular stress is high which can be triggered by things like environmental toxins, free radicals, or lifestyle related stress. Your recommended food and supplements will address your unique patterns of stress at a molecular level and may include antioxidants or anti-inflammatory nutrients designed specifically for you. Scroll down below to the section titled "How We Calculate This Score" to learn more. Did you know? Changes in lifestyle, food, and supplement intake can address your unique patterns of stress at a molecular level and supply you with cellular balance and resilience.



Stress Response Health Key

Reference Ranges:

-  **Not Optimal** 0 to 39 which represents 3.0% of the Viome population
-  **Average** 40 to 64 which represents 93.0% of the Viome population
-  **Good** 65 to 100 which represents 4.0% of the Viome population

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Cellular Stress

Good




Our Cellular Stress score measures pathway activities that either lead to or are reflective of cellular stress. Too much stress at a cellular level can contribute to damage and dysfunction, which can also expedite cellular aging. A score that is not optimal means that your body needs support in mitigating one or many of the following areas:

- Oxidative stress: excessive reactive oxygen species (ROS) and insufficient antioxidant activities needed to remove them (including Sirtuins and NRF2)
- Unfolded protein response (UPR) or Endoplasmic Reticulum (ER) stress which can be caused by inflammation, high-fat diet, environmental exposures or microbial sources of stress
- Genotoxic stress: DNA damage caused by toxins, which can elicit biochemical responses that either signal the need for quick repair or cell death (if the damage is too high).
- Hypoxia-induced stress: insufficient oxygenation levels in the blood, often accompanied by HIF1-alpha - pathway activation
- Stress-induced pro-apoptotic signaling, such as overly active p38/JNK or Calcium signaling pathways, all of which can cause otherwise healthy cells to die via programmed cell death, or apoptosis
- Antiviral or antimicrobial stress response (cell's lowered ability to defend and sustain itself from foreign invaders)



Cellular Stress Key

Reference Ranges:

-  **Not Optimal** 61 to 100 which represents 4.0% of the Viome population
-  **Average** 39 to 60 which represents 70.0% of the Viome population
-  **Good** 0 to 38 which represents 26.0% of the Viome population

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Cellular Senescence

Good

Your Cellular Senescence score assesses processes involved in progressive decline in your cells' vital functions usually associated with cellular aging such as:




- Cellular proteostasis (ability to make, fold, deliver and degrade various proteins)
- DNA damage markers and repair signaling
- Regulation of telomeres and cellular immortalization
- Oxidative and other stress-induced progressive functional decline
- Autophagy, stem-cell and regenerative signaling decline

A score that is not optimal suggests that your body is not providing the needed cellular activities to remedy the stress processes, restore homeostasis, and rid cells of debris in an efficient manner. Did you know? As cells age, they stop dividing. We call this cellular senescence. These aging cells become dysfunctional, excreting more and more of their harmful byproducts into your body and the bloodstream, causing further cellular inflammation, damage, and stress throughout the body.



Cellular Senescence Key

Reference Ranges:

-  **Not Optimal** 61 to 100 which represents 3.0% of the Viome population
-  **Average** 40 to 60 which represents 68.0% of the Viome population
-  **Good** 0 to 39 which represents 29.0% of the Viome population

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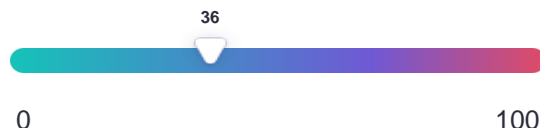


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Inflammatory Activity




Average

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.



Inflammatory Activity Key

Reference Ranges:

-  **Not Optimal** 50 to 100 which represents 5.0% of the Viome population
-  **Average** 36 to 49 which represents 83.0% of the Viome population
-  **Good** 0 to 35 which represents 12.0% of the Viome population

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Metabolic Fitness

Average

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.



Metabolic Fitness Key

Reference Ranges:

- Not Optimal** 0 to 22 which represents 10.0% of the Viome population
- Average** 23 to 31 which represents 65.0% of the Viome population
- Good** 32 to 100 which represents 25.0% of the Viome population

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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'.



Gut Lining Health Key

Reference Ranges:

-  **Not Optimal** 0 to 65 which represents 11.0% of the Viome population
-  **Average** 66 to 77 which represents 77.0% of the Viome population
-  **Good** 78 to 100 which represents 12.0% of the Viome population

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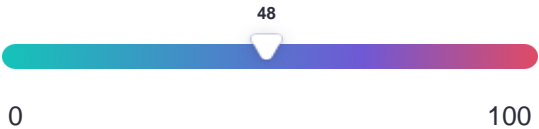


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Gas Production




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.



Gas Production Key

Reference Ranges:

-  **Not Optimal** 60 to 100 which represents 22.0% of the Viome population
-  **Average** 36 to 59 which represents 61.0% of the Viome population
-  **Good** 0 to 35 which represents 17.0% of the Viome population

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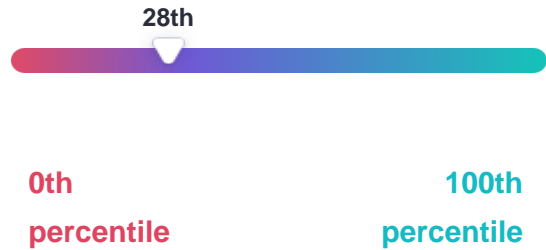


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Active Microbial Diversity

Average




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.



Active Microbial Diversity Key

Reportable Range -13.6 to 8.53

Reference Ranges:

-  **Not Optimal** -13.6 to -2.77 combined metric represents 0 to 5th percentile of the Viome population
-  **Average** -2.76 to 2.44 combined metric represents 6th to 94th percentile of the Viome population
-  **Good** 2.45 to 8.53 combined metric represents 95th to 100th percentile of the Viome population

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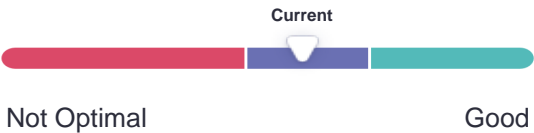


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Butyrate Production Pathways

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.



Butyrate Production Pathways Key

- Reference Ranges:**
- Not Optimal** Represents 10.0% of the Viome population
 - Average** Represents 65.0% of the Viome population
 - Good** Represents 25.0% of the Viome population

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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.



Methane Gas Production Pathways Key

Reference Ranges:

-  **Not Optimal** Represents 30.0% of the Viome population
-  **Average** Represents 42.0% of the Viome population
-  **Good** Represents 28.0% of the Viome population

**Scores are based on Viome's proprietary algorithm that incorporates relevant functional categories each consisting of multiple manually curated taxonomic and pathway scoring components.*

Learn more by reading our references:

<https://viome.com/referenceresults>



Test Name: Gut Intelligence Test, Human Gene Expression Test

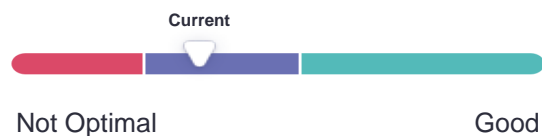
Customer Name: Nicholas Perry

DOB: 05/01/1987

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.



Flagellar Assembly Pathways Key

Reference Ranges:

- Not Optimal** Represents 38.0% of the Viome population
- Average** Represents 51.0% of the Viome population
- Good** Represents 11.0% of the Viome population

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Test Name: Gut Intelligence Test, Human Gene Expression Test
Customer Name: Nicholas Perry
DOB: 05/01/1987

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.



Ammonia Production Pathways Key

Reference Ranges:

- Not Optimal** Represents 63.0% of the Viome population
- Average** Represents 23.0% of the Viome population
- Good** Represents 14.0% of the Viome population

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Test Name: Gut Intelligence Test, Human Gene Expression Test
Customer Name: Nicholas Perry
DOB: 05/01/1987

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.



Putrescine Production Pathways Key

Reference Ranges:

- Not Optimal** Represents 36.0% of the Viome population
- Average** Represents 56.0% of the Viome population
- Good** Represents 8.0% of the Viome population

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Learn more by reading our references:

<https://viome.com/referenceresults>



Test Name: Gut Intelligence Test, Human Gene Expression Test
Customer Name: Nicholas Perry
DOB: 05/01/1987

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.



Salt Stress Pathways Key

Reference Ranges:

- Not Optimal** Represents 16.0% of the Viome population
- Average** Represents 70.0% of the Viome population
- Good** Represents 14.0% of the Viome population

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Learn more by reading our references:
<https://viome.com/referenceresults>

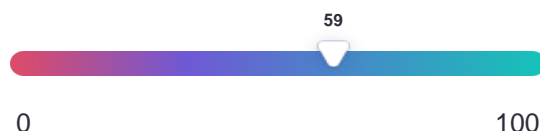


Test Name: Gut Intelligence Test, Human Gene Expression Test
Customer Name: Nicholas Perry
DOB: 05/01/1987

Immune System Health




Average

Your Immune System Health score assesses your immune response based on the inflammatory activities throughout your body as well as inside of your gut. If this score is not optimal, it means that your immunity is low and your immune system's preparedness to invading bacteria or viruses needs support. We may recommend specific foods or supplements that either address harmful microbial activities, stimulate anti-inflammatory nutrients (like the short-chain fatty acids produced by the gut microbiome), or suppress proinflammatory molecules or allergy-related reactions in the body. Scroll down below to the section titled "How We Calculate This Score" to learn more. Did you know? Your body's immune system is your defense against the invisible invaders that seek to use you as a host to infect and reproduce. Your immune system may not be ready to fight the invading bacteria or viruses if it's already dealing with inflammation caused by cellular stress, an overactive immune system, or toxins produced by your gut microbiome due to an unhealthy diet.



Immune System Health Key

Reference Ranges:

-  **Not Optimal** 0 to 44 which represents 28.0% of the Viome population
-  **Average** 45 to 64 which represents 63.0% of the Viome population
-  **Good** 65 to 100 which represents 9.0% of the Viome population

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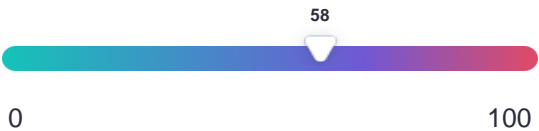


Test Name: Gut Intelligence Test, Human Gene Expression Test
Customer Name: Nicholas Perry
DOB: 05/01/1987

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.



Microbiome-Induced Stress Key

Reference Ranges:

-  **Not Optimal** 60 to 100 which represents 46.0% of the Viome population
-  **Average** 36 to 59 which represents 49.0% of the Viome population
-  **Good** 0 to 35 which represents 5.0% of the Viome population

**Scores are based on Viome's proprietary algorithm that incorporates relevant functional categories each consisting of multiple manually curated taxonomic and pathway scoring components.*

Learn more by reading our references:
<https://viome.com/referenceresults>



Test Name: Gut Intelligence Test, Human Gene Expression Test

Customer Name: Nicholas Perry

DOB: 05/01/1987

Biological Age

Average

Your Biological Age assesses the efficiency of your cellular activities and your gut microbial activities in order to determine how well you are aging in comparison with your chronological age. If your Biological Age is substantially higher than your chronological age, this means that at a cellular level, your body is aging faster compared with other people your age. Your food and supplement recommendations will target the underlying causes detailed in your other Integrative Health scores. Did you know? Nutrient levels in the body can influence various metabolic pathways. Among the affected parts of these pathways are proteins like IGF-1, mTOR, sirtuins, and AMPK. Changing levels of these proteins' pathways have implications on longevity and your biological age.



Biological Age Key

Reference Ranges:

- Not Optimal:** 6 years or more above the actual age represents 33.48% of the Viome population
- Average:** From 1 year below to 5 years above the actual age represents 20.75% of the Viome population
- Good:** 2 years or more below the actual age represents 45.77% of the Viome population

**This score is based on the output of an AI system trained to learn the patterns of genetic activity that are associated with each age.*

Learn more by reading our references: <https://viome.com/referenceresults>



Test Name: Gut Intelligence Test, Human Gene Expression Test

Customer Name: Nicholas Perry

DOB: 05/01/1987

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.



Test Name: Gut Intelligence Test, Human Gene Expression Test

Customer Name: Nicholas Perry

DOB: 05/01/1987

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



Test Name: Gut Intelligence Test, Human Gene Expression Test

Customer Name: Nicholas Perry

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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.



Test Name: Gut Intelligence Test, Human Gene Expression Test

Customer Name: Nicholas Perry

DOB: 05/01/1987

My Foods



Vegetables

59 recommended vegetables

9 avoid vegetables

9 servings of vegetables per day



Proteins & Fats

101 recommended proteins & fats

6 avoid proteins & fats

10 servings of proteins & fats per day



Fruits & Grains

71 recommended fruits & grains

0 avoid fruits & grains

6 servings of fruits & grains per day



Herbs, Spices & Other

57 recommended herbs, spices & other

3 avoid herbs, spices & other

11 servings of herbs, spices & other per day



Test Name: Gut Intelligence Test, Human Gene Expression Test

Customer Name: Nicholas Perry

DOB: 05/01/1987

My Superfoods

We recommend you eat more of these foods

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

Anchovies

Proteins & Fats

3 ounces

 **Superfood**

My Microbiome's Response to Anchovies

Anchovies contain essential fatty acids which are a class of unsaturated fatty acids. After an interpretation of your gene expression and taking your questionnaire data into account, it has been determined that anchovies 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. Studies indicate that essential fatty acids nourish your brain, enhance gut health and decrease inflammation.

Learn more...

1. <https://www.ncbi.nlm.nih.gov/pubmed/26610527>
2. <https://www.ncbi.nlm.nih.gov/pubmed/29215589>

Apple

Fruits & Grains

1 whole

 **Superfood**

My Microbiome's Response to Apple

Apples 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 apples in your diet will be of benefit 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



Test Name: Gut Intelligence Test, Human Gene Expression Test
Customer Name: Nicholas Perry
DOB: 05/01/1987

apples.

Apples may improve your Digestive Efficiency and Protein Fermentation scores.

Learn more...

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

Apple Cider Vinegar

Herbs, Spices & Other

1 teaspoon

 **Superfood**

My Microbiome's Response to Apple Cider Vinegar

Apple cider vinegar contains acetic acid which is a organic compound. After an interpretation of your gene expression and taking your wellness goals into account, it has been determined that apple cider vinegar in your diet will be good for you. Acetic acid is known to have antimicrobial properties and can help break down biofilms.

Apple cider vinegar may improve your Biofilm, Chemotaxis, and Virulence Pathways score.

Learn more...

1. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4486441/>

Artichoke

Vegetables

1 cup, diced

 **Superfood**

My Microbiome's Response to Artichoke

Artichokes contain inulin which is a prebiotic fiber. After analyzing your gene expression and taking your wellness goals into account, it has been determined that artichokes in your diet will be helpful for you. Inulin is converted by your microbiome to produce butyrate. Studies indicate that inulin increases microbial diversity, prevents constipation, helps manage weight, regulates blood sugar and aids with gastrointestinal distress.



Test Name: Gut Intelligence Test, Human Gene Expression Test

Customer Name: Nicholas Perry

DOB: 05/01/1987

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>

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 an interpretation of your gene expression and taking your questionnaire data into account, it has been determined that avocado in your diet will be of benefit 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. <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>



Test Name: Gut Intelligence Test, Human Gene Expression Test

Customer Name: Nicholas Perry

DOB: 05/01/1987

Bamboo Shoots

Vegetables

1 cup, sliced

 **Superfood**

My Microbiome's Response to Bamboo Shoots

Bamboo shoots contain ferulic acid which is a phenol. After analyzing your gene expression and taking your questionnaire data into account, it has been determined that bamboo shoots in your diet will be of benefit for you. Ferulic acid is metabolized by Clostridium and eubacterium species. Once absorbed, it has been reported that ferulic acid can improve your skin and promote brain health.

Learn more...

1. <https://onlinelibrary.wiley.com/doi/full/10.1002/mnfr.201900327>

Black Eyed Peas

Proteins & Fats

3/4 cup, cooked

 **Superfood**

My Microbiome's Response to Black Eyed Peas

Black eyed peas contain Vitamin B9 (Folate) which is a B vitamin. After analyzing your gene expression and taking your questionnaire data into account, it has been determined that black eyed peas in your diet will be optimal for you. Vitamin B9 (Folate) can be created by some of your gut bacteria like Streptococcus thermophilus and Lactobacillus lactis. Others, such as Lactobacillus delbrueckii, cannot produce Vitamin B9 (Folate) but utilize it from food for energy. It has been reported that Vitamin B9 (Folate) has many health benefits including helping to generate red blood cells, synthesize DNA, and enhance energy metabolism.

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

Learn more...

1. <http://www.jhrr.org/text.asp?2014/1/1/5/143318>



Test Name: Gut Intelligence Test, Human Gene Expression Test

Customer Name: Nicholas Perry

DOB: 05/01/1987

2. <https://www.ncbi.nlm.nih.gov/pubmed/19742217>

3. <https://onlinelibrary.wiley.com/doi/full/10.1111/j.1365-2672.2011.05157.x>

Fennel Bulb

Vegetables

1 cup

 **Superfood**

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 of benefit 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 Seeds

Proteins & Fats

2 tablespoons

 **Superfood**

My Microbiome's Response to Flax Seeds

Flax seeds contain Vitamin B1 (Thiamine) which is a B vitamin. After analyzing your gene expression and taking your data into account, it has been determined that flax seeds in your diet will be of benefit for you. The body cannot synthesize Vitamin B1 (Thiamine) on its own. Vitamin B1 (Thiamine) comes from two sources: your diet or your microbiome. A small amount of dietary Vitamin B1 (Thiamine) is absorbed in the small intestine but the majority comes from phosphorylation and dephosphorylation processes. Your gut microbes use thiamine to produce more Vitamin B1 (Thiamine). Studies indicate that Vitamin B1 (Thiamine) is a co-factor for many biological functions such as neurological stability and cardiovascular health.



Test Name: Gut Intelligence Test, Human Gene Expression Test
Customer Name: Nicholas Perry
DOB: 05/01/1987

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/pmc/articles/PMC4772032/>

Ginger
Herbs, Spices & Other
1 tablespoon

 **Superfood**

My Microbiome's Response to Ginger

Ginger contains gingerol which is a polyphenol. After analyzing your gene expression and taking your wellness goals into account, it has been determined that ginger in your diet will be beneficial for you. Gingerol like other polyphenols is metabolized by your microbiome. It has been reported that once converted by your microbes, gingerol reduces inflammation and improves digestion.

Ginger may improve your Biofilm, Chemotaxis, and Virulence Pathways score.
Learn more...

1. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3785436/>

Grapefruit
Fruits & Grains
1 whole

 **Superfood**

My Microbiome's Response to Grapefruit

Grapefruit contains naringenin which is a type of flavonoid. After an interpretation of your gene expression and taking your questionnaire data into account, it has been determined that grapefruit in your diet will be of benefit for you. Naringenin provides the bitter taste in grapefruit which promotes the production of necessary digestive juices



Test Name: Gut Intelligence Test, Human Gene Expression Test

Customer Name: Nicholas Perry

DOB: 05/01/1987

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>

Grapes

Fruits & Grains

1 cup

 **Superfood**

My Microbiome's Response to Grapes

Grapes contain resveratrol which is a polyphenol. After analyzing your gene expression and taking your data into account, it has been determined that grapes in your diet will be helpful for you. Resveratrol supports healthy mitochondrial functioning by stimulating mitochondrial biogenesis, a process in which mitochondria increase in mass and produce more energy. Resveratrol activates the peroxisome proliferator-activated receptor gamma coactivator 1-alpha (PGC-1alpha) pathway, which is a master regulator of mitochondrial biogenesis. In addition, resveratrol also regulates the gene expression of anti-oxidative enzymes such as NADPH oxidases (Nox), superoxide dismutase (SOD) and glutathione peroxidase 1 (GPx1).

Grapes may improve your Mitochondrial Biogenesis Pathways and Mitochondrial Health scores.

Learn more...

1. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5883375/>
2. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6412811/>
3. <https://pubmed.ncbi.nlm.nih.gov/20083859/>



Test Name: Gut Intelligence Test, Human Gene Expression Test

Customer Name: Nicholas Perry

DOB: 05/01/1987

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 an analysis of your gene expression and taking your data into account, it has been determined that hemp hearts in your diet will be good 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). Studies indicate 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...

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

Hot Pepper

Herbs, Spices & Other

1/2 teaspoon

 **Superfood**

My Microbiome's Response to Hot Pepper

Hot peppers contain capsaicin which is a phytochemical. After analyzing your gene expression and taking your questionnaire data into account, it has been determined that hot peppers in your diet will be optimal for you. Capsaicin is anti-inflammatory and promotes microbial diversity.

Hot peppers may improve your LPS Biosynthesis Pathways score.

Learn more...

1. <https://pubmed.ncbi.nlm.nih.gov/12531428/>



Test Name: Gut Intelligence Test, Human Gene Expression Test

Customer Name: Nicholas Perry

DOB: 05/01/1987

Jerusalem Artichoke

Vegetables

1 cup

 **Superfood**

My Microbiome's Response to Jerusalem Artichoke

Jerusalem artichoke contains inulin which is a prebiotic. After an analysis of your gene expression and taking your wellness goals 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. <https://www.ncbi.nlm.nih.gov/pubmed/29244718>
2. <https://www.ncbi.nlm.nih.gov/pubmed/28213610>
3. <https://www.ncbi.nlm.nih.gov/pubmed/29507837>

Lamb

Proteins & Fats

2 1/2 ounces

 **Superfood**

My Microbiome's Response to Lamb

Lamb contains protein which is an essential macronutrient. After an interpretation of your gene expression and taking your questionnaire data into account, it has been determined that lamb in your diet will be beneficial for you. Your microbiome is metabolically active and converts dietary protein into amino acids, which can be used by your



Test Name: Gut Intelligence Test, Human Gene Expression Test

Customer Name: Nicholas Perry

DOB: 05/01/1987

body or further converted by your microbes into short-chain fatty acids which are anti-inflammatory and protect your gut lining. It has been reported that protein also helps build strong muscles, improve gut integrity, balance glucose, enhance skin properties and is used to create neurotransmitters.

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/22367888>

2. <https://www.ncbi.nlm.nih.gov/pubmed/28388917>

Lime

Fruits & Grains

1 whole, juiced

 **Superfood**

My Microbiome's Response to Lime

Lime 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 lime in your diet will be optimal 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.

Lime may improve your Uric Acid Production Pathways score.

Learn more...

1. <https://onlinelibrary.wiley.com/doi/full/10.1002/fft2.27>

2. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6723425/>



Test Name: Gut Intelligence Test, Human Gene Expression Test

Customer Name: Nicholas Perry

DOB: 05/01/1987

Nectarine

Fruits & Grains

1 whole

 **Superfood**

My Microbiome's Response to Nectarine

Nectarine contains FOS which is a prebiotic. After an analysis of your gene expression and taking your questionnaire data into account, it has been determined that nectarine in your diet will be helpful for you. FOS stimulates the growth of beneficial bacteria like Lactobacillus strains which produce butyrate - a short-chain fatty acid that decreases inflammation and strengthens your gut lining. It also decreases the activity of less beneficial organisms. Studies indicate that FOS helps manage weight and protects against metabolic syndrome.

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

Nectarine may improve your Sulfide Gas Production Pathways score.

Learn more...

1. https://www.jstage.jst.go.jp/article/bifidus1996/19/1/19_1_51/_pdf

Oats

Fruits & Grains

1/2 cup, cooked

 **Superfood**

My Microbiome's Response to Oats

Oats contain beta-glucan which is a fiber. After an interpretation of your gene expression and taking your questionnaire data into account, it has been determined that oats in your diet will be helpful 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.

Oats may improve your Bile Acid Metabolism Pathways score.

Learn more...

1. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6892284/>



Test Name: Gut Intelligence Test, Human Gene Expression Test

Customer Name: Nicholas Perry

DOB: 05/01/1987

Papaya

Fruits & Grains

1 cup, sliced

 **Superfood**

My Microbiome's Response to Papaya

Papaya contains papain which is a proteolytic enzyme. After an analysis of your gene expression and taking your data into account, it has been determined that papaya in your diet will be helpful 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. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4540030>

Pineapple

Fruits & Grains

1 cup

 **Superfood**

My Microbiome's Response to Pineapple

Pineapple contains bromelain which is a proteolytic enzyme. After analyzing your gene expression and taking your questionnaire data into account, it has been determined that pineapple in your diet will be optimal for you. Bromelain helps breakdown proteins into amino acids.

Pineapple may improve your LPS Biosynthesis Pathways score.

Learn more...

1. <http://www.tandfonline.com/doi/full/10.1080/08820130802083622>



Test Name: Gut Intelligence Test, Human Gene Expression Test

Customer Name: Nicholas Perry

DOB: 05/01/1987

Pumpkin

Vegetables

1 cup

 **Superfood**

My Microbiome's Response to Pumpkin

Pumpkin contains magnesium which is a mineral. After an analysis of your gene expression and taking your data 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. 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 anthocyanins which are a group of flavonoids. After an interpretation of your gene expression and taking your questionnaire data into account, it has been determined that raspberries in your diet will be beneficial for you. Your microbiome plays an important role in breaking down flavonoids. Once flavonoids are



Test Name: Gut Intelligence Test, Human Gene Expression Test

Customer Name: Nicholas Perry

DOB: 05/01/1987

metabolized, anthocyanins are absorbed by your body. Studies indicate that anthocyanins enhance diversity of beneficial bacteria, decrease inflammation, promote a healthy metabolism, are neuroprotective and have antioxidant properties.

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

Learn more...

1. <https://www.ncbi.nlm.nih.gov/pubmed/15605279>
2. <https://www.ncbi.nlm.nih.gov/pubmed/12547288>
3. <https://www.ncbi.nlm.nih.gov/pubmed/22439618>

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 wellness goals into account, it has been determined that sage in your diet will be optimal 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>



Viome Inc.

<https://support.viome.com>

Test Name: Gut Intelligence Test, Human Gene Expression Test

Customer Name: Nicholas Perry

DOB: 05/01/1987

Salmon (Wild-Caught)

Proteins & Fats

3 ounces

 **Superfood**

My Microbiome's Response to Salmon (Wild-Caught)

Salmon contains essential fatty acids which are a class of unsaturated fatty acids. After analyzing your gene expression and taking your wellness goals into account, it has been determined that salmon 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. Studies indicate 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 salmon.

Learn more...

1. <https://www.ncbi.nlm.nih.gov/pubmed/26610527>
2. <https://www.ncbi.nlm.nih.gov/pubmed/29156325>
3. <https://www.ncbi.nlm.nih.gov/pubmed/29215589>

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 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



Test Name: Gut Intelligence Test, Human Gene Expression Test

Customer Name: Nicholas Perry

DOB: 05/01/1987

junctions between cells. Studies indicate 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>

Strawberry

Fruits & Grains

1 cup

 **Superfood**

My Microbiome's Response to Strawberry

Strawberries contain Vitamin C which is a water-soluble vitamin. After analyzing your gene expression and taking your questionnaire data into account, it has been determined that strawberries in your diet will be beneficial for you. Vitamin C impacts the activity, enzyme production, immune system regulation and nutrient absorption which are just some of the responsibilities of your gut microbiome. Research shows that Vitamin C affects the function of Bifidobacterium and Clostridium species. Vitamin C is a powerful antioxidant, can protect against cardiovascular disease, boost immunity, promote nutrient utilization and help fight vision loss.

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

Strawberries may improve your Uric Acid Production Pathways score.

Learn more...

1. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6723425/>
2. <https://rrtjournal.biomedcentral.com/articles/10.1186/s41100-018-0195-2>



Test Name: Gut Intelligence Test, Human Gene Expression Test

Customer Name: Nicholas Perry

DOB: 05/01/1987

Sunflower Seeds

Proteins & Fats

2 tablespoons

 **Superfood**

My Microbiome's Response to Sunflower Seeds

Sunflower seeds contain Vitamin B1 (Thiamine) which is a B vitamin. After analyzing your gene expression and taking your wellness goals into account, it has been determined that sunflower seeds in your diet will be helpful for you. The body cannot synthesize Vitamin B1 (Thiamine) on its own. Vitamin B1 (Thiamine) comes from two sources: your diet or your microbiome. A small amount of dietary Vitamin B1 (Thiamine) is absorbed in the small intestine but the majority comes from phosphorylation and dephosphorylation processes. Your gut microbes use thiamine to produce more Vitamin B1 (Thiamine). Research shows that Vitamin B1 (Thiamine) is a co-factor for many biological functions such as neurological stability and cardiovascular health.

Learn more...

1. <https://www.ncbi.nlm.nih.gov/pubmed/18642074>
2. <https://www.ncbi.nlm.nih.gov/pubmed/28951891>

Tomato

Vegetables

1 cup, peeled, seeded

 **Superfood**

My Microbiome's Response to Tomato

Tomatoes contain alpha-lipoic acid which is an antioxidant. After analyzing your gene expression and taking your wellness goals into account, it has been determined that tomatoes in your diet will be helpful for you. Alpha-lipoic acid (ALA) is essential for energy production and can also act as an antioxidant. ALA's role in energy production involves being a critical cofactor for mitochondrial energy production enzymes such as pyruvate dehydrogenase (PDH), alpha-ketoglutarate dehydrogenase (alpha-KGDH), and branched-chain ketoacid dehydrogenase (BCKDC).

Tomatoes may improve your Energy Production Pathways and Mitochondrial Health scores.



Test Name: Gut Intelligence Test, Human Gene Expression Test

Customer Name: Nicholas Perry

DOB: 05/01/1987

[Learn more...](#)

1. <https://academic.oup.com/biomedgerontology/article/61/7/650/822618>
2. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3600316/>

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 an analysis of your gene expression and taking your questionnaire data into account, it has been determined that white turkey meat in your diet will be beneficial 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/pmc/articles/PMC4393508/>

Watermelon

Fruits & Grains
1 cup, diced

 **Superfood**

My Microbiome's Response to Watermelon



Test Name: Gut Intelligence Test, Human Gene Expression Test

Customer Name: Nicholas Perry

DOB: 05/01/1987

Watermelon contains FOS which is a prebiotic. After analyzing your gene expression and taking your data into account, it has been determined that watermelon in your diet will be of benefit for you. FOS stimulates the growth of beneficial bacteria like Lactobacillus strains which produce butyrate - a short-chain fatty acid that decreases inflammation and strengthens your gut lining. It also decreases the activity of less beneficial organisms. Studies indicate that FOS helps manage weight and protects against metabolic syndrome.

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

Watermelon may improve your Sulfide Gas Production Pathways score.

Learn more...

1. https://www.jstage.jst.go.jp/article/bifidus1996/19/1/19_1_51/_pdf

White Mushroom

Vegetables

1 cup, diced

 **Superfood**

My Microbiome's Response to White Mushroom

White mushrooms contain beta-glucan which is a polysaccharide. After analyzing your gene expression and taking your data into account, it has been determined that white mushrooms in your diet will be good for you. Beta-glucan has a stimulatory effect on the immune system. It works by binding to receptors on immune cells (monocytes and macrophages), which stimulates their adaptive immune response. This makes the immune system "smarter" and more prepared to react to foreign pathogens such as viruses, bacteria, and parasites. Beta-glucans stimulate immune response by increasing the gene expression of the cytokines interleukin-1 (IL-1) by macrophages, and IL-2 by T-cells.

White mushrooms may improve your Bile Acid Metabolism Pathways, Immune System Activation, and Immune System Health scores.

Learn more...

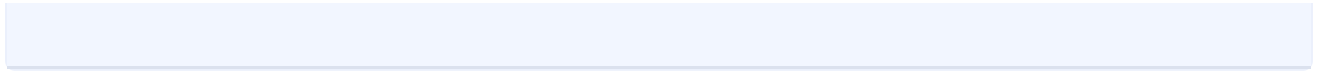
1. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6618291/>



Test Name: Gut Intelligence Test, Human Gene Expression Test

Customer Name: Nicholas Perry

DOB: 05/01/1987



Test Name: Gut Intelligence Test, Human Gene Expression Test

Customer Name: Nicholas Perry

DOB: 05/01/1987

My Foods to Avoid

We recommend you avoid these foods

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

Alfalfa Sprouts

Vegetables

 **Avoid**

My Microbiome's Response to Alfalfa Sprouts

An analysis of your data indicates that alfalfa sprouts can be unfavorable to your microbiome and your gut integrity and function.

Avoiding alfalfa sprouts may improve your Immune System Activation and Immune System Health scores.

Learn more...

1. <https://onlinelibrary.wiley.com/doi/full/10.1111/1541-4337.12010>
2. https://wwwnc.cdc.gov/eid/article/5/5/99-0503_article

Black Tea

Herbs, Spices & Other

 **Avoid**

My Microbiome's Response to Black Tea

Black tea 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 black tea that will increase your stress response.



Test Name: Gut Intelligence Test, Human Gene Expression Test
Customer Name: Nicholas Perry
DOB: 05/01/1987

Learn more...

1. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6230475/>
2. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2257922/>

Broccoli

Vegetables

 Avoid

My Microbiome's Response to Broccoli

Broccoli contains glucosinolates which has been shown to impair the absorption or utilization of essential nutrients if it is not degraded by specific microbes. An analysis of your data indicates that avoiding broccoli will be beneficial for you.

Avoiding broccoli may improve your Sulfide Gas Production Pathways score.

Learn more...

1. <https://pubmed.ncbi.nlm.nih.gov/28766244/>
2. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6767122/>
3. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4985713/>

Brussels Sprouts

Vegetables

 Avoid



Test Name: Gut Intelligence Test, Human Gene Expression Test

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DOB: 05/01/1987

My Microbiome's Response to Brussels Sprouts

Brussels sprouts contain glucosinolates which has been shown to impair the absorption or utilization of essential nutrients if it is not degraded by specific microbes. An analysis of your data indicates that avoiding brussels sprouts will be beneficial for you.

Avoiding brussels sprouts may improve your Sulfide Gas Production Pathways score.

Learn more...

1. <https://journals.physiology.org/doi/abs/10.1152/ajpgi.00261.2020?journalCode=ajpgi>
2. <https://pubmed.ncbi.nlm.nih.gov/11101476/>

Cabbage

Vegetables

i Avoid

My Microbiome's Response to Cabbage

Cabbage contains glucosinolates which has been shown to impair the absorption or utilization of essential nutrients if it is not degraded by specific microbes. An analysis of your data indicates that avoiding cabbage will be beneficial for you.

Avoiding cabbage may improve your Sulfide Gas Production Pathways score.

Learn more...

1. <https://pubmed.ncbi.nlm.nih.gov/28766244/>
2. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6767122/>
3. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4985713/>



Test Name: Gut Intelligence Test, Human Gene Expression Test

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DOB: 05/01/1987

Coffee

Herbs, Spices & Other

 **Avoid**

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/PMC6230475/>
2. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2257922/>

Crab (Pacific)

Proteins & Fats

 **Avoid**

My Microbiome's Response to Crab (Pacific)

Crab meat is high in purines. Purines are uric-acid-production-promoting compounds. High microbial production of uric acid can contribute to gout. An analysis of your data indicates that avoiding crab meat will be beneficial for you.

Avoiding crab meat may improve your Uric Acid Production Pathways score.

Learn more...

1. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5512149>



Test Name: Gut Intelligence Test, Human Gene Expression Test

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Goat

Proteins & Fats

i Avoid

My Microbiome's Response to Goat

Goat meat is high in purines. Purines are uric-acid-production-promoting compounds. High microbial production of uric acid can contribute to gout. An analysis of your data indicates that avoiding goat meat will be beneficial for you.

Avoiding goat meat may improve your Uric Acid Production Pathways score.

Learn more...

1. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5512149>

Green Beans

Vegetables

i Avoid

My Microbiome's Response to Green Beans

Your microbiome contains Phaseolus vulgaris endornavirus 1, which is known to infect green beans. Since plant viruses in the microbiome have been associated with an inflammatory response, it is recommended for you to avoid green beans.

Avoiding green beans may improve your Oxalate Metabolism Pathways score.

Learn more...

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



Test Name: Gut Intelligence Test, Human Gene Expression Test

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DOB: 05/01/1987

Haddock

Proteins & Fats

 **Avoid**

My Microbiome's Response to Haddock

Haddock is high in purines. Purines are uric-acid-production-promoting compounds. High microbial production of uric acid can contribute to gout. An analysis of your data indicates that avoiding haddock will be beneficial for you.

Avoiding haddock may improve your Uric Acid Production Pathways score.

Learn more...

1. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5512149>

Mung Bean Sprouts

Vegetables

 **Avoid**

My Microbiome's Response to Mung Bean Sprouts

An analysis of your data indicates that mung bean sprouts can be unfavorable to your microbiome and your gut integrity and function.

Avoiding mung bean sprouts may improve your Immune System Activation and Immune System Health scores.

Learn more...

1. <https://onlinelibrary.wiley.com/doi/full/10.1111/1541-4337.12010>
2. https://wwwnc.cdc.gov/eid/article/5/5/99-0503_article



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DOB: 05/01/1987

Mustard Greens

Vegetables

 **Avoid**

My Microbiome's Response to Mustard Greens

Mustard greens contain glucosinolates which has been shown to impair the absorption or utilization of essential nutrients if it is not degraded by specific microbes. An analysis of your data indicates that avoiding mustard greens will be beneficial for you.

Avoiding mustard greens may improve your Oxalate Metabolism Pathways and Sulfide Gas Production Pathways scores.

Learn more...

1. <https://pubmed.ncbi.nlm.nih.gov/28766244/>
2. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6767122/>
3. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4985713/>

Navy Beans

Proteins & Fats

 **Avoid**

My Microbiome's Response to Navy Beans

Your microbiome contains Phaseolus vulgaris endornavirus 1, which is known to infect navy beans. Since plant viruses in the microbiome have been associated with inflammation, it is recommended for you to avoid navy beans.

Learn more...



Test Name: Gut Intelligence Test, Human Gene Expression Test

Customer Name: Nicholas Perry

DOB: 05/01/1987

1. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6435874/>

2. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4405218/>

Pinto Beans

Proteins & Fats

 **Avoid**

My Microbiome's Response to Pinto Beans

Your microbiome contains Phaseolus vulgaris endornavirus 1, which is known to infect pinto beans. Since plant viruses in the microbiome have been associated with immune stimulation, it is recommended for you to avoid pinto beans.

Learn more...

1. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6435874/>

2. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4405218/>

Spinach

Vegetables

 **Avoid**

My Microbiome's Response to Spinach

Spinach contains high levels of oxalates and purines.

Avoiding spinach may improve your Oxalate Metabolism Pathways and Uric Acid Production Pathways scores.

Learn more...



Test Name: Gut Intelligence Test, Human Gene Expression Test

Customer Name: Nicholas Perry

DOB: 05/01/1987

1. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5512149>
2. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5300851/>

Trout (Cold Water)

Proteins & Fats

 **Avoid**

My Microbiome's Response to Trout (Cold Water)

Trout is high in purines. Purines are uric-acid-production-promoting compounds. High microbial production of uric acid can contribute to gout. An analysis of your data indicates that avoiding trout will be beneficial for you.

Avoiding trout may improve your Uric Acid Production Pathways score.

Learn more...

1. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5512149>

Turmeric

Herbs, Spices & Other

 **Avoid**

My Microbiome's Response to Turmeric

Turmeric stimulates the production and release of cholic acid, a bile acid important in the digestion of fats. However, if your microbes show increased bile acid related activity then excessive cholic acid may contribute to a pro-inflammatory environment in the gut.

Avoiding turmeric may improve your Bile Acid Metabolism Pathways score.

Learn more...



Test Name: Gut Intelligence Test, Human Gene Expression Test

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DOB: 05/01/1987

1. <https://pubmed.ncbi.nlm.nih.gov/27228476/>

2. <https://pubmed.ncbi.nlm.nih.gov/24045793/>

Turnip

Vegetables

 **Avoid**

My Microbiome's Response to Turnip

Turnips contain glucosinolates which has been shown to impair the absorption or utilization of essential nutrients if it is not degraded by specific microbes. An analysis of your data indicates that avoiding turnips will be beneficial for you.

Avoiding turnips may improve your Sulfide Gas Production Pathways score.

Learn more...

1. <https://journals.physiology.org/doi/abs/10.1152/ajpgi.00261.2020?journalCode=ajpgi>

2. <https://pubmed.ncbi.nlm.nih.gov/11101476/>



Test Name: Gut Intelligence Test, Human Gene Expression Test
Customer Name: Nicholas Perry
DOB: 05/01/1987

My Foods

Vegetables 9 per day

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

Superfood + 
Enjoy 8
Minimize 1 

Artichoke Vegetables 1 cup, diced	Superfood	Arugula Vegetables 1 cup	Enjoy
Asparagus Vegetables 15 spears	Enjoy	Bamboo Shoots Vegetables 1 cup, sliced	Superfood
Beet Greens Vegetables 1 cup	Minimize	Beets Vegetables 1 cup	Minimize
Bell Pepper Vegetables 1/2 cup, sliced, peeled	Minimize	Bok Choy Vegetables 1 cup	Minimize
Burdock Root Vegetables 2/3 cup	Enjoy	Cardoon Vegetables 1 cup	Enjoy



Test Name: Gut Intelligence Test, Human Gene Expression Test

Customer Name: Nicholas Perry

DOB: 05/01/1987

Carrot Vegetables 1 cup, sliced	Enjoy	Cauliflower Vegetables 1 cup	Minimize
Celeriac Vegetables 1 cup	Enjoy	Celery Vegetables 1 cup	Enjoy
Chard Vegetables 1 cup	Minimize	Chayote Squash Vegetables 1 cup, cooked	Enjoy
Chicory Root Vegetables 1/2 cup	Minimize	Collard Greens Vegetables 1 cup	Minimize
Cucumber Vegetables 1 cup	Enjoy	Dandelion Greens Vegetables 1 cup	Minimize
Eggplant Vegetables 1 cup	Enjoy	Endive Vegetables 1 cup	Enjoy
Escarole Vegetables 1 cup	Enjoy	Fennel Bulb Vegetables 1 cup	Superfood
Gourd Vegetables 1 cup, sliced	Enjoy	Jerusalem Artichoke Vegetables 1 cup	Superfood



Test Name: Gut Intelligence Test, Human Gene Expression Test

Customer Name: Nicholas Perry

DOB: 05/01/1987

Jicama Vegetables 1 cup	Enjoy	Kale Vegetables 1 cup	Minimize
Kimchi Vegetables 1 cup	Enjoy	Kohlrabi Vegetables 1 cup	Minimize
Leek Vegetables 1/2 cup, sliced	Minimize	Lettuce Vegetables 1 cup	Enjoy
Okra Vegetables 1 cup	Minimize	Onion Vegetables 1 cup	Minimize
Parsley Vegetables 1 cup	Minimize	Parsnip Vegetables 1/2 cup	Enjoy
Peas Vegetables 1/4 cup	Enjoy	Pepino Melon Vegetables 1 cup	Enjoy
Pickle (Unsweetened) Vegetables 2 whole	Enjoy	Potato Vegetables 1 half	Minimize
Pumpkin Vegetables 1 cup	Superfood	Radicchio Vegetables 1 cup, sliced	Enjoy



Test Name: Gut Intelligence Test, Human Gene Expression Test

Customer Name: Nicholas Perry

DOB: 05/01/1987

Radish Vegetables 1 cup, sliced	Enjoy	Radish Sprouts Vegetables 1 cup	Enjoy
Rutabaga Vegetables 1 cup, sliced	Minimize	Sauerkraut Vegetables 1 cup	Enjoy
Seaweed (Fresh) Vegetables 1/4 cup	Enjoy	Shallot Vegetables 1 tablespoon	Enjoy
Snap Peas Vegetables 1 cup	Enjoy	Spirulina Vegetables 2 teaspoon	Superfood
Sweet Potato or Yam Vegetables 1/2 cup	Minimize	Taro Vegetables 1/2 cup	Enjoy
Tomato Vegetables 1 cup, peeled, seeded	Superfood	Water Chestnuts Vegetables 1/2 cup	Enjoy
Watercress Vegetables 1 cup	Enjoy	White Mushroom Vegetables 1 cup, diced	Superfood
Winter Squash Vegetables 1/4 cup, cooked	Minimize	Yellow Squash Vegetables 1 cup, cooked	Enjoy



Test Name: Gut Intelligence Test, Human Gene Expression Test
Customer Name: Nicholas Perry
DOB: 05/01/1987

Zucchini
Vegetables
1 cup, cooked

Minimize



Test Name: Gut Intelligence Test, Human Gene Expression Test
Customer Name: Nicholas Perry
DOB: 05/01/1987

My Foods

Proteins & Fats 10 per day

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

Superfood + 
Enjoy 8
Minimize 2 

Abalone Proteins & Fats 3 ounces Enjoy	Adzuki Beans Proteins & Fats 1 cup, cooked Minimize
Almond Milk (Unsweetened) Proteins & Fats 1 cup Enjoy	Almonds Proteins & Fats 20 nuts Minimize
Anchovies Proteins & Fats 3 ounces Superfood	Avocado Proteins & Fats 1 half Superfood
Avocado Oil Proteins & Fats 1 tablespoon Enjoy	Beef (Fatty, Grass-Fed) Proteins & Fats 1 1/2 ounces Enjoy
Beef (Lean, Grass-Fed) Proteins & Fats 2 ounces Enjoy	Black Beans Proteins & Fats 3/4 cup, cooked Enjoy



Test Name: Gut Intelligence Test, Human Gene Expression Test

Customer Name: Nicholas Perry

DOB: 05/01/1987

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



Test Name: Gut Intelligence Test, Human Gene Expression Test

Customer Name: Nicholas Perry

DOB: 05/01/1987

Clams Proteins & Fats 3 ounces Enjoy	Coconut Meat Proteins & Fats 1 1/2 ounces Enjoy
Coconut Milk (Unsweetened) Proteins & Fats 1/4 cup Enjoy	Coconut Oil Proteins & Fats 1 tablespoon Enjoy
Cod (Alaskan) Proteins & Fats 6 ounces Enjoy	Cornish Game Hen Proteins & Fats 1 half Enjoy
Crayfish Proteins & Fats 6 ounces Enjoy	Duck Proteins & Fats 1 1/2 ounces Enjoy
Eel Proteins & Fats 3 ounces Enjoy	Egg Whites (Chicken) Proteins & Fats 3 eggs Minimize
Egg Yolk (Chicken) Proteins & Fats 3 eggs Minimize	Emu Proteins & Fats 4 ounces Enjoy
Fava Beans Proteins & Fats 1/2 cup, cooked Enjoy	Flax Oil Proteins & Fats 1 tablespoon Enjoy
Flax Seeds Proteins & Fats 2 tablespoons Superfood	Ghee Proteins & Fats 1 teaspoon Enjoy



Test Name: Gut Intelligence Test, Human Gene Expression Test

Customer Name: Nicholas Perry

DOB: 05/01/1987

Goat Cheese Proteins & Fats 1 ounce Enjoy	Goat Milk Proteins & Fats 1/2 cup Enjoy
Goose Proteins & Fats 3 ounces Enjoy	Grape Seed Oil Proteins & Fats 1 tablespoon Enjoy
Halibut (Pacific) Proteins & Fats 5 ounces Minimize	Hazelnuts Proteins & Fats 15 nuts Enjoy
Heavy Cream (Cow Milk) Proteins & Fats 2 tablespoons Minimize	Hemp Hearts Proteins & Fats 3 tablespoons Superfood
Herring Proteins & Fats 3 ounces Enjoy	Hickory Nuts Proteins & Fats 15 nuts Enjoy
Kefir (Cow Milk) Proteins & Fats 1/2 cup Minimize	Kidney Beans Proteins & Fats 3/4 cup, cooked Minimize
Lamb Proteins & Fats 2 1/2 ounces Superfood	Lentils Proteins & Fats 4 ounces, cooked Minimize
Lima Beans Proteins & Fats 1/2 cup, cooked Minimize	Lobster Proteins & Fats 6 ounces Enjoy



Test Name: Gut Intelligence Test, Human Gene Expression Test

Customer Name: Nicholas Perry

DOB: 05/01/1987

Lotus Seeds Proteins & Fats 4 ounces Enjoy	MCT Oil Proteins & Fats 1 tablespoon Enjoy
Macadamia Nuts Proteins & Fats 10 nuts Enjoy	Mackerel Proteins & Fats 3 ounces Enjoy
Mussels Proteins & Fats 3 ounces Enjoy	Natto Proteins & Fats 2 1/2 ounces Enjoy
Olive Oil Proteins & Fats 1 tablespoon Enjoy	Olives Proteins & Fats 20 olives Minimize
Ostrich Proteins & Fats 4 ounces Enjoy	Oysters Proteins & Fats 3 ounces Enjoy
Peanuts Proteins & Fats 20 peanuts Minimize	Pecans Proteins & Fats 15 nuts Minimize
Perch Proteins & Fats 5 ounces Enjoy	Pheasant Proteins & Fats 4 ounces Enjoy
Pine Nuts Proteins & Fats 1 1/2 tablespoons Enjoy	Pistachios Proteins & Fats 35 nuts Minimize



Test Name: Gut Intelligence Test, Human Gene Expression Test

Customer Name: Nicholas Perry

DOB: 05/01/1987

<p>Pork (Lean)</p> <p>Proteins & Fats</p> <p>1 ounce</p> <p>Minimize</p>	<p>Pumpkin Seeds</p> <p>Proteins & Fats</p> <p>2 teaspoons</p> <p>Enjoy</p>
<p>Quail</p> <p>Proteins & Fats</p> <p>2 1/2 ounces</p> <p>Enjoy</p>	<p>Ricotta or Cottage Cheese (cow, 2% fat)</p> <p>Proteins & Fats</p> <p>3 ounces</p> <p>Enjoy</p>
<p>Safflower Oil</p> <p>Proteins & Fats</p> <p>1 tablespoon</p> <p>Enjoy</p>	<p>Salmon (Wild-Caught)</p> <p>Proteins & Fats</p> <p>3 ounces</p> <p>Superfood</p>
<p>Sardines</p> <p>Proteins & Fats</p> <p>2 ounces</p> <p>Enjoy</p>	<p>Scallops</p> <p>Proteins & Fats</p> <p>5 ounces</p> <p>Enjoy</p>
<p>Sesame Seeds</p> <p>Proteins & Fats</p> <p>3 tablespoons</p> <p>Minimize</p>	<p>Sheep Cheese</p> <p>Proteins & Fats</p> <p>1 ounce</p> <p>Enjoy</p>
<p>Sheep Milk</p> <p>Proteins & Fats</p> <p>1/4 cup</p> <p>Enjoy</p>	<p>Shrimp (Domestic)</p> <p>Proteins & Fats</p> <p>5 ounces</p> <p>Minimize</p>
<p>Soy Milk (Unsweetened)</p> <p>Proteins & Fats</p> <p>1 cup</p> <p>Minimize</p>	<p>Soybeans (non-GMO)</p> <p>Proteins & Fats</p> <p>1/2 cup</p> <p>Minimize</p>
<p>Squid</p> <p>Proteins & Fats</p> <p>3 ounces</p> <p>Enjoy</p>	<p>Sunflower Seeds</p> <p>Proteins & Fats</p> <p>2 tablespoons</p> <p>Superfood</p>



Test Name: Gut Intelligence Test, Human Gene Expression Test

Customer Name: Nicholas Perry

DOB: 05/01/1987

Tempeh Proteins & Fats 1/2 cup	Minimize	Tofu Proteins & Fats 3/4 cup	Minimize
Tuna (Wild, Pole Caught) Proteins & Fats 5 ounces	Minimize	Turbot Proteins & Fats 5 ounces	Enjoy
Turkey (Dark Meat) Proteins & Fats 2 1/2 ounces	Enjoy	Turkey (White Meat) Proteins & Fats 3 ounces	Superfood
Veal Proteins & Fats 1 1/2 ounces	Enjoy	Venison or Elk Proteins & Fats 3 1/2 ounces	Enjoy
Walnuts Proteins & Fats 12 nuts	Minimize	Whole Milk (Cow Milk) Proteins & Fats 1/2 cup	Minimize
Yogurt (Cow Milk, Plain) Proteins & Fats 1/2 cup	Minimize		



Test Name: Gut Intelligence Test, Human Gene Expression Test
Customer Name: Nicholas Perry
DOB: 05/01/1987

My Foods

Fruits & Grains 6 per day

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

Superfood + ●●●●●
Enjoy 5
Minimize 1 ●

<div>Amaranth</div> <div>Fruits & Grains</div> <div>1/2 cup, cooked</div> <div>Minimize</div>	<div>Apple</div> <div>Fruits & Grains</div> <div>1 whole</div> <div>Superfood</div>
<div>Apricot</div> <div>Fruits & Grains</div> <div>3 whole</div> <div>Enjoy</div>	<div>Banana</div> <div>Fruits & Grains</div> <div>1 whole</div> <div>Enjoy</div>
<div>Barley</div> <div>Fruits & Grains</div> <div>3 ounces, cooked</div> <div>Minimize</div>	<div>Blackberry</div> <div>Fruits & Grains</div> <div>1 cup</div> <div>Enjoy</div>
<div>Blueberry</div> <div>Fruits & Grains</div> <div>1 cup</div> <div>Enjoy</div>	<div>Boysenberry</div> <div>Fruits & Grains</div> <div>1 cup</div> <div>Enjoy</div>
<div>Breadfruit</div> <div>Fruits & Grains</div> <div>1 cup, sliced</div> <div>Minimize</div>	<div>Brown Rice</div> <div>Fruits & Grains</div> <div>1/2 cup, cooked</div> <div>Enjoy</div>



Test Name: Gut Intelligence Test, Human Gene Expression Test

Customer Name: Nicholas Perry

DOB: 05/01/1987

Buckwheat Fruits & Grains 1/2 cup, cooked	Minimize	Bulgur Fruits & Grains 1/2 cup, cooked	Minimize
Cantaloupe Fruits & Grains 1 cup, diced	Enjoy	Cassava Fruits & Grains 1/2 cup, sliced	Minimize
Cherry Fruits & Grains 1 cup	Enjoy	Corn Fruits & Grains 1/2 cup	Enjoy
Couscous Fruits & Grains 1/2 cup, cooked	Minimize	Cranberry Fruits & Grains 1/2 cup	Enjoy
Currant Fruits & Grains 1 cup	Minimize	Dates Fruits & Grains 2 whole	Minimize
Dragon Fruit Fruits & Grains 1 cup, diced	Enjoy	Elderberry (Boiled) Fruits & Grains 1 cup	Minimize
Fig Fruits & Grains 2 whole	Minimize	Goji Berry Fruits & Grains 1/2 cup	Minimize
Gooseberry Fruits & Grains 1 cup	Minimize	Grapefruit Fruits & Grains 1 whole	Superfood



Test Name: Gut Intelligence Test, Human Gene Expression Test

Customer Name: Nicholas Perry

DOB: 05/01/1987

Grapes Fruits & Grains 1 cup Superfood	Guava Fruits & Grains 2 whole Enjoy
Honeydew Melon Fruits & Grains 1 cup, sliced Enjoy	Huckleberry Fruits & Grains 1 cup Enjoy
Jackfruit Fruits & Grains 1 cup Enjoy	Kamut Fruits & Grains 1/2 cup, cooked Minimize
Kiwi Fruits & Grains 2 whole Minimize	Kumquat Fruits & Grains 12 whole Enjoy
Lemon Fruits & Grains 1 whole, juiced Enjoy	Lime Fruits & Grains 1 whole, juiced Superfood
Loganberries Fruits & Grains 1 cup Enjoy	Lychee Fruits & Grains 1 cup Enjoy
Mango Fruits & Grains 1 cup, sliced Enjoy	Mangosteen Fruits & Grains 1 cup, sliced Enjoy
Marionberry Fruits & Grains 1 cup Enjoy	Millet Fruits & Grains 1/2 cup, cooked Enjoy



Test Name: Gut Intelligence Test, Human Gene Expression Test

Customer Name: Nicholas Perry

DOB: 05/01/1987

Mulberries Fruits & Grains 1 cup	Enjoy	Nectarine Fruits & Grains 1 whole	Superfood
Oats Fruits & Grains 1/2 cup, cooked	Superfood	Orange Fruits & Grains 1 whole	Enjoy
Papaya Fruits & Grains 1 cup, sliced	Superfood	Passionfruit Fruits & Grains 3/4 cup	Enjoy
Peach Fruits & Grains 1 whole	Enjoy	Pear Fruits & Grains 1 whole	Enjoy
Persimmon Fruits & Grains 2 whole	Enjoy	Pineapple Fruits & Grains 1 cup	Superfood
Plantain Fruits & Grains 1/2 cup	Minimize	Plum Fruits & Grains 3 whole	Enjoy
Pomegranate Fruits & Grains 1 half	Enjoy	Prunes Fruits & Grains 6 whole	Minimize
Pummelo Fruits & Grains 1 half	Minimize	Quinoa Fruits & Grains 1/2 cup, cooked	Minimize



Test Name: Gut Intelligence Test, Human Gene Expression Test

Customer Name: Nicholas Perry

DOB: 05/01/1987

Raspberry Fruits & Grains 1 cup	Superfood	Rhubarb Fruits & Grains 1 cup, sliced	Minimize
Rice Noodles Fruits & Grains 1/2 cup, cooked	Enjoy	Salmonberry Fruits & Grains 1 cup	Enjoy
Sour Cherries Fruits & Grains 1 1/3 cup	Enjoy	Sprouted Rye Bread Fruits & Grains 1 slice	Minimize
Sprouted Wheat Bread Fruits & Grains 1 slice	Minimize	Star Fruit Fruits & Grains 1 cup, sliced	Minimize
Strawberry Fruits & Grains 1 cup	Superfood	Triticale Fruits & Grains 1/2 cup, cooked	Minimize
Watermelon Fruits & Grains 1 cup, diced	Superfood	White Rice Fruits & Grains 1/2 cup, cooked	Minimize
Wild Rice Fruits & Grains 1/2 cup, cooked	Enjoy		



Test Name: Gut Intelligence Test, Human Gene Expression Test
Customer Name: Nicholas Perry
DOB: 05/01/1987

My Foods

Herbs, Spices & Other 11 per day

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

Superfood + ●●●●●●●●●●
Enjoy 9
Minimize 2 ●●

Allspice Herbs, Spices & Other 1/4 teaspoon	Enjoy	Apple Cider Vinegar Herbs, Spices & Other 1 teaspoon	Superfood
Basil Herbs, Spices & Other 1/4 teaspoon	Enjoy	Bay Leaf Herbs, Spices & Other 1/4 teaspoon	Enjoy
Black Pepper Herbs, Spices & Other 1/4 teaspoon	Enjoy	Cane Sugar Herbs, Spices & Other 1 teaspoon	Minimize
Capers Herbs, Spices & Other 1 teaspoon	Enjoy	Caraway Seed Herbs, Spices & Other 1/4 teaspoon	Enjoy
Cardamom Herbs, Spices & Other 1/4 teaspoon	Enjoy	Carob Herbs, Spices & Other 1 tablespoon	Enjoy



Test Name: Gut Intelligence Test, Human Gene Expression Test

Customer Name: Nicholas Perry

DOB: 05/01/1987

Cayenne Pepper Herbs, Spices & Other 1/8 teaspoon	Enjoy	Celery Seed Herbs, Spices & Other 1/4 teaspoon	Minimize
Chervil Herbs, Spices & Other 1/4 teaspoon	Enjoy	Chili Powder Herbs, Spices & Other 1/4 teaspoon	Enjoy
Cilantro Herbs, Spices & Other 2 tablespoons	Enjoy	Cinnamon Herbs, Spices & Other 1/4 teaspoon	Enjoy
Cloves Herbs, Spices & Other 1/8 teaspoon	Enjoy	Cocoa (Unsweetened) Herbs, Spices & Other 1 tablespoon	Enjoy
Coconut Water Herbs, Spices & Other 1 cup	Minimize	Coriander Herbs, Spices & Other 1/4 teaspoon	Enjoy
Cumin Herbs, Spices & Other 1/4 teaspoon	Enjoy	Dill (Fresh) Herbs, Spices & Other 2 tablespoons	Enjoy
Fennel Seed Herbs, Spices & Other 1/4 teaspoon	Enjoy	Fenugreek Seed Herbs, Spices & Other 1/4 teaspoon	Enjoy



Test Name: Gut Intelligence Test, Human Gene Expression Test

Customer Name: Nicholas Perry

DOB: 05/01/1987

<div>Garlic</div> <div>Herbs, Spices & Other</div> <div>1 clove</div> <div>Minimize</div>	<div>Ginger</div> <div>Herbs, Spices & Other</div> <div>1 tablespoon</div> <div>Superfood</div>
<div>Grape Leaves</div> <div>Herbs, Spices & Other</div> <div>4 leaves</div> <div>Enjoy</div>	<div>Green Tea</div> <div>Herbs, Spices & Other</div> <div>1 cup</div> <div>Minimize</div>
<div>Herbal Tea</div> <div>Herbs, Spices & Other</div> <div>1 cup</div> <div>Enjoy</div>	<div>Honey</div> <div>Herbs, Spices & Other</div> <div>1 teaspoon</div> <div>Minimize</div>
<div>Horseradish</div> <div>Herbs, Spices & Other</div> <div>1 teaspoon</div> <div>Minimize</div>	<div>Hot Pepper</div> <div>Herbs, Spices & Other</div> <div>1/2 teaspoon</div> <div>Superfood</div>
<div>Kombucha</div> <div>Herbs, Spices & Other</div> <div>1 cup</div> <div>Minimize</div>	<div>Mace</div> <div>Herbs, Spices & Other</div> <div>1/8 teaspoon</div> <div>Enjoy</div>
<div>Maple Syrup</div> <div>Herbs, Spices & Other</div> <div>1 teaspoon</div> <div>Minimize</div>	<div>Marjoram</div> <div>Herbs, Spices & Other</div> <div>1/8 teaspoon</div> <div>Enjoy</div>
<div>Miso</div> <div>Herbs, Spices & Other</div> <div>1 teaspoon</div> <div>Minimize</div>	<div>Molasses</div> <div>Herbs, Spices & Other</div> <div>1 teaspoon</div> <div>Minimize</div>



Test Name: Gut Intelligence Test, Human Gene Expression Test

Customer Name: Nicholas Perry

DOB: 05/01/1987

<div>Mustard Seed</div> <div>Herbs, Spices & Other</div> <div>1/4 teaspoon</div> <div>Enjoy</div>	<div>Nutmeg</div> <div>Herbs, Spices & Other</div> <div>1/4 teaspoon</div> <div>Enjoy</div>
<div>Oregano</div> <div>Herbs, Spices & Other</div> <div>1/4 teaspoon</div> <div>Enjoy</div>	<div>Paprika</div> <div>Herbs, Spices & Other</div> <div>1/4 teaspoon</div> <div>Enjoy</div>
<div>Peppermint (Fresh)</div> <div>Herbs, Spices & Other</div> <div>1 tablespoon</div> <div>Enjoy</div>	<div>Poppy Seed</div> <div>Herbs, Spices & Other</div> <div>1 teaspoon</div> <div>Enjoy</div>
<div>Rice Milk (Unsweetened)</div> <div>Herbs, Spices & Other</div> <div>3/4 cup</div> <div>Minimize</div>	<div>Rosemary (Fresh)</div> <div>Herbs, Spices & Other</div> <div>1 teaspoon</div> <div>Enjoy</div>
<div>Saffron</div> <div>Herbs, Spices & Other</div> <div>1/8 teaspoon</div> <div>Enjoy</div>	<div>Sage</div> <div>Herbs, Spices & Other</div> <div>1/4 teaspoon</div> <div>Superfood</div>
<div>Salt (Sea, Himalayan, Celtic or Bonaire)</div> <div>Herbs, Spices & Other</div> <div>1/8 teaspoon</div> <div>Minimize</div>	<div>Savoury</div> <div>Herbs, Spices & Other</div> <div>1/4 teaspoon</div> <div>Enjoy</div>
<div>Spearmint (Fresh)</div> <div>Herbs, Spices & Other</div> <div>1 tablespoon</div> <div>Enjoy</div>	<div>Stevia</div> <div>Herbs, Spices & Other</div> <div>1 package</div> <div>Minimize</div>



Test Name: Gut Intelligence Test, Human Gene Expression Test

Customer Name: Nicholas Perry

DOB: 05/01/1987

<div>Tarragon</div> <div>Herbs, Spices & Other</div> <div>1/4 teaspoon</div> <div>Enjoy</div>	<div>Vanilla Extract</div> <div>Herbs, Spices & Other</div> <div>1/4 teaspoon</div> <div>Enjoy</div>
<div>Vinegar (Unsweetened)</div> <div>Herbs, Spices & Other</div> <div>1 teaspoon</div> <div>Enjoy</div>	<div>Wheatgrass</div> <div>Herbs, Spices & Other</div> <div>2 tablespoons</div> <div>Enjoy</div>
<div>White Tea</div> <div>Herbs, Spices & Other</div> <div>8 ounce</div> <div>Minimize</div>	



Test Name: Gut Intelligence Test, Human Gene Expression Test

Customer Name: Nicholas Perry

DOB: 05/01/1987

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



Bromelain

Look for supplements with the following ingredients:

Bromelain

Offered by [Pure Encapsulations](#), [Thorne](#), or other vendors.

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



Test Name: Gut Intelligence Test, Human Gene Expression Test

Customer Name: Nicholas Perry

DOB: 05/01/1987



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



Cellular and mitochondrial support

Look for supplements with the following ingredients:

Nicotinamide Riboside, Resveratrol, Quercetin, Fisetin

Offered by [Life Extension](#), [Thorne](#), or other vendors.

To support cellular and mitochondrial functions, such as DNA repair and protection from cellular stress and aging



Mitochondrial support

Look for supplements with the following ingredients:

CoQ10, Omega-3

Offered by [Smarter Nutrition](#), [Nordic Naturals](#), or other vendors.

To support mitochondrial health and increase energy production

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



Test Name: Gut Intelligence Test, Human Gene Expression Test

Customer Name: Nicholas Perry

DOB: 05/01/1987

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.



Test Name: Gut Intelligence Test, Human Gene Expression Test

Customer Name: Nicholas Perry

DOB: 05/01/1987

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.

Whole blood total RNA is extracted, polyadenylated transcripts are captured from total RNA and sequenced on Illumina NextSeq or NovaSeq. Proprietary bioinformatics algorithms are used to perform quantitative gene expression analysis of the sequencing data. Results are reported to Viome customers in the context of integrative functional health themes communicated as scores derived largely from proprietary pathway content and analytics methodology. Each score is built to account for molecular pathway topology and strength of literature evidence manually curated by translational science experts in systems biology. Scoring results are CLIA-validated and are end-to-end automated in the production system, which uses each customer's gene expression data as input.

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 profile. Results are qualitative and identify the presence or absence of identified annotated organisms.

Viome's results and recommendations are based on our ability to identify and quantify thousands of human transcripts. While the test has been clinically validated and shows very high precision, it also has some limitations. As the presence of transcripts nears the limits of detection, the ability of the test to accurately detect them is diminished. This is simply due to the uneven distribution of molecules in liquid volumes, causing small random changes in the transcript concentrations. Scores rely on detection of expressed genes, as well as their levels of expression against the reference population cohort. Hence, certain sample results may be affected by



Test Name: Gut Intelligence Test, Human Gene Expression Test

Customer Name: Nicholas Perry

DOB: 05/01/1987

any skewing or sampling biases of the reference cohort, as opposed to solely the biology of the given customer. Scores also are limited by our current understanding of actionable or biologically meaningful insights and literature coverage to date. As Viome's reference population expands and current knowledge grows, these limitations become more negligible.

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.

The Human Gene Expression 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.



V I O M E

NICHOLAS PERRY'S RECOMMENDATIONS

VERSION: 1.14.2

