DEMO DEMO		Name: DEMO DEMO Date of Birth: 05-26-1964 Biological Sex: Male Age: 61 Height: Weight:	Telephone: 000-000-0000 Street Address: Email:
AMENDED REPORT	Accession ID: 2375990671	Fasting: UNKNOWN	
Provider Information		Practice Name: DEMO CLIENT, MD Provider Name: DEMO CLIENT, MD Phlebotomist: 0	Telephone: 000-000-0000 Address: 3521 Leonard Ct, Santa Clara, CA 95054

### **Report Information**

Current Result 
 Previous Result
 In Control
 Moderate
 Risk

#### **Specimen Information**

Sample Type	Collection Time	Received Time	Report	Final Report Date
Stool	2024-06-21 16:20 (UTC)	2024-06-24 19:04 (UTC)	Gut Zoomer - P2	2024-07-03 23:55 (UTC)
Unpreserved Stool	2024-06-21 16:20 (UTC)	2024-06-24 19:04 (UTC)	Gut Zoomer - P2	2024-07-03 23:55 (UTC)







#### INTRODUCTION

Vibrant Wellness is pleased to present to you 'Gut Zoomer' testing to help you make healthy lifestyle choices in consultation with your healthcare provider. It is intended to be used as a tool to encourage general healthy lifestyle choices.

Gut Zoomer is a health analytics tool based on the gut microbiome which provides potential risks for intestinal permeability, cardiovascular, metabolic, neurological, intestinal, autoimmune, liver, hormonal, and nutritional health conditions. Additionally, it has panels for detection of gut pathogens and digestive markers. It is intended to be used to improve functions associated with a general state of health, and where it is well understood as well as accepted that healthy lifestyle choices may play an important role in these health outcomes.

#### Methodology:

Gut Zoomer is split into 6 sections: Gut Pathogens, Gut Commensal, Digestion and Immune Balance, Gut Inflammatory, Gut Antibodies, and Gut Metabolites. Gut Pathogens uses real-time PCR Assay designed for semi-quantitative and qualitative detection of group- specific DNA in clinical stool samples. Gut Commensal uses deep metagenomic PCR to semi-quantitatively assess the presence of key commensal bacterial populations, providing resolution from phylum down to species level to support comprehensive gut microbiome profiling. Digestion and Immune Balance panel and Gut Inflammatory markers are a quantitative assay that detects calprotectin, anti-gliadin, eosinophil protein X, lactoferrin, zonulin, lysozyme, MMP 9, pancreatic elastase 1, S100A12, and slgA levels with Sandwich ELISA Enzyme-Linked ImmunoSorbent Assay methodology. ELISA (enzyme-linked immunosorbent assay) methodology is used for detecting ß-glucuronidase, pH, and fecal immunochemical test (FIT). Gut Antibodies panel utilizes a multiplexed microarray chip technology to provide accurate quantitative analysis of gut-related antibody markers. Tandem mass spectrometry methodology (LC-MS/MS) is used for detecting Gut Metabolites like fatty acids markers and bile acid markers and dietary fiber detection. Colorimetric assay methodology is used for detecting fat malabsorption like fecal fat, fecal triglycerides, and total phospholipids.

#### **Interpretation of Report:**

The following terminologies are used consistently in the report and are explained below.

**Gut Diversity** is an indicator for the amount of individual bacteria from each of the bacterial species present in your gut microbiome. There are two indices calculated including Shannon's Index (scale 0-3) and Simpson's Index (scale 0-1). For both calculations, higher index value represents increased diversity of species. While Shannon's is a better indicator of "richness" of the diversity, Simpson's is a better indicator of "revenness." The calculated Index values are surrounded with a risk indicator (green – high diversity, yellow – moderate diversity, and red – low diversity).

Gut Phyla distribution is displayed in a pie chart with each pie representing the % of individual phyla tested.

Key Ratios are calculated and displayed comprising of F/B (Firmicutes to Bacteroidetes ratio) and P/B (Prevotella to Bacteroides ratio), along with the corresponding risk indicator.

**Gut Commensal** bacteria is represented using relative abundance values. Relative abundance is the percent composition of an organism of a particular kind relative to the total number of organisms in your gut microbiome. The abundance of individual bacterial phylum/family/genus/species is calculated by comparing the relative abundance to the healthy reference range. Reference ranges have been established using results from 200 healthy individuals. The abundance is always mentioned in the report along with the potential associated risks; however, it is applicable only when indicated in RED. Associated probiotic tests are displayed in each panel with suggestions based on potential associated risks.

**Gut Pathogens** comprising of pathogenic bacteria, parasites, virus, and fungi are indicated as DETECTED or NOT DETECTED along with the levels in respective units. Worm and antibiotic resistance gene testing are displayed as DETECTED or NOT DETECTED based on the test result.

**Digestion and Immune Balance, Gut Inflammatory, Gut Antibodies**, and **Gut Metabolites** markers are displayed along with a risk indicator and the corresponding reference range for each test calculated using results from 200 healthy individuals. All test results are displayed with risk indicator and abundance direction as applicable. (red – high risk, yellow – moderate risk and green – low risk).

Vibrant Wellness is a personalized health analytics company founded out of our passion to serve patients and providers. The Vibrant Wellness platform provides tools for you to track and analyze your general wellness profile. All testing offered by Vibrant Wellness is performed by Vibrant America, a CLIA certified lab CLIA#:05D2078809 and Vibrant Genomics, a CLIA certified lab CLIA#: 05D2098445. Vibrant Wellness provides and makes available this report and any related services pursuant to the Terms of Use Agreement (the "Terms") on its website at www.vibrant-wellness.com. By accessing, browsing, or otherwise using the report or website or any services, you acknowledge that you have read, understood, and agree to be bound by these terms. If you do not agree to these terms, you shall not access, browse, or use the report or website. The statements in this report have not been evaluated by the Food and Drug Administration and are only meant to be lifestyle choices for potential risk mitigation. Please consult your healthcare provider for medication, treatment, or lifestyle management. This product is not intended to diagnose, treat, or cure any disease.

#### INTRODUCTION

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#### Interpretation of Report:

Comments provided by Vibrant Wellness are for educational purposes only and are not intended to be used as or substituted for medical advice. We do not treat or cure medical conditions. Vibrant Wellness does not replace the care of a medical practitioner or counselor and does not recommend self-diagnosis or self-medication. Depending on the nature of your testing, if you receive a high risk or moderate risk result, confirmatory testing may be recommended, and you will be encouraged to seek medical attention for additional follow up. Vibrant Wellness shall not be liable to you or anyone else for loss or injury caused in whole or part by procuring, compiling, interpreting, delivering, or reporting information through this report. Also, in no event shall Vibrant Wellness be held liable to you or anyone else for any decisions made or action taken or not taken by you in reliance on such information.

#### Please note:

Consider all supplements in relation to medical history and symptoms. Not all recommended supplements are appropriate in all individual cases. It is important that you discuss any modifications to your diet, exercise, and nutritional supplementation with your healthcare provider before making any changes. Pediatric ranges have not been established for these tests.



## Patient Name:DEMO DEMODate of Birth:05-26-1964Accession ID:2375990671Service Date:2024-06-21 16:20 (UTC)

#### **Questionnaire Data**

Gut 2	Zoomer	- Summary
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DEMOGRAPHICS					
Date of Birth	2000-01-01	Biological sex			Male
Ethnicity	Asian	Please specify:			Chinese
SYMPTOM HISTORY					
GI SYMPTOMS					
Abdominal pain	Mild	Bloating	Mild	Constipati <mark>on</mark>	Mild
Bad breath	None	Diarrhea	None	Nausea	None
Vomitting	None	Acid reflux or heartburn	Mild	Indigestion	None
Flatulence	Mild	Greasy/oily appearing stools	None	Mucus in stool	Mild
Change in stool form	None	Blood in stool	Mild	Anal fissures	None
SYSTEMIC SYMPTOMS					
Frequent infections	Sometimes	Altered weight	Often	Fatigue	Rarely
Over-eating	Sometimes	Loss of appetite	Som <mark>etime</mark> s	Joint pain	Rarely
Skin concerns	Often	Brain fog	Rarely	Sleep disturbances	Sometimes
Fever or night sweats	Rarely				
Do any symptoms worsen after specific foods or stressors?	Null				
DIETARY PATTERNS					
High-fat foods	Always	Dairy products	Often	Fermented foods	Sometimes
Fiber-rich foods	Often	Processed foods	Always	Sugary foods/drinks	Sometimes
Gluten-containing foods	Rarely	Artificial sweeteners	Sometimes		
DIGESTIVE FUNCTION					
How often do you have bowel move	ements?				Three to seven per week
How would you describe your stoo	l cons <mark>istency</mark> ?		С Т	ype 3: Like a sausage but	with cracks on its surface
HEALTH CONCERNS					
Clinically diagnosed conditions?					Celiac disease
Family History					-
MEDICATION HISTORY					
Have you taken antibiotics in the pa 2 months?	ast Yes	If yes, please list and provide necessary details:			One to three months
Are you currently on any medicatio	ns?				Metformin, ibuprofen



#### **Questionnaire Data**

LIFESTYLE	
How active are you?	Moderately active
How many hours of sleep do you get on average per night?	Between 5 and 8 hours
Do you use tobacco or nicotine products?	Yes regularly
How often do you have a drink(s) containing alcohol?	Two to four times a month
How would you rate your stress levels?	Moderate
How often do you engage in stress-reducing techniques?	Rarely



#### 

## Gut Zoomer - Summary

Out Diversity						
INDEX	Reference	Current	Previous	PHYLA		
Shannon's Index	≥ 2.40	1.5			<ul> <li>21.4%</li> <li>Proteobacteria</li> <li>2.6%</li> <li>Actinobacteria</li> </ul>	56.0% Firmicutes 0.0% Euryarchaeota
Simpson's Index	> 0.74	0.62			1.0% Fusobacteria 19.0% Bacteroidetes	0.1% Verrucomicrobia
NOTE Shannon's Index: Higl Simpson's Index: Higl	her values indica her values indica	te richness. te evenness				
KEY RATIOS		Current	Previous		Result	Reference
Firmicutes/Bacteroid	detes	3.0		0 0.9	7	≤0.9
Higher risk for obesit	ty, metabolic disc	orders, and ir	Iflammation.			
Prevotella/Bacteroid	es	1.37		0	0.47	≥0.48
Gut Commensa	ls			R	eference Range: In Control: <2 Moder	rate: 2-3.9 Risk: >3.9
Risk Category	C	urrent	Previous	Risk Score	Risk Association	
Risk Category	Ci ity	urrent 2.7	Previous	Risk Score	Risk Association Impaired intestinal barrier, Low bu Low propionate production, Low a	utyrate production, acetate production
Risk Category Intestinal Permeabili GENUS/SPECIES IME Enterobacteriaceae, I	Ci ity BALANCE Butyrivibrio, Bact	urrent 2.7 reroides vulg	Previous atus, Lactobacillus	Risk Score	Risk Association Impaired intestinal barrier, Low be Low propionate production, Low i i, Bacteroides, Enterococcus, Veill	utyrate production, acetate production lonella
Risk Category Intestinal Permeabili GENUS/SPECIES IME Enterobacteriaceae, I Intestinal Gas	Ci ity BALANCE Butyrivibrio, Bact	urrent 2.7 eroides vulg 1.0	Previous atus, Lactobacillus	Risk Score	Risk Association Impaired intestinal barrier, Low be Low propionate production, Low a i, Bacteroides, Enterococcus, Veill Elevated hydrogen production, Ele dioxide production, Elevated hydr production, Elevated methane pro	utyrate production, acetate production lonella evated carbon ogen sulfide oduction
Risk Category Intestinal Permeabili GENUS/SPECIES IME Enterobacteriaceae, I Intestinal Gas GENUS/SPECIES IME Bacteroides, Enteroce	Ci ity BALANCE Butyrivibrio, Bact BALANCE occus, Veillonella	urrent 2.7 eeroides vulg 1.0 a, Fusobacte	Previous atus, Lactobacillus rium, Methanobrev	Risk Score	Risk Association Impaired intestinal barrier, Low be Low propionate production, Low a i, Bacteroides, Enterococcus, Veill Elevated hydrogen production, Ele dioxide production, Elevated hydr production, Elevated methane pro	utyrate production, acetate production lonella evated carbon ogen sulfide oduction
Risk Category Intestinal Permeabili GENUS/SPECIES IME Enterobacteriaceae, I Intestinal Gas GENUS/SPECIES IME Bacteroides, Enteroco SIBO	Ci ity BALANCE Butyrivibrio, Bact BALANCE occus, Veillonella	urrent 2.7 eroides vulg 1.0 a, Fusobacte 2.5	Previous atus, Lactobacillus rium, Methanobrev	Risk Score	Risk Association Impaired intestinal barrier, Low bu Low propionate production, Low a i, Bacteroides, Enterococcus, Veill Elevated hydrogen production, Ele dioxide production, Elevated hydr production, Elevated methane pro	utyrate production, acetate production lonella evated carbon ogen sulfide oduction
Risk Category Intestinal Permeabili GENUS/SPECIES IME Enterobacteriaceae, I Intestinal Gas GENUS/SPECIES IME Bacteroides, Enteroco SIBO GENUS/SPECIES IME Escherichia coli, Met	Ci ity BALANCE Butyrivibrio, Bact BALANCE occus, Veillonella BALANCE hanobrevibacter	urrent 2.7 eeroides vulg 1.0 a, Fusobacte 2.5 smithii	Previous atus, Lactobacillus rium, Methanobrev	Risk Score	Risk Association Impaired intestinal barrier, Low be Low propionate production, Low a i, Bacteroides, Enterococcus, Veill Elevated hydrogen production, Ele dioxide production, Elevated hydr production, Elevated methane pro	utyrate production, acetate production lonella evated carbon ogen sulfide oduction
Risk Category Intestinal Permeabili GENUS/SPECIES IME Enterobacteriaceae, I Intestinal Gas GENUS/SPECIES IME Bacteroides, Enteroco SIBO GENUS/SPECIES IME Escherichia coli, Met	Ci ity BALANCE Butyrivibrio, Bact BALANCE occus, Veillonella BALANCE hanobrevibacter rome	urrent 2.7 eroides vulg 1.0 a, Fusobacte 2.5 smithii 3.2	Previous atus, Lactobacillus rium, Methanobrev	Risk Score	Risk Association Impaired intestinal barrier, Low bu Low propionate production, Low a i, Bacteroides, Enterococcus, Veill Elevated hydrogen production, Ele dioxide production, Elevated hydr production, Elevated methane pro SIBO syndrome Irritable bowel syndrome	utyrate production, acetate production lonella evated carbon ogen sulfide oduction

## Patient Name:DEMO DEMODate of Birth:05-26-1964Accession ID:2375990671Service Date:2024-06-21 16:20 (UTC)

## Gut Zoomer - Summary

Gut Commensals				Reference Range: In Control: <2 Moderate: 2-3.9 Risk: >3.9
Risk Category	Current	Previous	Risk Score	Risk Association
Inflammatory Bowel Disease	1.7		-	Crohn's disease, Ulcerative colitis
GENUS/SPECIES IMBALANCE Enterococcus, Veillonella, Fusoba	cterium, Lact	obacillus, Esche	richia coli, Bacteroio	des
Autoimmune Health	1.7		-	Celiac disease
GENUS/SPECIES IMBALANCE Enterobacteriaceae, Lactobacillus	;			
Metabolic Health	2.7			Glucose dysregulation and <mark>obesity, Alter</mark> ed bile acid m <mark>etaboli</mark> sm
GENUS/SPECIES IMBALANCE Clostridium ramosum, Escherichia	a coli, Oscillo	spira, Bacteroide	es, Lactobacillus	
Liver Health	2.4			Liver cirrhosis, Alcohol-related liver cirrhosis, Alcohol- associated dysbiosis, Primary sclerosing cholangitis
<b>GENUS/SPECIES IMBALANCE</b> Veillonella, Enterobacteriaceae, E	scherichia co	li, Lactobacillus,	Enterococcus, Fusc	obacterium
Hormones	>6			Affected estrogen metabolism
GENUS/SPECIES IMBALANCE ß-Galactosidase producing bacter	ia			
Nutrition	1.5			Poor vitamin synthesis, Poor tryptophan metabolism, Poor phenylalanine metabolism, Poor tyrosine metabolism, Poor polyphenol metabolism
GENUS/SPECIES IMBALANCE Lactobacillus, Escherichia coli <mark>, Ba</mark>	cteroides, Er	iterococcus, Lac	obacillus plantarun	n
Cardiovascular Health	1.8			Cardiovascular risk
GENUS/SPECIES IMBALANCE Escherichia coli, Tyzzerella 4				
Neurological Health	2.5			Alzheimer's disease, Parkinson's disease, Autism, Poor biosynthesis of neurotransmitters
GENUS/SPECIES IMBALANCE Bacteroides, Enterobacteriaceae,	Lactobacillad	ceae, Bacteroides	s vulgatus, Escheric	hia coli
Probiotic Health	1.8			Low probiotic diversity
GENUS/SPECIES IMBALANCE Saccharomyces boulardii				

#### Patient Name: DEMO DEMO Date of Birth: 05-26-1964 Accession ID: 2375990671 Service Date: 2024-06-21 16:20 (UTC)

## Gut Zoomer - Summary

Gut Commensals				Reference Range: In Control: <2 Moderate: 2-3.9 Risk: >3.9
Risk Category	Current	Previous	Risk Score	Risk Association
Keystone Health	>6			Reduced keystone species
GENUS/SPECIES IMBALANCE Butyrivibrio				
Supplement Suggestions				

#### PROBIOTICS

Intestinal Permeability: Lactobacillus rhamnosus GG, Lactobacillus acidophilus, Lactobacillus plantarum, Bifidobacterim infantis, E. coli Nissle 1917, Bifidobacterium animalis lactis BB-12

Keystone Health: Lactobacillus rhamnosus GG

#### **SUPPLEMENTS**

Intestinal Permeability: Vitamin D, Inulin, Curcumin, Vitamin A, Glutamine, L-arginine, Epigallocatechin 3-gallate, Quercetin, Zinc, Vitamin B2, Inulin-propionate ester

Irritable Bowel Syndrome: Vitamin D, Psyllium husk

Metabolic Health: Vitamin D, Calcium, Chitosan, Vitamin B12

Liver Health: Milk thistle, Artichoke extract

Hormones: Diindolylmethane

**Neurological Health:** Vitamin D, Curcumin, Melatonin, Docosahexaenoic acid (DHA), N-acetyl-cysteine, Vitamin A, Glutamine, L-carnitine, Tryptophan

#### SUPPORTIVE SUPPLEMENTS

Intestinal Permeability: Resistant starch

Metabolic Health: Inulin

Liver Health: Vitamin D, Milk thistle, Artichoke extract, Curcumin, Glutathione, Garlic

#### Neurological Health: Berberine, 5-HTP

Consider these supplements in relation to medical history and symptoms. Not all recommended supplements are appropriate in all individual cases. Consult a knowledgeable healthcare provider before taking any supplemental nutrients or probiotics.

GUT PATHOGENS					
Bacteria Current	Previous Reference	Bacteria	Current	Previous	Reference
Campylobacter Notes 1.5e4	≤1e2	Campylobacter jejuni	2e2		≤1e2

#### **Lab Notes**

Campylobacter spp.: Your risk changed from normal to elevated. Your result changed from <1e2 to 14652. Report comments changed based on the amended result and respective risk.

*Campylobacter spp.*: Campylobacter spp. is a genus of bacteria commonly linked to foodborne illnesses. Exposure to these bacteria occurs through undercooked poultry or contaminated water. Symptoms associated with its infection may include diarrhea (often bloody), abdominal pain, fever, and nausea.

**Campylobacter jejuni:** Campylobacter jejuni is a leading cause of bacterial gastroenteritis. Exposure to this bacterium occurs through undercooked poultry or contaminated water. Symptoms associated with its infection may include fever, abdominal pain, and diarrhea, which may be bloody.



GUT PATHOGENS					
Antibiotic Resistance Genes	Current	Previous	Antibiotic Resistance Genes	Current	Previous
Bactrim	DETECTED		Rifampin	DETECTED	

**Bactrim:** Bactrim, a combination of sulfamethoxazole and trimethoprim, is commonly used to treat infections such as urinary tract infections, respiratory infections, and certain types of gastrointestinal infections. It works by inhibiting the production of folic acid in bacteria, which is essential for their growth. Sulfamethoxazole targets dihydropteroate synthase (DHPS), while trimethoprim targets dihydrofolate reductase (DHFR). Resistance to bactrim can develop through mutations in the DHPS or DHFR enzymes, or through the acquisition of plasmid-borne resistance genes, such as sul1, sul2, and dfrA. Bacteria may also develop resistance by producing more of the target enzymes or bypassing the blocked metabolic pathway. The rise of resistance reduces the effectiveness of bactrim, leading to treatment failures and limited alternatives for patients. Testing for resistance genes is important to ensure the appropriate use of this therapy and to prevent ineffective treatment.

*Rifampin:* Rifampin is a key antibiotic used to treat bacterial infections such as tuberculosis (TB), leprosy, and certain types of bacterial meningitis. It works by stopping bacterial RNA synthesis, targeting the RNA polymerase  $\beta$ -subunit encoded by the rpoB gene. Resistance to rifampin mainly occurs through mutations in the rpoB gene, which change the drug's binding site and make it less effective. Other mechanisms include reduced drug uptake by bacteria and the use of efflux pumps to expel the antibiotic. The development of rifampin resistance is a significant concern because it often leads to multidrug-resistant infections. This complicates treatment, requiring alternative antibiotics that may be less effective, more toxic, or harder to access. Rapid and accurate detection of resistance is essential to select the right therapies, improve patient outcomes, and prevent the spread of resistant bacteria.

#### Supplement Suggestions

#### SUPPLEMENTS

Campylobacter jejuni: Oligofructose

#### SUPPORTIVE SUPPLEMENTS

*Campylobacter spp.:* Butyrate, Ginger, Bifidobacterium longum, Zinc, Vitamin D, Berberine, Garlic, Curcumin, Glutamine, Lactobacillus rhamnosus

Bactrim: Butyrate, Ginger, Aloe vera extract, Licorice root extract

Rifampin: Butyrate, Ginger, Aloe vera extract, Licorice root extract

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#### **Gut Inflammation**

#### **Gut Lumen**





![](_page_10_Figure_2.jpeg)

Beta-defensin is an antimicrobial peptide produced by epithelial cells lining the gut mucosa. It is secreted in response to microbial overgrowth, particularly involving gram-negative bacteria and fungi. Elevated levels of beta-defensin indicate an active immune response to these microorganisms or the presence of inflammation. Sustained elevation may signal persistent gut inflammation and damage to the epithelial barrier. Symptoms associated with elevated beta-defensin include abdominal pain and diarrhea, which are commonly observed in inflammatory bowel disease (IBD) and Candida overgrowth.

	01 7						
Calprotectin (mcg/g)	81.7	C	0	50	119		≤50.0

Calprotectin, a protein released by neutrophils, is a hallmark of inflammation in the gastrointestinal tract. Elevated calprotectin levels indicate active disease and immune cell infiltration, which can result in tissue damage and disrupted gut function. Symptoms may include abdominal pain and loose stools. The presence of elevated calprotectin in stool serves as a marker of neutrophil activity and gastrointestinal inflammation. This makes it a valuable biomarker for conditions such as inflammatory bowel disease (IBD), including ulcerative colitis (UC) and Crohn's disease, and for distinguishing these conditions from irritable bowel syndrome (IBS), which typically does not involve significant inflammation.

Fecal Eosinophil Protein X (mcg/g)	9.4	0		4.8	≤4.8

Eosinophil Protein X (EPX) is a water-soluble protein produced by eosinophils and reflects their activity in the gastrointestinal tract. Elevated levels of EPX may result from food allergies, parasitic infections, or inflammatory conditions. High EPX levels signify active tissue damage and inflammation associated with eosinophilic activity. Prolonged elevation of EPX is commonly associated with symptoms such as bloating and abdominal pain and is indicative of conditions such as inflammatory bowel disease (IBD).

#### Supplement Suggestions

#### **SUPPLEMENTS**

Calprotectin: Phosphatidylcholine

Fecal Eosinophil Protein X: Lactoferrin

#### SUPPORTIVE SUPPLEMENTS

#### Beta Defensin 2: Butyrate

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DIGESTION AND IMMUNE BALANCE							
Test Name	Current	Previous	Result	Reference			
Fecal Zonulin (ng/mL)	221.6		0 25 160	25.1-160.8			

Zonulin, a regulatory protein involved in intestinal permeability, is a marker for "leaky gut." It is produced by intestinal epithelial cells and hepatocytes in response to gut microorganisms, gluten, and other environmental triggers, regulating the integrity of tight junctions in the gut lining. Elevated fecal zonulin levels are associated with metabolic syndrome, obesity, Crohn's disease, and increased gut permeability. High levels indicate disrupted tight junctions, resulting in symptoms such as bloating, diarrhea, food sensitivities, and fatigue. Zonulin is a key marker of gut dysbiosis and systemic metabolic disorders.

![](_page_11_Figure_2.jpeg)

Secretory IgA (SIgA) is an antibody that plays a critical role in mucosal immunity, protecting epithelial barriers by neutralizing pathogens and modulating the intestinal microbiota. SIgA is secreted by plasma cells in the lamina propria and transported across the gut epithelium. Elevated SIgA levels indicate an active immune response, often triggered by infections, allergic reactions, or inflammatory conditions such as celiac disease or inflammatory bowel disease (IBD). Elevated SIgA suggests that the immune system is responding to chronic antigenic stimulation, which may result in symptoms such as diarrhea, bloating, systemic inflammation, and food intolerances. The overproduction of SIgA is regulated by cytokines like IL-4, TGF-β, IL-5, IL-6, and IL-10, reflecting the immune system's heightened activity. Addressing elevated SIgA levels is critical for managing inflammation, preventing tissue damage, and maintaining immune regulation.

#### Supplement Suggestions

#### SUPPORTIVE SUPPLEMENTS

Fecal Zonulin: Vitamin A

slgA: Berberine, Inulin, Fructooligosaccharides, Galactooligosaccharides, Butyrate

Consider these supplements in relation to medical history and symptoms. Not all recommended supplements are appropriate in all individual cases. Consult a knowledgeable healthcare provider before taking any supplemental nutrients or probiotics.

GUT ANTIBODIES						
Test Name	Current	Previous			Result	Reference
Lipopolysaccharide Antibody	11.1		0.1	10	20	≤10.0

The lipopolysaccharide (LPS) antibody test evaluates immune responses against LPS, a potent endotoxin found in the outer membrane of Gram-negative bacteria. When intestinal permeability is compromised, due to dysbiosis, chronic inflammation, or infection, LPS can translocate across the epithelial barrier and trigger systemic immune activation. Elevated anti-LPS antibody levels reflect heightened exposure to bacterial endotoxins and suggest ongoing gut barrier dysfunction, commonly referred to as "leaky gut." This immune response is often associated with symptoms such as brain fog, persistent fatigue, abdominal bloating, and low-grade systemic inflammation. By capturing immune reactivity to bacterial endotoxins, the LPS antibody test serves as a crucial marker of microbial translocation and gut-immune axis disruption, offering valuable insights into the underlying causes of systemic and gastrointestinal imbalances.

	101				
Tissue Transolutaminase					<10.0
·····	10.1	0.1	10	20	310:0

The tissue transglutaminase (tTG) antibody test detects autoantibodies targeting the tTG enzyme, which plays a role in the modification of gluten peptides. In individuals with celiac disease, tTG modifies gluten by deamidating gliadin peptides, making them more immunogenic and triggering an autoimmune response in genetically susceptible individuals. Therefore, elevated levels are strongly associated with celiac disease and are considered a hallmark of the autoimmune response to gluten. These elevated levels may arise from continued gluten intake in genetically predisposed individuals, especially those with HLA-DQ2 or HLA-DQ8 alleles. Symptoms may include chronic diarrhea, abdominal distension, malabsorption, anemia, and fatigue. This marker is crucial for diagnosing celiac disease and for evaluating intestinal damage and adherence to a gluten-free diet. Its assessment provides insight into autoimmune activation triggered by gut-derived antigens.

GUT ANTIBODIES				
Test Name	Current	Previous	Result	Reference
Fecal Anti Gliadin	>30	0.1	10 20	≤10.0

The fecal anti-gliadin antibody test detects immune responses to gluten and is valuable for monitoring adherence to a gluten-free diet (GFD) in patients with celiac disease (CD). Elevated levels may result from ongoing gluten exposure, whether intentional or inadvertent, such as through cross-contamination, hidden gluten in processed foods, or poor dietary compliance. Increased levels may also be observed in non-celiac gluten sensitivity and in certain cases of nonresponsive or refractory CD, where symptoms persist despite a strict GFD. Common symptoms may include diarrhea, abdominal pain, bloating, weight loss, and fatigue. This marker plays a critical role in assessing gluten intolerance and supports the diagnosis and clinical management of persistent or treatment-resistant CD.

#### Supplement Suggestions

#### SUPPLEMENTS

*Tissue Transglutaminase:* Enterococcus faecium, Lactobacillus acidophilus, Lactobacillus rhamnosus, Bifidobacterium bifidum, Bifidobacterium longum, Fructooligosaccharides, Vitamin B1, Vitamin B2, Vitamin B6, Vitamin A

#### SUPPORTIVE SUPPLEMENTS

Lipopolysaccharide Antibody: Butyrate, Phosphatidylcholine

Consider these supplements in relation to medical history and symptoms. Not all recommended supplements are appropriate in all individual cases. Consult a knowledgeable healthcare provider before taking any supplemental nutrients or probiotics.

MALABSORPTION			
DIETARY FIBER	Current	Previous	
Meat Fiber	DETECTED		

*Meat Fiber:* The presence of meat fibers in stool suggests improper digestion or inadequate chewing, which can hinder nutrient absorption and overall digestive efficiency. Dietary fiber intake supports intestinal health by contributing to fecal bulk and promoting beneficial microbiota activity, while undigested meat fibers often indicate digestive insufficiency linked to inefficient chewing or reduced enzymatic activity. Proper chewing and slower eating enhance digestion, improving nutrient absorption, appetite control, and weight management. Symptoms such as bloating, abdominal discomfort, or malnutrition may accompany poor digestion, highlighting the importance of proper dietary and lifestyle habits.

#### Supplement Suggestions

#### SUPPORTIVE SUPPLEMENTS

#### Meat Fiber: Betaine HCL, Taurine

Consider these supplements in relation to medical history and symptoms. Not all recommended supplements are appropriate in all individual cases. Consult a knowledgeable healthcare provider before taking any supplemental nutrients or probiotics.

![](_page_13_Figure_2.jpeg)

![](_page_13_Picture_3.jpeg)

GUT METABOLITES					
BILE ACID METABOLITES	Current	Previous	Resu	lt	Reference
Deoxycholic Acid (DCA) (%)	16.75	0	24.2	75.8	24.25-75.84

Deoxycholic acid (DCA), a secondary bile acid formed from cholic acid in the colon, plays a crucial role in fat emulsification and absorption. It activates the farnesoid X receptor (FXR) to regulate bile acid and cholesterol homeostasis while maintaining gut motility. DCA also acts as a signaling molecule, activating PXR for xenobiotic detoxification and TGR5 to enhance GLP-1 secretion, improving glucose regulation and insulin sensitivity. Additionally, DCA influences immune cells and drives inflammation through toll-like receptor (TLR) pathways. Dysregulated DCA levels can impair these functions, leading to gut inflammation, reduced stool water content, and motility issues. Importantly, lower DCA levels can impair bile metabolism, fat digestion, and cholesterol clearance, increasing the risk of fat malabsorption and affecting gut and overall health.

	4.27	_			
LCA/DCA Ratio	4.37	0 0.31	3.38	0.32-3.38	

The LCA/DCA ratio, representing the balance between lithocholic acid (LCA) and deoxycholic acid (DCA), reflects gut microbiota activity and bile acid metabolism. Both LCA and DCA influence pregnane X receptor (PXR) and Toll-like receptor (TLR) signaling, with LCA exerting a stronger agonistic effect on PXR, promoting detoxification, while DCA contributes to TLR-mediated inflammation. An imbalance in this ratio may indicate impaired detoxification, weakened gut immunity, gut dysbiosis, and symptoms such as altered bowel movements. Specifically, a high LCA/DCA ratio may contribute to bile acid-induced liver toxicity and an elevated risk of colorectal cancer.

SHORT CHAIN FATTY	ACIDS Current	Previous			Result	Reference
Propionate (%)	30.5		0	15.3	30.3	15.4-30.3

Propionate is a key short-chain fatty acid (SCFA) produced during the bacterial fermentation of dietary fibers and resistant starch. This process involves the microbial conversion of carbohydrates into SCFAs via anaerobic pathways. Propionate contributes to gut health by regulating microbial composition, serving as an energy source for intestinal epithelial cells, reducing gut inflammation, and promoting gut barrier integrity. Propionate exerts its effects through G-protein-coupled receptors 41 and 43 (GPR41 and GPR43). Activation of GPR41 regulates energy metabolism, while propionate's interaction with GPR43 modulates appetite control and gut barrier integrity. Both receptors enhance insulin sensitivity through glucagon-like peptide-1 (GLP-1), which aids in glucose metabolism and improves insulin secretion. However, elevated levels of fecal propionate can lead to constipation associated with slower bowel transit time.

Butyrate is a short-chain fatty acid (SCFA) primarily produced through the bacterial fermentation of resistant starch and dietary fibers. This process involves the microbial hydrolysis of dietary polysaccharides into monosaccharides, which are then fermented to form butyrate. Butyrate serves as a vital energy source for colonocytes and supports gut barrier function by enhancing tight junction integrity. It also reduces intestinal inflammation and oxidative stress, promoting a healthy gut environment. Butyrate exerts its effects through G-protein-coupled receptors 41 and 43 (GPR41 and GPR43), contributing to insulin sensitivity via glucagon-like peptide-1 (GLP-1), which aids in glucose metabolism and enhances insulin secretion. Recent studies have shown that butyrate can support neurogenesis (the formation of new neurons) in the brain via the 'gut-brain axis.' Low fecal butyrate levels can cause gastrointestinal issues due to a compromised intestinal lining, impaired blood sugar regulation from disrupted GLP-1 activity, and cognitive symptoms like brain fog due to affected neurogenesis.

# Supplement Suggestions SUPPLEMENTS Deoxycholic Acid (DCA): Vitamin A, Vitamin D, Folate Propionate: Magnesium Butyrate: Fructans, Vitamin B2, Inulin

![](_page_14_Picture_11.jpeg)

#### **GUT METABOLITES**

#### **Supplement Suggestions**

#### SUPPORTIVE SUPPLEMENTS

LCA/DCA Ratio: Curcumin, Milk thistle, N-acetyl-cysteine

#### Propionate: Aloe vera extract

Consider these supplements in relation to medical history and symptoms. Not all recommended supplements are appropriate in all individual cases. Consult a knowledgeable healthcare provider before taking any supplemental nutrients or probiotics.

![](_page_15_Picture_8.jpeg)

#### Suggestions

#### Prebiotics

Prebiotics are non-digestible fibers that serve as a food source for beneficial gut bacteria, promoting a balanced microbiome and enhancing digestive health. By nourishing beneficial microbes, prebiotics help strengthen the gut barrier, support nutrient absorption, and regulate inflammation, all of which contribute to overall well-being. Based on the assessment of gut commensals, pathogenic microorganisms, and digestive health markers, increasing your intake of prebiotic-rich foods or supplements may help improve gut health and microbial balance.

![](_page_16_Picture_5.jpeg)

SUPPLEMENTS	Inulin Inulin-propionate ester Fructans	10 g/day 10 g/day 7.5 g/day	Resistant starch Oligofructose	15 g/day 20 g/day	Fructooligosaccharides Galactooligosaccharides	20 g/day 5 g/day
	<b>Fruits</b> Bananas					
DURCES	<b>Vegetables</b> Onions, Garlic, Asparagus, Gre	en Bananas, (	Cooked Potatoes, Leeks			
FOOD S(	<b>Dairy</b> Milk, Cheese, Yogurt, Butter					
	<b>Fiber</b> Chicory Root, Wheat, Legumes	5				

![](_page_16_Picture_7.jpeg)

#### Suggestions

#### **Probiotics**

Probiotics are beneficial bacteria and yeasts that contribute to gut health by maintaining a balanced microbiome, supporting digestion, and enhancing immune function. A healthy gut microbiome aids in breaking down nutrients, producing essential vitamins, and preventing the overgrowth of harmful microbes, which collectively support metabolic balance and immune resilience. Based on the assessment of gut commensals, pathogenic microorganisms, and digestive health markers, incorporating probiotic-rich foods and supplements may help improve your gut health and support overall well-being.

![](_page_17_Picture_5.jpeg)

လ	Butyrate	150 mg/day	Lactobacillus rhamnosus GG	10 billion CFU/day	Lactob <mark>acillu</mark> s acidophilus	10 billion CFU/day
MENT	Bifidobacterium longum	10 billion CFU/day	Lactobacillus rhamnosus	10 billion CFU/day	Lactobac <mark>illus</mark> plantarum	10 billion CFU/day
IPPLE	Bifidobacterim infantis	10 billion CFU/day	E. coli Nissle 1917	10 billion CFU/day	Bifidobacterium animalis lactis BB-12	10 billion CFU/day
പ	Enterococcus faecium	10 billion CFU/day	Bifidobacterium bifidum	10 billion CFU/day		

#### **Vegetables**

Dairy

Kimchi, Sauerkraut, Ginger Root, Pickles

## FOOD SOURCES

Yogurt, Kefir, Curd, Milk, Cheese, Butter

#### **Fiber** Natto

#### Suggestions

#### **Nutrients**

Essential nutrients, including vitamins and minerals, play a vital role in maintaining gut health by supporting digestive processes, microbial diversity, and immune function. Proper nutrient intake helps regulate gut motility, maintain intestinal integrity, and reduce inflammation, which in turn promotes overall metabolic and physiological balance. Based on the evaluation of key biomarkers, ensuring adequate intake of these nutrients through a well-balanced diet or supplementation may help optimize gut function and overall well-being.

	Vitamin D	600 IU/day	Vitamin A	3000 IU/day	Glutamine	25 mg/day
2	Vitamin B2	1.3 mg/day	N-acetyl-cysteine	600 mg/day	Zinc	11 mg/day
E	Calcium	1,000 mg/day	Docosahexaenoic ac	id (DHA) 1 g/day	Phosphatidylcholine	6 g/day
ĭ	L-arginine	1.5 g/day	Vitamin B12	2.4 mcg/day	L-carnitine	500 mg/day
ī	Tryptophan	5 mg/kg/day	Vitamin B1	1.2 mg/day	Vitamin B6	1.7 mg/day
N N	Betaine HCL	350 mg/day	Taurine	3 g/day	Folate	400 mcg/day
	Magnesium	400 mg/day				

#### K Fruits

Bananas, Papayas, Oranges, Cantaloupe, Citrus Fruits

#### C Vegetables

Leafy Greens, Avocado, Spinach, Carrots, Cabbage, Garlic, Onions, Kale, Beets, Legumes

![](_page_18_Picture_10.jpeg)

FOOD SOURCES

#### 🚡 Dairy

Milk, Cheese, Yogurt, Butter

#### 🔬 Fiber

Nuts, Beans, Legumes, Sunflower Seeds, Seeds, Whole Grains, Almonds, Soybeans, Brown Rice, Whole Wheat, Lentils, Peas

#### 🖓 Animal Protein

Eggs, Meat, Poultry, Liver, Shellfish, Salmon, Tuna, Fatty Fish, Fish Oil, Algae, Red Meat, Fish, Turkey, Chicken, Pork, Trout, Beef Liver, Seafood

![](_page_18_Picture_17.jpeg)

#### Suggestions

#### **Botanicals**

Botanicals are plant-derived compounds, such as polyphenols, flavonoids, and terpenoids, that support gut health by aiding digestion, modulating the microbiome, and reducing gastrointestinal inflammation. Many botanicals possess prebiotic, antimicrobial, and anti-inflammatory properties, which help maintain gut microbial balance and improve digestive efficiency, ultimately benefiting systemic health. Based on the assessment of relevant biomarkers, incorporating specific botanical extracts may help promote gut health and enhance overall well-being.

![](_page_19_Picture_5.jpeg)

450 mg/day	Milk thistle	0.1 g/day	Curcumin	900 mg/day	Berberine
100 mg/day	Aloe vera extract	1.2 g/day	Ginger	50 mg/day	Artichoke extract
7 g/day	Psyllium husk	500 mg/day	Licorice root extract	1.2 g/day	Garlic
	Psyllium husk	500 mg/day	Licorice root extract	1.2 g/day	Garlic

![](_page_19_Picture_7.jpeg)

#### Contraction Vegetables

Goldenseal, Barberry, Oregon Grape, Tree Turmeric, Turmeric, Artichokes, Aloe Vera, Garlic Bulb (allium Sativum), Licorice Root

#### Ger Fiber

Milk Thistle Seeds, Psyllium Seeds

![](_page_19_Picture_12.jpeg)

## Patient Name: DEMO DEMO Date of Birth: 05-26-1964 Accession ID: 2375990671 Service Date: 2024-06-21 16:20 (UTC) Control Control

## **Gut Zoomer**

GUT PATHOGEN	IS						
Bacteria	Current	Previous	Reference	Bacteria	Current	Previous	Reference
Clostridium difficile	<1e1		≤1.1e1	Clostridium difficile Toxin A	<1e2		≤1e3
Clostridium difficile Toxin B	<1e2		≤1e3	Clostridium perfringens	<1e2		≤1e2
Campylobacter Note	🔊 1.5e4		≤1e2	Campylobacter coli	<1e2		≤1e2
Campylobacter jejuni	2e2		≤1e2	Campylobacter upsaliensis	<1e2		≤1e2
Vibrio (vulnificus)	<1e4		≤1e4	Vibrio (parahaemolyticus)	<3e3		≤3e3
Vibrio (cholerae)	<2e2		≤2e2	Enteropathogen <mark>ic</mark> E.coli (EPEC)	<1.5e3		≤1.5e3
Enteroaggregative E.coli (EAEC)	<1e2		≤1e2	Enterotoxigenic E.coli (ETEC) Lt/St	<2e3		≤2e3
Shiga-Like Toxin Producing E.coli (STEC) Stx1/Stx2	<1e2		≤1e2	E.coli 0157	<1.1e1		≤1e2
Shigella/EIEC	<1.3e1		≤1e2	Helicobacter pylori	<1e2		≤1.5e4
Non-pylori Helicobacter spp.	<1e2		≤1e2	Listeria	<3e3		≤3e3
Klebsiella pneumoniae	<3.5e3		≤3. <mark>5e3</mark>	Yersinia enterocolitica	<2e4		≤2e4
Salmonella	<2e3		≤2e3	Plesiomonas shigelloides	<3e2		≤3e2
Edwardsiella tarda	<4.5e3		≤4.5e3	Aeromonas spp.	<1e2		≤1e2
Staphylococcus aureus	<1e3		≤1e3	Bacillus cereus	<1e1		≤1.1e1

#### **Lab Notes**

Campylobacter spp.: Your risk changed from normal to elevated. Your result changed from <1e2 to 14652. Report comments changed based on the amended result and respective risk.

Parasites - Protozoans	Current	Previous	Reference	Parasites - Protozoans	Current	Previous	Reference
Cryptospo <mark>ridium</mark>	<1e2		≤1e2	Giardia lamblia	<4e2		≤4e2
Chilomastix mesnili	<2e3		≤2e3	Dientamoeba fragilis	<1e3		≤1e3
Entamoeba coli	<2e3		≤2e3	Blastocystis hominis	<1e3		≤1e3
Isospora belli	<1e3		≤1e3	Pentatrichomonas hominis	<1e3		≤1e3
Entamoeba histolytica	<1e2		≤1e2	Cyclospora cayetanensis	<1.5e2		≤2e3
Cyclospora spp.	<2.5e3		≤2.5e3	Endolimax nana	<2e3		≤2e3

![](_page_20_Picture_6.jpeg)

#### 

## **Gut Zoomer**

GUT PATHOGE	NS						
Parasites - Protozoans	Current	Previous	Reference	Parasites - Protozoans	Current	Previous	Reference
Trichomonas hominis	<1e3		≤1e3	Balantidium coli	<1e2		≤1e2
Fungi	Current	Previous	Reference	Fungi	Current	Previous	Reference
Candida spp.	<1.2e1		≤1.1e2	Candida albicans	<1.1e2		≤1.1e2
Candida glabrata	<1e2		≤1e2	Rodotorula spp.	<2.5e3		≤2.5e3
Geotrichum spp.	<1.1e2		≤1.1e2	Microsporidium spp.	<1.1e2		≤1.1e2
Virus	Current	Previous	Reference	Virus	Current	Previous	Reference
Adenovirus F40/41	<1e2		≤1e2	Astrovirus	<1.2e3		≤1.2e3
Norovirus GI	<1e2		≤1e3	Norovirus GII	<1e2		≤1e3
Sapovirus I	<2.1e2		≤2.1e2	Sapovirus II	<2.1e2		≤2.1e2
Sapovirus IV	<2.1e2		≤ <mark>2.1e</mark> 2	Sapovir <mark>us V</mark>	<2.1e2		≤2.1e2
Enterovirus	<1e2		≤1 <mark>e2</mark>	Epstein Barr virus	<1e3		≤1e3
Rotavirus A	<3.1e2		≤3.1e2	Cytomegalovirus	<1e3		≤1e3
Human bocavirus	<1e1		≤1.1e1				
Antibiotic Resistar Genes	nce Cu	rrent	Previous	Antibiotic Resista Genes	ince Cu	rrent	Previous
Helicobacter - Clarithromycin		ETECTED		Helicobacter - Fluoroquinolones	NOT DE	TECTED	
Fluoroquinolones	NOT DE	ETECTED		Vancomycin	NOT DE	TECTED	
b-lactamase	NOT DE	ETECTED		Macrolides	NOT DE	TECTED	
Tetracycline		ETECTED		Aminoglycoside	NOT DE	TECTED	
Bactrim	DETE	ECTED		Carbapenem	NOT DE	TECTED	
Rifampin	DETE	ECTED		Polymyxins	NOT DE	TECTED	
Parasites - Helmin	ths Cu	rrent	Previous	Parasites - Helmi	nths Cu	rrent	Previous
Larval Nematode	NOT DE	ETECTED		Taenia solium	NOT DE	TECTED	
Fasciola/Fasciolopsi	s NOT DE	ETECTED		Dipylidium caninum	NOT DE	TECTED	

## Patient Name:DEMO DEMODate of Birth:05-26-1964Accession ID:2375990671Service Date:2024-06-21 16:20 (UTC)

## **Gut Zoomer**

GUT PATHOGENS					
Parasites - Helminths	Current	Previous	Parasites - Helminths	Current	Previous
Enterobius vermicularis	NOT DETECTED		Ancylostoma duodenale	NOT DETECTED	
Necator americanus	NOT DETECTED		Taenia spp.	NOT DETECTED	
Strongyloides stercoralis	NOT DETECTED		Schistosoma	NOT DETECTED	
Hymenolepis	NOT DETECTED		Diphyllobothrium latum	NOT DETECTED	
Mansonella	NOT DETECTED		Ascaris lumbricoides	NOT DETECTED	
Trichuris trichiura	NOT DETECTED				

#### **GUT INFLAMMATORY MARKERS**

Test Name	Current	Previous		Result	Reference
Beta Defensin 2 (ng/mL)	51.0		0	34.9	≤34.9
Lysozyme (ng/mL)	463.1		0	575	≤575.0
MMP 9 (ng/mL)	0.2		0	0.2	≤0.2
S100A12 (mcg/ml)	30.0		0	50	≤50.0
Calprotectin (mcg/g)	81.7		0	50 119	≤50.0
Fecal Lactoferrin (mcg/ml)	2.1		0	6.4	≤6.4
Fecal Eosinophil Protein X (mcg/g)	9.4		0	4.8	≤4.8

#### **DIGESTION AND IMMUNE BALANCE**

Test Name	Current	Previous	Result	Reference
Pancreatic Elastase 1 (mcg/g)	331.9	0	100 199	≥200.0
Fecal Immunochemical Test (FIT) (mcg/g)	5.3	0	10	≤10.0
Fecal Zonulin (ng/mL)	221.6	0	25 160	25.1-160.8
рН	6.8	0	6 7.8	6.1-7.8
sIgA (mcg/g)	1973.5	0	425 1450	426.0-1450.0

## Patient Name:DEMO DEMODate of Birth:05-26-1964Accession ID:2375990671Service Date:2024-06-21 16:20 (UTC)

## **Gut Zoomer**

#### **GUT ANTIBODIES**

Test Name	Current	Previous	Result	Reference
Lipopolysaccharide Antibody	11.1		0.1 10 20	≤10.0
Anti-Saccharomyces Cerevisiae Antibody	2.8		0.1 10 20	≤10.0
Tissue Transglutaminase	10.1		0.1 10 20	≤10.0
Deamidated Gliadin Peptide	2.0		0.1 10 20	≤10.0
Fecal Anti Gliadin	>30		0.1 10 20	≤10.0
Actin Antibody	3.6		0.1 10 20	≤10.0
MALABSORPTION				
DIETARY FIBER	Current	Previous	DIETARY FIBER Current	Previous
Meat Fiber DE	TECTED		Vegetable Fiber NOT DETECTED	
FAT MALABSORPTION	Current	Previous	Result	Reference
Total Fecal Fat (mg/g)	19.2		0 2.8 37.5	2.9-37.5
Total Fecal Triglycerides (mg/g)	1.9		0 0.2 2.5	0.3-2.5
Long Chain Fatty Acids (mg/g)	10.3		0 0.8 28.1	0.9-28.1
Total Cholesterol (mg/g)	1.0		0 0.4 5.3	0.5-5.3
Total Phospholipids (mg/g)	4.1		0 0.2 6.4	0.3-6.4
GUT METABOLITES				
BILE ACID METABOLITES	Current	Previous	Result	Reference
Cholic Aci <mark>d (CA) (%)</mark>	0.17		0 0.36	≤0.36
Chenodeoxycholic Acid (CDCA) (%)	1.14		0 1.25	≤1.25
Deoxycholic Acid (DCA) (%)	16.75		0 24.2 75.8	24.25-75.84
Lithocholic Acid (LCA) (%)	73.23		0 24.1 75.7	24.16-75.75
LCA/DCA Ratio	4.37		0 0.31 3.38	0.32-3.38

![](_page_23_Picture_4.jpeg)

#### 

## **Gut Zoomer**

#### **GUT METABOLITES**

SHORT CHAIN FATTY ACIDS	Current	Previous	Result	Reference
Acetate (%)	62.1		0 60.1 72.7	60.2-72.7
Propionate (%)	30.5		0 15.3 30.3	15.4-30.3
Butyrate (%)	1.5		0 5 12.4	5.1-12.4
Valerate (%)	2.0		0 0.7 3.5	0.8-3.5
Total Short Chain Fatty Acids (micromol/g)	176.4		0 45.3 210	45.4-210.1
ESTROGEN METABOLISM	Current	Previous	Result	Reference
ß-Glucuronidase (U/mL)	1299		0 2300	≤2300.0
Gut Commensals - Gut Mi	crobiome			
Test Name	Current	Previous	Result	Reference
Akkermansia muciniphila	11.2		0 9.9	≥10.0
Butyrivibrio	4.0		0 9.9	≥10.0
Alloprevotella	14.4		0 9.9	≥10.0
Roseburia intestinalis	19.4		0 9.9	≥10.0
Bacteroides vulgatus	20.7		0 20	≤20.0
Prevotella	28.5		0 9.9	≥10.0
Faecalibacterium	20.2		0 9.9	≥10.0
Ruminococcaceae	28.6		0 9.9	≥10.0
Dialister invisus	21.6		0 9.9	≥10.0
Veillonella	23.4		0 20	≤20.0
Haemophilus	6.3		0 20	≤20.0
Bacteroidales	6.9		0 20	≤20.0
Bacteroides caccae	10.4		0 20	≤20.0
Bifidobacterium animalis	18.5		0 9.9	≥10.0

#### **Gut Commensals - Gut Microbiome**

## **Gut Zoomer**

erence 20.0 20.0 20.0 20.0 20.0 20.0
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![](_page_25_Picture_4.jpeg)

## Patient Name: DEMO DEMO Date of Birth: 05-26-1964 Accession ID: 2375990671 Service Date: 2024-06-21 16:20 (UTC) Control Control

#### Gut Commensals - Gut Microbiome

## **Gut Zoomer**

Test Name	Current	Previous	Result	Reference
Atopobium parvulum	16.9		0 20	≤20.0
Catenibacterium	24.5		0 9.9	≥10.0
Escherichia colí	26.8		0 20	≤20.0
Prevotella coprí	16.2		0 9.9	≥10.0
Solobacterium moorei	20.0		0 20	≤20.0
Streptococcus species	7.4		0 20	≤20.0
Tyzzerella	12.3		0 20	≤20.0
Tyzzerella 4	21.7		0 20	≤20.0
Atopobium	3.0		0 20	≤20.0
Lactobacillus ruminis	10.1		0 20	≤20.0
Lactobacillus sakei	14.0		0 9.9	≥10.0
Bradyrhizobiaceae <sup>-</sup>	1.3		0 20	≤20.0
Lactobacillaceae	21.7		0 20	≤20.0
Blautia	6.9		0 20	≤20.0
Butyricimonas <sup>-</sup>	25.4		0 9.9	≥10.0
Coprococcus	21.8		0 9.9	≥10.0
Desulfovibrio	0.8		0 20	≤20.0
Veillonellaceae <sup>-</sup>	27.8		0 9.9	≥10.0
Lachnospiraceae	12.0		0 9.9	≥10.0
Alistipes	11.5		0.1 20	≤20.0
Holdemania	14.9		0.1 20	≤20.0
Bacillus subtilis	27.3		0 9.9	≥10.0
ß-Galactosidase producir bacteria	<sup>ng</sup> 20.7		0 20	≤20.0

![](_page_26_Picture_4.jpeg)

#### Gut Commensals - Gut Microbiome

## **Gut Zoomer**

Test Name	Current	Previous	Result	Reference
ß-Glucuronidase producing bacteria	9.6	0	20	≤20.0
Acinetobacter	9.8	0	20	≤20.0
Enterococcus species	10.7	0	20	≤20.0
Staphylococcus species	5.4	0	20	≤20.0
Fusobacterium	25.0	0	20	≤20.0
Methanobrevibacter smithii	>30	0	20	≤20.0
Clostridium	6.4	0	20	≤20.0
Porphyromonas gingivalis⁻	1.9	0	20	≤20.0
Proteus mirabilis	11.0	0	20	≤20.0
Pseudobutyrivibrio <sup>-</sup>	25.0	0	9.9	≥10.0
Bifidobacterium	15.7	0	9.9	≥10.0
Staphylococcaceae	15.5	0	20	≤20.0
Staphylococcus epidermidis	4.0	0	20	≤20.0
Staphylococcus pasteuri	13.6	0	20	≤20.0
Clostridia clusters IV	23.1	0	9.9	≥10.0
Clostridia clusters XIVa	28.0	0	9.9	≥10.0
Enterococcus gallinarum	1.4	0	20	≤20.0
Actinomyces	19.6	0.1	20	≤20.0
Bacteroides	20.8	0	20	≤20.0
Bifidobacterium animalis subspecies lactis	29.6	0	9.9	≥10.0
Lactobacillus animalis	21.8	0	9.9	≥10.0
Clostridiales Family XIV Incertae Sedis	17.2	0	9.9	≥10.0
Enterobacteria	14.0	0	20	≤20.0

![](_page_27_Picture_4.jpeg)

#### Patient Name: DEMO DEMO Date of Birth: 05-26-1964 Accession ID: 2375990671 Service Date: 2024-06-21 16:20 (UTC)

## **Gut Zoomer**

Gut Commensais - Gut Microbiome							
Test Name	Current	Previous	Result	Reference			
Faecalibacterium prausnitzii	14.6	0	9.9	≥10.0			
Lactobacillus	6.4	C	9.9	≥10.0			
Lactococcus	22.7	0	9.9	≥10.0			
Leuconostoc	10.6	0	9.9	≥10.0			
Pediococcus	24.0	0	9.9	≥10.0			
Mycoplana <sup>-</sup>	13.6	0	20	≤20.0			
Pseudomonas	11.1	0	20	≤20.0			
Blautia hydrogenotorophica	6.1	0	20	≤20.0			
Clostridia clusters XVIII	12.0	O	9.9	≥10.0			
Clotridiales Incertae Sedis IV	17.6	0	20	≤20.0			
Enterobacter aerogenes	13.9	0	20	≤20.0			
Peptostreptococcus	6.2	0	20	≤20.0			
Propionibacterium freudenreichii	19.6	0	9.9	≥10.0			
Ruminococcus obeum	13.7	0	20	≤20.0			
Gut Commensals - Probiotic Organisms							
Test Name	Current	Previous	Result	Reference			
Streptococcus	28.4	0	9.9	≥10.0			
	24.2		•	10.0			

Lactobacillus bulgaricus	24.2	0 9.9	≥10.0
Lactobacillus plantarum	0.9	0 9.9	≥10.0
Saccharomyces boulardii	4.7	0 9.9	≥10.0
Streptococcus thermophilus	20.7	0 9.9	≥10.0
Bifidobacterium dentium	11.3	0 9.9	≥10.0
Bacillus coagulans	27.9	0 9.9	≥10.0

![](_page_28_Picture_5.jpeg)

#### **Gut Commensals - Probiotic Organisms**

## **Gut Zoomer**

Test Name	Current	Previous	Result	Reference
Bifidobacterium bifidum	12.7		9.9	≥10.0
Bifidobacterium breve	11.6		9.9	≥10.0
Bifidobacterium infantis	1.6		9.9	≥10.0
Bifidobacterium longum	28.9		9.9	≥10.0
Escherichia coli Nissle	27.6		9.9	≥10.0
Lactobacillus acidophilus	23.6		9.9	≥10.0
Lactobacillus brevis	11.5		9.9	≥10.0
Lactobacillus casei	26.4		9.9	≥10.0
Lactobacillus fermentum	10.0		9.9	≥10.0
Lactobacillus paracasei	1.2		9.9	≥10.0
Lactobacillus reuteri	17.0		9.9	≥10.0
Lactobacillus rhamnosus	5.3		9.9	≥10.0
Lactobacillus rhamnosus G0	s 12.8		9.9	≥10.0
Lactobacillus salivarius	1.6		9.9	≥10.0

## **Gut Zoomer**

#### **Risk and Limitations**

This test has been developed and its performance characteristics determined by Vibrant America LLC., a CLIA certified lab and Vibrant Genomics, a CLIA and CAP certified lab. These assays have not been cleared or approved by the U.S. Food and Drug Administration. Vibrant Wellness provides additional contextual information on these tests and provides the report in a more descriptive fashion.

Gut Zoomer testing is performed at Vibrant Genomics and Vibrant America utilizing ISO-13485 developed technology. Vibrant America has effective procedures in place to protect against technical and operational problems. However, such problems may still occur. Examples include failure to obtain the result for a specific test due to circumstances beyond Vibrant's control. Vibrant may re-test a sample to obtain these results but upon re-testing the results may still not be obtained. As with all medical laboratory testing, there is a small chance that the laboratory could report incorrect results. A tested individual may wish to pursue further testing to verify any results.

Tested individuals should not change their diet, physical activity, or any medical treatments they are currently using based on the results without consulting their personal health care provider. The information in this report is intended for educational purposes only. While every attempt has been made to provide current and accurate information, neither the author nor the publisher can be held accountable for any errors or omissions. Tested individuals may find their experience is not consistent with Vibrant's selected peer reviewed scientific research findings of relative improvement for study groups. The science in this area is still developing and many personal health factors affect diet and health. Since subjects in the scientific studies referenced in this report may have had personal health and other factors different from those of tested individuals, results from these studies may not be representative of the results experienced by tested individuals. Further, some recommendations may or may not be attainable, depending on the tested individual's physical ability or other personal health factors. A limitation of this testing is that many of these scientific studies may have been performed in selected populations only. The interpretations and recommendations are done in the context of these studies, but the results may or may not be relevant to tested individuals of different or mixed ethnicities. Please note that pediatric ranges have not been established for these tests. Interference studies have not been established for individuals on immunosuppressive drugs.

Based on test results and other medical knowledge of the tested individual, health care providers might consider additional independent testing, or consult another health care provider or genetic counselor.

Vibrant Wellness makes no claims as to the diagnostic or therapeutic use of its tests or other informational materials. Vibrant Wellness reports and other information do not constitute medical advice and are not a substitute for professional medical advice. Please consult your healthcare practitioner for questions regarding test results, or before beginning any course of supplementation or dietary changes.

Vibrant America/Wellness makes no claims as to the diagnostic or therapeutic use of its tests or other informational materials. Vibrant Wellness reports and other information do not constitute medical advice and are not a substitute for professional medical advice. Please consult your healthcare practitioner for questions regarding test results, or before beginning any course of supplementation, dietary or lifestyle changes. A summary of the test information that allows the user to understand how the test works and how to interpret the results of the test is provided at the start of the test report.

![](_page_30_Picture_9.jpeg)