FULL NAME: **TEST2 PATIENT** ACCESSION ID: **2006240006** DATE OF SERVICE: **06-23-2020 15:38**

GUT METABOLITES

MARKER	RESULT			COMMENT
	CURRENT	REF RANGE	PREV	
BILE ACID METABOLITES				
Cholic acid (CA)	0.25 %	≤0.36	0.28 %	
Chenodeoxycholic acid (CDCA)	0.31 %	≤1.25	1.24 %	
Deoxycholic acid (DCA)	32.90 %	24.25~75.84	19.93 %	
Lithocholic acid (LCA)	56.94 %	24.16~75.75	69.62 %	
LCA/DCA ratio	1.73	0.32~3.38	3.49	
SHORT CHAIN FATTY ACIDS				
Acetate	68.2 %	60.2~72.7	62.0 %	
Butyrate	9.8 %	5.1~12.4	2.3 %	
Propionate	17.1 %	15.4~30.3	28.8 %	
Valerate	0.5 %	0.8~3.5	2.8 %	SCFA supplements are most commonly found as butyric acid salts. Herbal medicines that can affect SCFA levels include berberine, passiflora edulis, Chinese Yam, trametes versicolor extract, lotus seed resistant starch, xylooligosaccharides from corn cobs, coptis chinensis, Reishi mushroom, Poria mushroom, Lingzhi mushroom, Daikenchuto. Sleep, diet, exercise and stress management needs to be evaluated. Be cautious with use of antibiotics.
Total Short chain fatty acids	10.2 micromol/g	45.4~210.1	98.1 micromol/g	SCFA supplements are most commonly found as butyric acid salts. Herbal medicines that can affect SCFA levels include berberine, passiflora edulis, Chinese Yam, trametes versicolor extract, lotus seed resistant starch, xylooligosaccharides from corn cobs, coptis chinensis, Reishi mushroom, Poria mushroom, Lingzhi mushroom, Daikenchuto. Sleep, diet, exercise and stress management needs to be evaluated. Be cautious with use of antibiotics.
ß-glucuronidase	1124 U/mL	≤2300	1088 U/mL	

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.

FULL NAME: **TEST2 PATIENT** ACCESSION ID: **2006240006** DATE OF SERVICE: **06-23-2020 15:38**

Other Markers

MARKER	RESULT			COMMENT
	CURRENT	REF RANGE	PREV	
sIgA	>1000.0 mcg/g	≤857.0	>1000.0 mcg/g	Elevated levels are indicative of immune upregulation in the gut. Causes could be due to food sensitivities, intestinal permeability or infections. Consider testing at peptide and protein levels for food sensitivities for higher sensitivity.
Fecal Occult Blood	8.2 mcg/g	≤10.0	8.2 mcg/g	
pH	7.0	6.1~7.8	7.0	
Fecal Zonulin	341.9 ng/mL	25.1~160.8	341.9 ng/mL	Elevation indicative of intestinal permeability. Addressing gut dysbiosis and low diversity if any. Checking for food sensitivities at peptide and protein level recommended.
Fecal Anti Gliadin	224.8 U/L	≤148.0	224.8 U/L	Fecal Anti Gliadin is a less sensitive marker of wheat sensitivity in comparison to serum antibodies to peptide fragments of wheat. Individuals can consider a wheat avoidance diet.

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.

FULL NAME: **TEST2 PATIENT** ACCESSION ID: **2006240006** DATE OF SERVICE: **06-23-2020 15:38**

Gut Microbiome and Intestinal Permeability

GENUS/SPECIES	RELATIVE ABUNDANCE			RATING	POTENTIAL ASSOCIATED RISK*
	CURRENT	REF RANGE	PREVIOUS 06/24/2020		
Enterobacteriaceae⁻	6.6 ↔	≤20.0	10.9 ↔	★★★★	Intestinal permeability
Akkermansia muciniphila⁻	11.5 ↔	≥10.0	4.3 ↓	★★★★	
Bifidobacterium	29.4 ↔	≥10.0	21.3 ↔	★★★	Lower SCFA production
Propionibacterium	19.5 ↔	≥10.0	23.0 ↔	★★★	
Eubacterium	15.0 ↔	≥10.0	2.4 ↓	★★★	
Lactobacillus	12.9 ↔	≥10.0	22.3 ↔	★★★	
Roseburia	19.6 ↔	≥10.0	19.3 ↔	★★★	
Eubacterium rectale	28.0 ↔	≥10.0	4.4 ↓	★★★	Lower butyrate production
Butyrivibrio	3.4 ↓	≥10.0	0.4 ↓	★★★★	
Faecalibacterium prausnitzii	15.0 ↔	≥10.0	15.0 ↔	★★★★	
YOUR LEVELS OF PROBIOTIC ORGANISMS					
Lactobacillus reuteri	23.4 ↔	≥10.0	9.9 ↓		
Lactobacillus rhamnosus	14.8 ↔	≥10.0	21.5 ↔		
Lactobacillus plantarum	16.7 ↔	≥10.0	28.0 ↔		
Streptococcus thermophilus	22.5 ↔	≥10.0	6.3 ↓		
Lactobacillus bulgaricus	17.6 ↔	≥10.0	16.8 ↔		
Lactobacillus acidophilus	11.5 ↔	≥10.0	29.5 ↔		
Bifidobacterium longum	21.0 ↔	≥10.0	29.8 ↔		

FULL NAME: **TEST2 PATIENT** ACCESSION ID: **2006240006** DATE OF SERVICE: **06-23-2020 15:38**

Gut Microbiome and SIBO

GENUS/SPECIES	RELATIVE ABUNDANCE			RATING	POTENTIAL ASSOCIATED RISK*
	CURRENT	REF RANGE	PREVIOUS 06/24/2020		
Streptococcus species	27.6 ↑	≤20.0	22.6 ↑	★★★	SIBO syndrome
Escherichia coli¯	3.1 ↔	≤20.0	8.3 ↔	★★★	
Staphylococcus species	15.2 ↔	≤20.0	30.0 ↑	★★★	
Micrococcus	15.5 ↔	≤20.0	20.8 ↑	★★★	
Acinetobacter¯	19.5 ↔	≤20.0	4.2 ↔	★★★	
Bacteroides¯	5.2 ↔	≤20.0	19.9 ↔	★★★	
Clostridium	16.3 ↔	≤20.0	19.7 ↔	★★★	
Peptostreptococcus	3.9 ↔	≤20.0	3.5 ↔	★★★	
Enterococcus species	20.7 ↑	≤20.0	2.8 ↔	★★★	
Methanobrevibacter smithii	14.9 ↔	≤20.0	0.6 ↔	★★★★	
YOUR LEVELS OF PROBIOTIC ORGANISMS					
Lactobacillus casei	24.5 ↔	≥10.0	23.8 ↔		
Lactobacillus plantarum	16.7 ↔	≥10.0	28.0 ↔		

Based on clinical literature, the following probiotics and supplements maybe beneficial

Supplements: Berberine, Origanum vulgare, Wormwood oil, Lemon balm oil, Barberry root 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.

FULL NAME: **TEST2 PATIENT** ACCESSION ID: **2006240006** DATE OF SERVICE: **06-23-2020 15:38**

Gut Microbiome and Cardiovascular Health

GENUS/SPECIES	RELATIVE ABUNDANCE			RATING	POTENTIAL ASSOCIATED RISK*
	CURRENT	REF RANGE	PREVIOUS 06/24/2020		
Collinsella	18.0 ↔	≤20.0	13.0 ↔	★★★★	Atherosclerosis
Lactobacillus ruminis	14.0 ↔	≤20.0	4.6 ↔	★★★★	Stroke
Atopobium	26.1 ↑	≤20.0	16.7 ↔	★★★★	
Lactobacillus sakei	26.5 ↔	≥10.0	16.7 ↔	★★★★	
Escherichia coli¯	3.1 ↔	≤20.0	8.3 ↔	★★★★★	Cardiovascular disease
Enterobacter aerogenes¯	11.0 ↔	≤20.0	1.8 ↔	★★★★★	
Streptococcus species	27.6 ↑	≤20.0	22.6 ↑	★★★★★	
Solobacterium moorei	2.1 ↔	≤20.0	7.1 ↔	★★★★★	
Atopobium parvulum	0.4 ↔	≤20.0	19.7 ↔	★★★★★	
Roseburia intestinalis	6.4 ↓	≥10.0	26.1 ↔	★★★★★	
Faecalibacterium prausnitzii	17.5 ↔	≥10.0	26.5 ↔	★★★★★	
Prevotella copri¯	17.1 ↔	≥10.0	15.3 ↔	★★★★★	
Alloprevotella¯	25.3 ↔	≥10.0	16.6 ↔	★★★★★	
Catenibacterium	16.7 ↔	≥10.0	22.6 ↔	★★★★★	
Tyzzerella	15.6 ↔	≤20.0	15.5 ↔	★★★★★	
Tyzzerella 4	4.1 ↔	≤20.0	7.6 ↔	★★★★★	
YOUR LEVELS OF PROBIOTIC ORGANISMS					
Lactobacillus plantarum	16.7 ↔	≥10.0	28.0 ↔		
Streptococcus thermophilus	22.5 ↔	≥10.0	6.3 ↓		

FULL NAME: **TEST2 PATIENT** ACCESSION ID: **2006240006** DATE OF SERVICE: **06-23-2020 15:38**

Gut Bacteria and Autoimmune Health

GENUS/SPECIES	RELATIVE ABUNDANCE			RATING	POTENTIAL ASSOCIATED RISK*
	CURRENT	REF RANGE	PREVIOUS 06/24/2020		
Porphyromonas gingivalis¯	5.0 ↔	≤20.0	4.4 ↔	★★★	Rheumatoid arthritis
Lactobacillus	12.9 ↔	≥10.0	22.3 ↔	★★★★	Celiac disease
Bifidobacterium	29.4 ↔	≥10.0	21.3 ↔	★★★★	
Enterobacteriaceae¯	6.6 ↔	≤20.0	10.9 ↔	★★★	
Staphylococcaceae	22.9 ↑	≤20.0	11.8 ↔	★★★	
Staphylococcus epidermidis	14.3 ↔	≤20.0	3.2 ↔	★★★	
Staphylococcus pasteuri	13.9 ↔	≤20.0	23.3 ↑	★★★	
Coprococcus	11.0 ↔	≥10.0	0.3 ↓	★★★	Psoriatic arthritis
Akkermansia muciniphila¯	10.8 ↔	≥10.0	5.0 ↓	★★★	
Pseudobutyrivibrio¯	21.4 ↔	≥10.0	10.5 ↔	★★★	
Proteus mirabilis¯	5.9 ↔	≤20.0	22.8 ↑	★★	Rheumatoid arthritis, Ankylosing spondylitis
Enterococcus gallinarum	18.7 ↔	≤20.0	24.1 ↑	★★★★★	Autoimmunity
Clostridia clusters XIVa	22.5 ↔	≥10.0	22.8 ↔	★★★★★	Inflammation, Allergy
Clostridia clusters IV	25.0 ↔	≥10.0	22.2 ↔	★★★★★	
Clostridia clusters XVIII	23.1 ↔	≥10.0	26.0 ↔	★★★★★	
YOUR LEVELS OF PROBIOTIC ORGANISMS					
Lactobacillus acidophilus	11.5 ↔	≥10.0	29.5 ↔		
Lactobacillus casei	24.5 ↔	≥10.0	23.8 ↔		
Bifidobacterium bifidum	12.7 ↔	≥10.0	29.2 ↔		

FULL NAME: **TEST2 PATIENT** ACCESSION ID: **2006240006** DATE OF SERVICE: **06-23-2020 15:38**

Gut Microbiome and Metabolic Health

GENUS/SPECIES	RELATIVE ABUNDANCE			RATING	POTENTIAL ASSOCIATED RISK*
	CURRENT	REF RANGE	PREVIOUS 06/24/2020		
Oscillospira¯	29.3 ↑	≤20.0	23.4 ↑	★★★★★	Low BMI, Metabolic health
Christensenella minuta	7.5 ↔	≤20.0	8.8 ↔	★★★★★	
Bacteroides caccae¯	13.0 ↔	≤20.0	1.6 ↔	★★★★★	Diabetes, Metabolic health
Clostridium hathewayi¯	29.2 ↑	≤20.0	3.6 ↔	★★★★★	
Clostridium ramosum	16.3 ↔	≤20.0	0.7 ↔	★★★★★	
Clostridium symbiosum¯	25.1 ↑	≤20.0	4.0 ↔	★★★★★	
Eggerthella lenta	5.9 ↔	≤20.0	7.0 ↔	★★★★★	
Escherichia coli¯	3.1 ↔	≤20.0	8.3 ↔	★★★★★	
Bifidobacterium animalis	10.3 ↔	≥10.0	7.7 ↓	★★★★	Obesity, Metabolic health
Blautia hydrogenotorophica	0.1 ↔	≤20.0	20.4 ↑	★★	
Ruminococcus obeum	14.1 ↔	≤20.0	11.0 ↔	★★	
Akkermansia muciniphila¯	11.5 ↔	≥10.0	4.3 ↓	★★★★★	Obesity, Diabetes, Metabolic health
Methanobrevibacter smithii	14.9 ↔	≤20.0	0.6 ↔	★★	IBS, Obesity, Metabolic health
Bifidobacterium adolescentis	15.7 ↔	≥10.0	29.5 ↔	★★★	Digestive insufficiency, Metabolic health
YOUR LEVELS OF PROBIOTIC ORGANISMS					
Lactobacillus paracasei	6.8 ↓	≥10.0	6.8 ↓		
Lactobacillus rhamnosus	14.8 ↔	≥10.0	21.5 ↔		
Lactobacillus acidophilus	11.5 ↔	≥10.0	29.5 ↔		
Lactobacillus casei	24.5 ↔	≥10.0	23.8 ↔		
Bifidobacterium animalis	10.3 ↔	≥10.0	7.7 ↓		

Based on clinical literature, the following probiotics and supplements maybe beneficial

Probiotics: Lactobacillus paracasei.

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.

FULL NAME: **TEST2 PATIENT** ACCESSION ID: **2006240006** DATE OF SERVICE: **06-23-2020 15:38**

Gut Microbiome and Nutrition

GENUS/SPECIES	RELATIVE ABUNDANCE			RATING	POTENTIAL ASSOCIATED RISK*
	CURRENT	REF RANGE	PREVIOUS 06/24/2020		
Bifidobacterium	29.4 ↔	≥10.0	21.3 ↔	★★★★	Lower prodution of folate, Lower production of vitamin K, Lower production of riboflavin (vitamin B2), Lower production of cobalamin (vitamin B12)
Lactobacillus	12.9 ↔	≥10.0	22.3 ↔	★★★★	
Bacillus subtilis	27.4 ↔	≥10.0	15.3 ↔	★★★★	
Propionibacterium freudenreichii	5.0 ↓	≥10.0	22.5 ↔	★★★★	
Bifidobacterium animalis subspecies lactis	24.5 ↔	≥10.0	27.4 ↔	★★	Oxalate degradation affected
Lactobacillus animalis	13.2 ↔	≥10.0	10.4 ↔	★★	
Ruminococcus bromii	25.7 ↔	≥10.0	28.1 ↔	★★★★	Digestive insufficiency
Eubacterium rectale	28.0 ↔	≥10.0	4.4 ↓	★★★★	
Roseburia	19.6 ↔	≥10.0	19.3 ↔	★★★★	Lower butyrate production
Eubacterium rectale	28.0 ↔	≥10.0	4.4 ↓	★★★★	
Bifidobacterium	29.4 ↔	≥10.0	21.3 ↔	★★★★	
YOUR LEVELS OF PROBIOTIC ORGANISMS					
Lactobacillus animalis	13.2 ↔	≥10.0	10.4 ↔		
Bifidobacterium animalis	10.3 ↔	≥10.0	7.7 ↓		

FULL NAME: **TEST2 PATIENT** ACCESSION ID: **2006240006** DATE OF SERVICE: **06-23-2020 15:38**

Gut Microbiome and Neurological Health

GENUS/SPECIES	RELATIVE ABUNDANCE			RATING	POTENTIAL ASSOCIATED RISK*
	CURRENT	REF RANGE	PREVIOUS 06/24/2020		
Lactobacillaceae	17.8 ↔	≤20.0	29.6 ↑	★★★★	Parkinson's disease
Bradyrhizobiaceae⁻	9.5 ↔	≤20.0	8.5 ↔	★★★★	
Clotridiales Incertae Sedis IV	27.4 ↑	≤20.0	24.6 ↑	★★★★	
Enterobacteriaceae⁻	6.6 ↔	≤20.0	10.9 ↔	★★★★	
Desulfovibrio⁻	22.2 ↑	≤20.0	28.6 ↑	★★★★	Autism
Bacteroides vulgatus⁻	26.7 ↑	≤20.0	16.9 ↔	★★★★	
Bifidobacterium	29.4 ↔	≥10.0	21.3 ↔	★★★★	
Prevotella⁻	6.9 ↓	≥10.0	20.4 ↔	★★★★	
Coprococcus	11.0 ↔	≥10.0	0.3 ↓	★★★★	
Veillonellaceae⁻	23.2 ↔	≥10.0	22.6 ↔	★★★★	
Bacteroidales⁻	3.3 ↔	≤20.0	10.3 ↔	★★★	Depression
Lachnospiraceae	28.0 ↔	≥10.0	10.5 ↔	★★★	
Methanobrevibacter	22.6 ↑	≤20.0	14.9 ↔	★★★	Multiple sclerosis
Butyricimonas⁻	18.8 ↔	≥10.0	29.4 ↔	★★★	
Pseudomonas	9.6 ↔	≤20.0	9.6 ↔	★★★	
Mycoplana⁻	8.0 ↔	≤20.0	3.5 ↔	★★★	
Haemophilus⁻	6.4 ↔	≤20.0	4.7 ↔	★★★	
Blautia	16.3 ↔	≤20.0	13.3 ↔	★★★	
Dorea	11.7 ↔	≤20.0	5.0 ↔	★★★	
Bifidobacterium	29.4 ↔	≥10.0	21.3 ↔	★★★	Alzheimer's disease.
Bacteroides⁻	5.2 ↔	≤20.0	19.9 ↔	★★★	
YOUR LEVELS OF PROBIOTIC ORGANISMS					
Lactobacillus acidophilus	11.5 ↔	≥10.0	29.5 ↔		
Lactobacillus casei	24.5 ↔	≥10.0	23.8 ↔		
Lactobacillus fermentum	29.9 ↔	≥10.0	17.6 ↔		

FULL NAME: **TEST2 PATIENT** ACCESSION ID: **2006240006** DATE OF SERVICE: **06-23-2020 15:38**

Bifidobacterium bifidum	12.7 ↔	≥10.0	29.2 ↔
Lactobacillus brevis	11.8 ↔	≥10.0	22.5 ↔
Bifidobacterium dentium	22.6 ↔	≥10.0	24.8 ↔
Streptococcus thermophilus	22.5 ↔	≥10.0	6.3 ↓
Lactobacillus bulgaricus	17.6 ↔	≥10.0	16.8 ↔
Streptococcus	25.8 ↔	≥10.0	13.7 ↔

Based on clinical literature, the following probiotics and supplements maybe beneficial

Supplements: glycine, Pantothenic Acid, riboflavin, vitamin B6, folate, vitamin B12, betaine.

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.

FULL NAME: **TEST2 PATIENT** ACCESSION ID: **2006240006** DATE OF SERVICE: **06-23-2020 15:38**

Gut Microbiome and Liver Health

GENUS/SPECIES	RELATIVE ABUNDANCE			RATING	POTENTIAL ASSOCIATED RISK*
	CURRENT	REF RANGE	PREVIOUS 06/24/2020		
Lactococcus	14.6 ↔	≥10.0	25.2 ↔	★★	Alcohol-associated dysbiosis
Pediococcus	27.7 ↔	≥10.0	14.6 ↔	★★	
Lactobacillus	12.9 ↔	≥10.0	22.3 ↔	★★	
Leuconostoc	1.1 ↓	≥10.0	14.2 ↔	★★	
Veillonella⁻	4.8 ↔	≤20.0	9.9 ↔	★★★★★	Liver cirrhosis
Streptococcus species	27.6 ↑	≤20.0	22.6 ↑	★★★★★	
Clostridium	16.3 ↔	≤20.0	19.7 ↔	★★★★★	
Lachnospiraceae	28.0 ↔	≥10.0	10.5 ↔	★★★	Alcohol-related liver cirrhosis
Ruminococcaceae	14.7 ↔	≥10.0	0.2 ↓	★★★	
Clostridiales Family XIV Incertae Sedis	12.2 ↔	≥10.0	15.1 ↔	★★★	
Enterobacteriaceae⁻	6.6 ↔	≤20.0	10.9 ↔	★★★	
Escherichia coli⁻	3.1 ↔	≤20.0	8.3 ↔	★★★	
Streptococci	14.2 ↔	≤20.0	6.2 ↔	★★★	Alcoholic hepatitis
Enterobacteria⁻	9.5 ↔	≤20.0	28.2 ↑	★★★	
Faecalibacterium prausnitzii	17.5 ↔	≥10.0	26.5 ↔	★★★	
Ruminococcus	17.6 ↔	≤20.0	5.1 ↔	★★★★	Nonalcoholic steatohepatitis
Prevotella⁻	6.9 ↓	≥10.0	20.4 ↔	★★★★	
Enterococcus	2.6 ↔	≤20.0	12.1 ↔	★★★★	Primary sclerosing cholangitis
Fusobacterium⁻	2.3 ↔	≤20.0	7.4 ↔	★★★★	
Streptococcus species	27.6 ↑	≤20.0	22.6 ↑	★★★★	
Veillonella⁻	4.8 ↔	≤20.0	9.9 ↔	★★★★	
YOUR LEVELS OF PROBIOTIC ORGANISMS					
Lactobacillus rhamnosus GG	29.1 ↔	≥10.0	10.2 ↔		
Lactobacillus	12.9 ↔	≥10.0	22.3 ↔		
Bifidobacterium	29.4 ↔	≥10.0	21.3 ↔		

FULL NAME: **TEST2 PATIENT** ACCESSION ID: **2006240006** DATE OF SERVICE: **06-23-2020 15:38**

Gut Microbiome and IBD

GENUS/SPECIES	RELATIVE ABUNDANCE			RATING	POTENTIAL ASSOCIATED RISK*
	CURRENT	REF RANGE	PREVIOUS 06/24/2020		
Roseburia	19.6 ↔	≥10.0	19.3 ↔	★★★★★	IBD
Phascolarctobacterim⁻	17.1 ↔	≤20.0	0.3 ↔	★★★★★	
Clostridium	16.3 ↔	≤20.0	19.7 ↔	★★★★★	
Ruminococcaceae	14.7 ↔	≥10.0	0.2 ↓	★★★★★	
Faecalibacterium	12.8 ↔	≥10.0	17.8 ↔	★★★★★	
Desulfovibrio piger⁻	20.5 ↑	≤20.0	18.4 ↔	★★★★★	
Faecalibacterium prausnitzii	17.5 ↔	≥10.0	26.5 ↔	★★★	
Akkermansia muciniphila⁻	11.5 ↔	≥10.0	4.3 ↓	★★★	Crohn's disease
Dialister invisus⁻	17.8 ↔	≥10.0	29.2 ↔	★★★★	
Faecalibacterium prausnitzii	17.5 ↔	≥10.0	26.5 ↔	★★★★	
Bifidobacterium adolescentis	15.7 ↔	≥10.0	29.5 ↔	★★★★	
Ruminococcus gnavus	2.0 ↔	≤20.0	4.2 ↔	★★★★	
Enterococcus	2.6 ↔	≤20.0	12.1 ↔	★★	
Veillonella⁻	4.8 ↔	≤20.0	9.9 ↔	★★	
YOUR LEVELS OF PROBIOTIC ORGANISMS					
Saccharomyces boulardii	8.6 ↓	≥10.0	16.6 ↔		
Lactobacillus reuteri	23.4 ↔	≥10.0	9.9 ↓		
Lactobacillus plantarum	16.7 ↔	≥10.0	28.0 ↔		
Lactobacillus salivarius	4.6 ↓	≥10.0	22.6 ↔		
Bifidobacterium breve	27.2 ↔	≥10.0	16.8 ↔		
Bifidobacterium bifidum	12.7 ↔	≥10.0	29.2 ↔		
Lactobacillus acidophilus	11.5 ↔	≥10.0	29.5 ↔		
Escherichia coli Nissle⁻	8.8 ↓	≥10.0	6.1 ↓		

Based on clinical literature, the following probiotics and supplements maybe beneficial

Probiotics: Saccharomyces boulardii, Lactobacillus salivarius, Escherichia coli Nissle.

FULL NAME: **TEST2 PATIENT** ACCESSION ID: **2006240006** DATE OF SERVICE: **06-23-2020 15:38**

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 Microbiome and IBS

GENUS/SPECIES	RELATIVE ABUNDANCE			RATING	POTENTIAL ASSOCIATED RISK*
	CURRENT	REF RANGE	PREVIOUS 06/24/2020		
Dorea	11.7 ↔	≤20.0	5.0 ↔	★★★★★	IBS
Ruminococcus	17.6 ↔	≤20.0	5.1 ↔	★★★★★	
Clostridium	16.3 ↔	≤20.0	19.7 ↔	★★★★★	
Lactobacillus	12.9 ↔	≥10.0	22.3 ↔	★★★★★	
Veillonella⁻	4.8 ↔	≤20.0	9.9 ↔	★★★★★	
Bifidobacterium catenulatum	11.2 ↔	≥10.0	20.2 ↔	★★★★★	
Bifidobacterium	29.4 ↔	≥10.0	21.3 ↔	★★★	
Enterobacteriaceae⁻	6.6 ↔	≤20.0	10.9 ↔	★★★	
Roseburia	19.6 ↔	≥10.0	19.3 ↔	★★★★	Lower butyrate production
Eubacterium rectale	28.0 ↔	≥10.0	4.4 ↓	★★★★	
YOUR LEVELS OF PROBIOTIC ORGANISMS					
Bacillus coagulans	12.2 ↔	≥10.0	25.2 ↔		
Bifidobacterium infantis	2.5 ↓	≥10.0	15.6 ↔		
Lactobacillus acidophilus	11.5 ↔	≥10.0	29.5 ↔		
Lactobacillus plantarum	16.7 ↔	≥10.0	28.0 ↔		
Lactobacillus rhamnosus	14.8 ↔	≥10.0	21.5 ↔		
Bifidobacterium breve	27.2 ↔	≥10.0	16.8 ↔		
Bifidobacterium lactis	28.7 ↔	≥10.0	18.1 ↔		
Bifidobacterium longum	21.0 ↔	≥10.0	29.8 ↔		
Streptococcus thermophilus	22.5 ↔	≥10.0	6.3 ↓		

Based on clinical literature, the following probiotics and supplements maybe beneficial

Probiotics: Bifidobacterium infantis.

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.

FULL NAME: **TEST2 PATIENT** ACCESSION ID: **2006240006** DATE OF SERVICE: **06-23-2020 15:38**

Gut Microbiome and Hormones

GENUS/SPECIES	RELATIVE ABUNDANCE			RATING	POTENTIAL ASSOCIATED RISK*
	CURRENT	REF RANGE	PREVIOUS 06/24/2020		
ß-glucuronidase producing bacteria	9.5 ↔	≤20.0	17.7 ↔	★★★★	Estrogen metabolism affected
ß-galactosidase producing bacteria	10.0 ↔	≤20.0	2.8 ↔	★★★★	