

Microbiome Information for: primary biliary cholangitis

For non-prescribing Medical professionals Review

The suggestions below are based on an Expert System (Artificial Intelligence) modelled after the MYCIN Expert System produced at Stanford University School of Medicine in 1972. The system uses over 1,800,000 facts with backward chaining to sources of information. The typical sources are studies published on the US National Library of Medicine.

Many recent studies has found that symptoms and symptom severity has strong associations to the microbiome for many conditions. Correcting the microbiome dysfunction is beleived to reduce the severity of symptoms. In some cases, this correction may cause symptoms to disappear.

These are a *a priori suggestions* that are predicted to independently reduce microbiome dysfunction. Suggestions should *only be done after a review* by a medical professional factoring in patient's conditions, allergies and other issues.

This report may be freely shared by a patient to their medical professionals

Best practise for making microbiome adjustments is to obtain the individuals microbiome. The following are the best microbiome to use with this expert system model. The suggestions below are intended as temporary suggestions until a test result in received.

In the USA

Ombre (<https://www.ombrelab.com/>)

Thome (<https://www.thome.com/products/dp/gut-health-test>)

Worldwide: BiomeSight (<https://biomesight.com>) - Discount Code 'MICRO'

Analysis Provided by Microbiome Prescription

A Microbiome Analysis Company

892 Lake Samish Rd, Bellingham WA 98229

Email: Research@MicrobiomePrescription.com

[Our Facebook Discussion Page](#)

Bacteria being reported because of atypical values.

These bacteria were reported atypical in studies of primary biliary cholangitis

Nota Bena: Many studies are done with a small sample size or mixtures of condition subsets which can greatly diminish the ability to detect bacteria shifts.

Bacteria Name	Rank	Shift	Taxonomy ID	Bacteria Name	Rank	Shift	Taxonomy ID
Coriobacteria	class	High	84998	Oscillospiraceae	family	Low	216572
Deltaproteobacteria	class	Low	28221	Pirellulaceae	family	High	2691357
Acidaminococcaceae	family	Low	909930	Veillonellaceae	family	High	31977
Chitinophagaceae	family	High	563835	Collinsella	genus	Low	102106
Comamonadaceae	family	High	80864	Dorea	genus	High	189330
Gracilibacteraceae	family	High	541019	Coriobacteriales	order	High	84999
Lachnospiraceae	family	High	186803	Bacteroides uniformis	species	Low	820
Muribaculaceae	family	High	2005473	Pichia kudriavzevii	species	High	4909

Substance to Consider Adding or Taking

These are the most significant substances that are likely to improve the microbiome dysfunction. Dosages are based on the dosages used in clinical studies. For more information see: <https://microbiomeprescription.com/library/dosages>. These are provided as examples only

Colors indicates the type of substance: i.e. probiotics and prebiotics, herbs and spices, etc. There is no further meaning to them.

almonds/ almond skins	90 gram/day	lactobacillus rhamnosus gg (probiotics)	48 BCFU/day
bacillus subtilis (probiotics)	10 BCFU/day	Nicotine, Nicotine Patch	
barley	60 gram/day	omega-3 fatty acids	4 gram/day
bifidobacterium animalis lactis (probiotics)	1 BCFU/day	salt (sodium chloride)	
bifidobacterium longum (probiotics)	10 BCFU/day	Ursolic acid	
bile (acid/salts)		vegetable	
Fisetin	20 mg/day	vitamin a	25000 IU/day
ginko	240 mg/day	Vitamin E	60 IU/day
glycine	15 gram/day	walnuts	75 gram/day
inulin (prebiotic)	32 gram/day	wheat	
lactobacillus casei (probiotics)	48 BCFU/day	wheat bran	
lactobacillus reuteri (probiotics)	22 BCFU/day	whole-grain barley	60 gram/day

Retail Probiotics

Over 260 retail probiotics were evaluated with the following deemed beneficial with no known adverse risks.

Global Healing Center / FloraTrex
 SuperSmart / Full Spectrum Probiotic Formula
 Thryve Inside/ L.Reu,Rham,Casi; B.Lactis
 vita miracle / ultra-30 probiotics
 garden of life / primal defense
 quantum wellness / restora flora
 Physician Choice /60 Billion Probiotics
 Advanced Bio-Cultures / Advance Multi Strain Probiotics
 elixa / probiotic
 bioray / cytoflora
 theramedix / probiotic
 newrhythm / probiotics 20 stains
 fairvital / microflora basic
 seed / female version
 organic 3 / primal gut
 Garden of Life / Dr. Formulated Once Daily Women's
 hyperbiotics / pro-15
 nature's way (au) / restore probiotic 100 billion
 seed / male version
 lifted naturals / mood boosting probiotic
 Dr. Mercola / Complete Probiotics
 Physis / Advance Probiotics
 NOW FOODS / Clinical GI Probiotic
 Lake Avenue Nutrition / Probiotics 10 Strain Blend
 Bromatech (IT) / Rotanelle plus
 fürstenmed / lacto-bifido
 Swiss BioEnergetics / Full Spectrum Probiotic Defence
 probiotic pur (de) / realdose nutrition
 ASEA VIA / BIOME
 Wholesome Wellness / Raw Probiotic
 udo's choice /super 8 gold
 HLH BIOPHARMA(DE) / LACTOBACT ® PREMIUM
 Krauterhaus / Lactopro
 renew life / ultimate flora
 up4 / ultra
 Jetson (US) / Immunity Probiotics
 bioglan bio (au) / happy probiotic 100
 douglas laboratories / multi probiotic 40 billion
 Realdose
 SuperSmart / Lactoxira
 nature's way (au) /restore probiotic bowel & colon health 30s
 visbiome
 klaire labs / target gb-x
 Ombre / Heart Health
 klaire labs / ther-biotic factor 4
 Northwest Natural Products / PB8
 naturopathica (au) / gastrohealth probiotic dairy free 50 billion
 organic 3 / gutpro
 renew life men's probiotic - ultimate
 HLH BIOPHARMA(DE) / LACTOBACT ® 60PLUS
 PoolPharma (IT) / ProbioTKMIO
 blackmores (au) / probiotics+ immune defence
 SuperSmart / Oral Health
 1 md / complete probiotics platinum

nature's bounty / probioti 10
MegaFood / MegaFlora
microbiome labs / hu58
Invivo / Bio.Me Femme UT
blackmore (au) / probiotics+ bowel support
CustomProbiotics.com / L. Reuteri Probiotic Powder
digestive care
perfect pass / perfect pass probiotic bacillus spore
spain (es) / ns florabiotic instant
optibac / for women
OMNI-BIOTIC®/ TRAVEL
jarrow formulas / fem-dophilus®
global health trax / threelac
nature's way (au) / restore probiotic 30 billion 30s
SuperSmart / H. Pylori Fight
Law of Nature / Best Days Formula
BioGaia / BioGaia Osfortis
microbiome labs/ megasporebiotic
optibac / bifidobacteria & fibre
Sanogermina / AB-Kolicare
klair labs / biospora
SuperSmart / Derma Relief
spain (es) / kaleidon
RepHresh / Pro-B Probiotic Supplement for Women
young living/life 9
PharmExtracta (IT) / Gliadines buccal stickpacks
just for tummies / live bacteria
Bromatech (IT) / Citogenex
spain (es) / casenbiotic
naturopathica (au) / gastrohealth probiotic dairy free 20 bcfu
CVSHealth / Daily Probiotic
Bromatech (IT) / Serobiome
corebiotic
Bromatech (IT) / Bifiselle
BioGaia / BioGaia Products
spain (es) / reuteri gotas
solgar / advanced 40+ acidophilus
custom probiotics / d-lactate free probiotics powder
ferring/ vsl#3
jamieson (can) / probiotic 10 bcfu
Microbiome Labs / MEGA Genesis
Jetson / FIT
Seeking Health / Probiota HistaminX
bravo europe / starter and complex
optibac / for every day
Prescript-Assist®/SBO Probiotic
blackmore (au) / probiotics+ womens flora balance
Optibac Probiotics / Bifidobacterium lactis HN019
SuperSmart / Lactobacillus reuteri
spain (es) / profaes4 viajeros
SuperSmart / Probio Forte
wakamoto (jp) / wakamoto pharmaceutical intestinal drug
custom probiotics / five strain bifidobacteria
InnovixLabs / Mood Probiotic
optibac / for every day max
enviromedica terrafloa sbo probiotic
PureGG
Microbiome Labs / ZENBIOME Dual

canada (ca) / calmbiotic
Jetson (US) / Mood Probiotics
jarrow formulas / jarro-dophilus eps
spain (es) / ns defenbiotic kids
naturopathica (au) / gastrohealth fibrepro
philips / colon health
Sash Vitality / Bio-Cultures Probiotics for Adults
blackmore (au) / probiotics+ eczema relief
SuperSmart / Vaginal Health
7 AM Ultra Probiotics
Schwabe Pharma Italia / EnteroDophilus
Bromatech (IT) / Psicobrain
Schwabe Pharma Italia / MegaStress
naturopathica (au) / gastrohealth probiotic adults 50+
Ombre / Mood Enhancer
spain (es) / aquilea intimus
BIO-BOTANICAL RESEARCH / Megacidin
reserveage nutrition / beautiflora
amy meyers / primal earth probiotic
PrecisionBiotics / Zenflora
PharmExtracta / Bowell
Jetson / Gut Prep
up4 / adult
Ombre / Restore
spain (es) / gastrus
HLH BIOPHARMA(DE) / LACTOBACT ® AAD
spain (es) / vivomixx
genestra brands® hm
jarrow formulas / fem dophilus
quality health(au)/ fridge free probiotic 25b
jarrow formulas / bifidus balance® + fos
culturelle / culturelle
spain (es) / bivos
ProbioMax® Daily DF
JGL / Lactogyn
organic 3 / primal soil
SuperSmart / Bacillus Subtilis
LiveWell Nutrition / Pro-45
naturopathica (au) / gastrohealth probiotic ultimate daily care 100billion
microbiome labs / restorflora
spain (es) / suerobivos
Smidge / Sensitive Probiotic
Botica Alternativa / Lactobacilos Reuteri
bio-k+
jarrow formula / jarro-dophilus original
vitamin angels / just thrive
CustomProbiotics.com / L. Casei Probiotic Powder
solgar / advanced multi-billion dophilus
nature's way (au) / restore probiotic daily health 90s
Metabolics / Bifidobacterium Longum Powder
Windlove Probiotics / Ecologic®825
blackmores (au) / probiotics + adults daily (90 capsules)
ecology_allergycare
activia drink
PrecisionBiotics / Immune
bio-botanical research / proflora4r restorative probiotic
blackmore (au) / probiotics+ daily health
SuperSmart / Lactobacillus rhamnosus GG

Dr.Max / ProtectMax ATB
naturopathica (au) / gastrohealth probiotic daily care
jarrow formulas / jarro-dophilus® ultra
Energybalance / ColoBiotica 28 Colon Support
naturopathica (au) / gastrohealth women's probiotic with cranberry
jarrow formulas / jarro-dophilus mood
spain (es) / profaes4 edad escolar
cytoplan(uk) / dentavital bifidophilus
bioglan bio (au) / happy probiotic 50
CustomProbiotics.com / B. Longum Probiotic Powder
powerlabs (au) / ultra blend
Genesis Bifidobacterium Complex BB Probiotic
spain (es) / gum periobalance
vinco / probiotic eight 65
nature's instincts / ultra spore probiotic

Note: Some of these are only available regionally – search the web for sources.

Substance to Consider Reducing or Eliminating

These are the most significant substances have been identified as probably contributing to the microbiome dysfunction.

In some cases blood work may show low levels of some vitamins, etc. listed below. This may be due to *greedy* bacteria reported at a high level above. Viewing bacteria data on the Kyoto Encyclopedia of Genes and Genomes (<https://www.kegg.jp/>) may provide better insight on the course of action to take.

Baking Soda, Sodium Bicarbonate	quercetin, resveratrol
bifidobacterium pseudocatenulatum li09, bifidobacterium	red wine
catenulatum li10 (probiotics)	resveratrol (grape seed/polyphenols/red wine)
Caffeine	Slippery Elm
enterococcus faecium (probiotic)	stevia
fat	Vitamin B1, thiamine hydrochloride
high red meat	Vitamin B-12
ku ding cha tea	vitamin b2, Riboflavin
lactobacillus rhamnosus	vitamin B3, niacin
gg lactobacillus, rhamnosus, propionibacterium	Vitamin C (ascorbic acid)
freudenreichii, bifidobacterium breve (probiotics)	xylan (prebiotic)
l-glutamine	
pectin	
Polyethylene glycol	

Sample of Literature Used

The following are the most significant of the studies used to generate these suggestions.

[Genetic predisposition of the gastrointestinal microbiome and primary biliary cholangitis: a bi-directional, two-sample Mendelian randomization analysis.](#)

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Authors Luo X, You X

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[Dietary food patterns as determinants of the gut microbiome-endocannabinoidome axis in humans.](#)

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[Lactobacillus rhamnosus GG protects against atherosclerosis by improving ketone body synthesis.](#)

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[A red wine intervention does not modify plasma trimethylamine N-oxide but is associated with broad shifts in the plasma metabolome and gut microbiota composition.](#)

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[Alleviation Effects of *Bifidobacterium animalis* subsp. *lactis* XLTG11 on Dextran Sulfate Sodium-Induced Colitis in Mice.](#)

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[An Osmotic Laxative Renders Mice Susceptible to Prolonged *Clostridioides difficile* Colonization and Hinders Clearance.](#)

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Acne

ADHD

Age-Related Macular Degeneration and Glaucoma

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Allergies

Alopecia (Hair Loss)

Alzheimer's disease

Amyotrophic lateral sclerosis (ALS) Motor Neuron

Ankylosing spondylitis

Anorexia Nervosa

Antiphospholipid syndrome (APS)

Asthma

Atherosclerosis

Atrial fibrillation

Autism

Autoimmune Disease

Barrett esophagus cancer

benign prostatic hyperplasia

Bipolar Disorder

Brain Trauma

Breast Cancer
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Celiac Disease
Cerebral Palsy
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cystic fibrosis
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Depression
Dermatomyositis
Eczema
Endometriosis
Eosinophilic Esophagitis
Epilepsy
erectile dysfunction
Fibromyalgia
Functional constipation / chronic idiopathic constipation
gallstone disease (gsd)
Gastroesophageal reflux disease (Gerd) including Barrett's esophagus
Generalized anxiety disorder
Gout
Graves' disease
Hashimoto's thyroiditis
Heart Failure
Hidradenitis Suppurativa
Histamine Issues, Mast Cell Issue, DAO Insufficiency
hypercholesterolemia (High Cholesterol)
hyperglycemia
Hyperlipidemia (High Blood Fats)
hypersomnia
hypertension (High Blood Pressure)
Hypoxia
IgA nephropathy (IgAN)
Inflammatory Bowel Disease
Insomnia
Intelligence
Intracranial aneurysms
Irritable Bowel Syndrome
Juvenile idiopathic arthritis
Liver Cirrhosis
Long COVID
Low bone mineral density
Lung Cancer
ME/CFS with IBS
ME/CFS without IBS
Menopause
Metabolic Syndrome
Mood Disorders
Multiple Sclerosis

Multiple system atrophy (MSA)
myasthenia gravis
Neuropathy (all types)
neuropsychiatric disorders (PANDAS, PANS)
Nonalcoholic Fatty Liver Disease (nafld) Nonalcoholic
NonCeliac Gluten Sensitivity
Obesity
obsessive-compulsive disorder
Osteoarthritis
Osteoporosis
pancreatic cancer
Parkinson's Disease
Polycystic ovary syndrome
Postural orthostatic tachycardia syndrome
Premenstrual dysphoric disorder
primary biliary cholangitis
Psoriasis
rheumatoid arthritis (RA),Spondyloarthritis (SpA)
Rosacea
Schizophrenia
scoliosis
sensorineural hearing loss
Sjögren syndrome
Sleep Apnea
Small Intestinal Bacterial Overgrowth (SIBO)
Stress / posttraumatic stress disorder
Systemic Lupus Erythematosus
Tic Disorder
Tourette syndrome
Type 1 Diabetes
Type 2 Diabetes
Ulcerative colitis
Unhealthy Ageing