

Microbiome Information for: Multiple Sclerosis

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

Bacteria being reported because of atypical values.

These bacteria were reported atypical in studies of Multiple Sclerosis

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
Actinomycetia	class	High	1760	Olsenella	genus	High	133925
Bacteroidia	class	Low	200643	Parabacteroides	genus	Low	375288
Clostridia	class	High	186801	Pedobacter	genus	High	84567
Coriobacteria	class	High	84998	Prevotella	genus	Low	838
Barnesiellaceae	family	Low	2005519	Pseudomonas	genus	High	286
Christensenellaceae	family	High	990719	Roseburia	genus	Low	841
Desulfovibrionaceae	family	High	194924	Sporobacter	genus	High	44748
Lachnospiraceae	family	Low	186803	Streptococcus	genus	High	1301
Methanobacteriaceae	family	High	2159	Sutterella	genus	Low	40544
Oscillospiraceae	family	High	216572	Turicibacter	genus	Low	191303
Ruminococcaceae	family	Low	541000	[Clostridium] leptum	species	High	1535
Verrucomicrobiaceae	family	High	203557	[Eubacterium] rectale	species	Low	39491
Acinetobacter	genus	High	469	Akkermansia muciniphila	species	High	239935
Adlercreutzia	genus	Low	447020	Alistipes onderdonkii	species	High	328813
Akkermansia	genus	High	239934	Anaerostipes hadrus	species	Low	649756
Alistipes	genus	High	239759	Bacteroides fragilis	species	Low	817
Anaerofustis	genus	High	264995	Bacteroides stercoris	species	Low	46506
Anaerostipes	genus	Low	207244	Bifidobacterium longum	species	High	216816
Anaerotruncus	genus	High	244127	Butyricimonas virosa	species	Low	544645
Bacteroides	genus	Low	816	Clostridiaceae bacterium	species	Low	1898204
Bifidobacterium	genus	High	1678	Clostridium perfringens	species	Low	1502
Bilophila	genus	High	35832	Clostridium sp.	species	Low	1506
Blautia	genus	High	572511	Eggerthella lenta	species	High	84112
Butyricoccus	genus	Low	580596	Faecalibacterium prausnitzii	species	Low	853
Butyricimonas	genus	Low	574697	Holdemanella biformis	species	Low	1735
Clostridium	genus	Low	1485	Lachnospira eligens	species	Low	39485
Coprobacillus	genus	Low	100883	Lachnospira pectinoschiza	species	Low	28052
Desulfotomaculum	genus	Low	1562	Lactobacillus rogosae	species	Low	706562
Desulfovibrio	genus	High	872	Limosilactobacillus fermentum	species	Low	1613
Dorea	genus	High	189330	Megamonas uniformis	species	Low	437897
Eggerthella	genus	High	84111	Methanobrevibacter smithii	species	High	2173
Erwinia	genus	High	551	Parabacteroides distasonis	species	Low	823
Faecalibacterium	genus	Low	216851	Phocaeicola coprocola	species	Low	310298
Flavobacterium	genus	High	237	Phocaeicola coprophilus	species	Low	387090
Fusobacterium	genus	High	848	Prevotella copri	species	Low	165179
Gemmiger	genus	Low	204475	Streptococcus anginosus	species	High	1328
Haemophilus	genus	High	724	Streptococcus parasanguinis	species	High	1318
Intestinibacter	genus	Low	1505657	Streptococcus salivarius	species	High	1304
Methanobrevibacter	genus	High	2172	Streptococcus thermophilus	species	High	1308
Mycoplasma	genus	High	13159	Sutterella wadsworthensis	species	Low	40545
Mycoplasma	genus	High	2093	Acinetobacter calcoaceticus/baumannii complex	species	High	909768
					group		

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.

Akkermansia muciniphila (probiotic) 10 BCFU/day

bacillus subtilis (probiotics) 10 BCFU/day

bifidobacterium longum bb536 (probiotics)

Cacao 20 gram/day

cannabinoids

chitosan,(sugar) 3 gram/day

Cranberry

cranberry bean flour

fructo-oligosaccharides (prebiotic) 15 gram/day

grapes

green tea

lactobacillus casei (probiotics) 48 BCFU/day

lactobacillus gasseri (probiotics) 10 BCFU/day

lactobacillus kefir (NOT KEFIR)

lactobacillus rhamnosus (probiotics) 48 BCFU/day

lactulose

omega-3 fatty acids 4 gram/day

raffinose(sugar beet)

rhubarb

zinc 300 mg/day

Retail Probiotics

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

Wholesome Wellness / Raw Probiotic
bio-k+
spain (es) / muvagyn probiotico
Sash Vitality / Bio-Cultures Probiotics for Adults
SuperSmart / Vaginal Health
optibac / for every day
ISCON Elegance/ Ochek Capsule 10
just for tummies / live bacteria
Jetson (US) / Mood Probiotics
NOW FOODS / Clinical GI Probiotic
powerlabs (au) / ultra blend
ecology_allergycare
PIANETA FARMA/KefiBios
cytoplan(uk) /dentavital bifidophilus
SuperSmart / Bifidobacterium longum (BB536)
Bromatech (IT) / Citogenex
CVSHealth / Daily Probiotic
Nu U (uk) /Bio-Cultures Complex
corebiotic
SuperSmart / Oral Health
Nutrition Essentials / Probiotic (900 BCFU)
RepHresh /Pro-B Probiotic Supplement for Women
Ombre / Harmony
nature's bounty / probioti 10
mwsb / candida yeast support
microbiome labs/ megasporebiotic
CustomProbiotics.com / L. Gasseri Probiotic Powder
optibac / bifidobacteria & fibre
klaire labs / biospora
Energybalance / ColoBiotica 28 Colon Support
naturopathica (au) / gastrohealth women's probiotic with cranberry
jarrow formulas / jarro-dophilus mood
microbiome labs /hu58
perfect pass / perfect pass probiotic bacillus spore
PharmExtracta (IT) / INatal Sachets
Ombre / Metabolic Booster
spain (es) / ns florabiotic instant
SuperSmart / Lactobacillus Gasseri
optibac / for women
jarrow formulas / fem-dophilus®
global health trax / threelac
HLH BIOPHARMA(DE) / LACTOBACT ® OMNI FOS
naturopathica (au)/ gastrohealth probiotic daily care
bio-botanical research / proflora4r restorative probiotic
Bromatech (IT) / Ramnoselle
nature's instincts / ultra spore probiotic
Biorela® Daily
Prescript-Assist®/SBO Probiotic
wakamoto (jp) / wakamoto pharmaceutical intestinal drug
blackmore (au) / probiotics+ womens flora balance
Pendulum / Pendulum Glucose Control
bravo europe / freeze-dried bravo
enviromedica terraflora sbo probiotic
Microbiome Labs / ZENBIOME Dual

Pendulum / akkermansia muciniphila
Ombre / Endless Energy
Jetson / FIT
bravo europe / starter and complex
CustomProbiotics.com / L. Rhamnosus Probiotic Powder
PharmExtracta (IT) / FG5 Forte In Sachets
aor / probiotic-3
vitamin angels / just thrive
CustomProbiotics.com / L. Casei Probiotic Powder
SuperSmart / Akkermansia Muciniphila Postbiotic (pasturized)
microbiome labs / restorflora
Jetson (US) / Immunity Probiotics
INVIVO THERAPEUTICS / Bio.Me IB +
jarrow formulas / fem dophilus
JGL / Lactogyn
organic 3 / primal soil
SuperSmart / Bacillus Subtilis
naturopathica (au) / gastrohealth probiotic adults 50+
Metabolics / Lactobacillus Rhamnosus Powder
Bromatech (IT) / Psicobrain
spain (es) / aquilea intimus
BIO-BOTANICAL RESEARCH / Megacidin
reserveage nutrition / beautiflora
amy meyers / primal earth probiotic
PrecisionBiotics / Zenflore
Jetson / Gut Prep
Ombre / Restore
jamieson (can) / probiotic 10 bcfu
optibac / for those on antibiotics
custom probiotics / d-lactate free probiotics powder
klaire labs / target gb-x
spain (es) / ns defenbiotic kids
philips / colon health

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.

arabinogalactan (prebiotic)

berberine

fat

inulin (prebiotic)

Lactobacillus plantarum (probiotics)

lupin seeds (anaphylaxis risk, toxic if not prepared properly)

non-starch polysaccharides

pectin

Psyllium (*Plantago Ovata* Husk)

Pulses

red wine

resistant maltodextrin

resistant starch

saccharin

vegetarians

vitamin d

walnuts

xylan (prebiotic)

Sample of Literature Used

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Acne
ADHD
Allergic Rhinitis (Hay Fever)
Allergies
Alopecia (Hair Loss)
Alzheimer's disease
Amyotrophic lateral sclerosis (ALS) Motor Neuron
Ankylosing spondylitis
Anorexia Nervosa
Antiphospholipid syndrome (APS)
Asthma
Atherosclerosis

Autism
Autoimmune Disease
Barrett esophagus cancer
Bipolar Disorder
Brain Trauma
Carcinoma
Celiac Disease
Cerebral Palsy
Chronic Fatigue Syndrome
Chronic Kidney Disease
Chronic Lyme
Chronic Obstructive Pulmonary Disease (COPD)
Chronic Urticaria (Hives)
Coagulation / Micro clot triggering bacteria
Colorectal Cancer
Constipation
Coronary artery disease
COVID-19
Crohn's Disease
cystic fibrosis
deep vein thrombosis
Depression
Dermatomyositis
Eczema
Endometriosis
Eosinophilic Esophagitis
Epilepsy
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
Hidradenitis Suppurativa
Histamine Issues From Ubiome
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
Irritable Bowel Syndrome
Juvenile idiopathic arthritis
Liver Cirrhosis
Long COVID
Lung Cancer
ME/CFS with IBS
ME/CFS without IBS
Menopause
Metabolic Syndrome
Mood Disorders

Multiple Sclerosis
Multiple system atrophy (MSA)
Neuropathy (all types)
neuropsychiatric disorders (PANDAS, PANS)
Nonalcoholic Fatty Liver Disease (nafld) Nonalcoholic
NonCeliac Gluten Sensitivity
Obesity
obsessive-compulsive disorder
Osteoarthritis
Osteoporosis
Parkinson's Disease
Postural orthostatic tachycardia syndrome
Premenstrual dysphoric disorder
Psoriasis
rheumatoid arthritis (RA),Spondyloarthritis (SpA)
Rosacea
Schizophrenia
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