

Microbiome Information for: hypercholesterolemia (High Cholesterol)

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 hypercholesterolemia (High Cholesterol)

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
Bacillaceae	family	High	186817	Odoribacter	genus	High	283168
Coriobacteriaceae	family	High	84107	Prevotella	genus	High	838
Erysipelotrichaceae	family	Low	128827	Rothia	genus	High	32207
Allobaculum	genus	High	174708	Rothia	genus	High	508215
Anaeroplasma	genus	Low	2086	Selenomonas	genus	Low	970
Clostridium	genus	High	1485	Serratia	genus	High	613
Enterococcus	genus	Low	1350	Victivallis	genus	Low	172900
Faecalibacterium	genus	Low	216851	Chromatiales	order	High	135613
Haemophilus	genus	Low	724	Eubacteriales	order	High	186802
Leptotrichia	genus	High	32067	Akkermansia muciniphila	species	Low	239935
Megamonas	genus	High	158846	Enterococcus faecium	species	Low	1352
Methanosphaera	genus	High	2316	Lactiplantibacillus plantarum	species	Low	1590
Mitsuokella	genus	Low	52225	Limosilactobacillus reuteri	species	Low	1598

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.

aspartame (sweetner)		oregano (origanum vulgare, oil)
Astragalus polysaccharide		propolis(bee's glue)
bifidobacterium infantis,(probiotics)	10 BCFU/day	quercetin 2 gram/day
Bile Acid Sequestrant		rare meat
Bofutsushosan		saccharin 450 mg/day
cadium		Shen Ling Bai Zhu San
cinnamon (oil. spice)	6 gram/day	Slippery Elm
coptis chinensis, Chinese goldthread		stevia 800 mg/day
Exercise		triphala 9000 mg/day
fruit/legume fibre		tulsi 1000 mg/day
glycyrrhizic acid (licorice)	32 gram/day	vegetarians
linseed(flaxseed)	30 mg/day	vitamin a 25000 IU/day
naringenin(grapefruit) (Flavonoid)		vitamin d 50000 IU/day
Nicotine, Nicotine Patch		wasabi
non-starch polysaccharides		xylan (prebiotic)
		zinc 300 mg/day

Retail Probiotics

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

CustomProbiotics.com / B. Infantis Probiotic Powder
VSL Pharmaceuticals / Oxadrop
Smidge / Sensitive Probiotic
spain (es) / vivomixx
spain (es) / alflorex
Metabolics / Bifidobacterium Infantis Powder
natren / life start 2 (goat milk-based)
custom probiotics / d-lactate free probiotics powder
Seeking Health / Probiota HistaminX
bravo europe / starter and complex
custom probiotics / five strain bifidobacteria
organic 3 / gutpro
Pendulum / Pendulum Glucose Control
HLH BIOPHARMA(DE) / LACTOBACT ® FORTE
CVSHealth / Daily Probiotic
anabolic laboratories / probiotic complete
Genesis Bifidobacterium Complex BB Probiotic
seed / male version
solaray / microbiome probiotic colon formula
lifted naturals / mood boosting probiotic
cytoplant(uk) / dentavital bifidophilus

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.

bacillus subtilis (probiotics)

Cacao

fructo-oligosaccharides (prebiotic)

Human milk oligosaccharides (prebiotic, Holigos, Stachyose)

inulin (prebiotic)

jerusalem artichoke (prebiotic)

lactobacillus casei (probiotics)

lactulose

raffinose(sugar beet)

resistant starch

resveratrol (grape seed/polyphenols/red wine)

sesame cake/meal

soy

Sample of Literature Used

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

[Characterization of microbial communities from gut microbiota of hypercholesterolemic and control subjects.](#)

Frontiers in cellular and infection microbiology , Volume: 12 2022

Authors Morales C,Rojas G,Rebolledo C,Rojas-Herrera M,Arias-Carrasco R,Cuadros-Orellana S,Maracaja-Coutinho V,Saavedra K,Leal P,Lanas F,Salazar LA,Saavedra N

[Gut microbiome alterations in preclinical Alzheimer`s disease.](#)

PloS one , Volume: 17 Issue: 11 2022

Authors Jung JH,Kim G,Byun MS, Lee JH,Yi D,Park H, Lee DY,KBASE Research Group

[Akkermansia muciniphila is Negatively Correlated with Hemoglobin A1c in Refractory Diabetes.](#)

Microorganisms , Volume: 8 Issue: 9 2020 Sep 5

Authors Shih CT,Yeh YT,Lin CC,Yang LY,Chiang CP

[Probiotic strains improve high-fat diet-induced hypercholesterolemia through modulating gut microbiota in ways different from atorvastatin.](#)

Food & function , Volume: 10 Issue: 9 2019 Sep 18

Authors Sudun,Liu S,Xiao C,Peng C,Liang L,He X,Zhao S,Zhang G

[Faecal bacterial and short-chain fatty acids signature in hypercholesterolemia.](#)

Scientific reports , Volume: 9 Issue: 1 2019 Feb 11

Authors Granado-Serrano AB,Martín-Garí M,Sánchez V,Riart Solans M,Berdún R,Ludwig IA,Rubió L,Vilapriñó E,Portero-Otín M,Serrano JCE

[Ability of lactic acid bacteria isolated from mink to remove cholesterol: in vitro and in vivo studies.](#)

Canadian journal of microbiology , Volume: 59 Issue: 8 2013 Aug

Authors Liu H,Yang C,Jing Y,Li Z,Zhong W,Li G

[Evidence for hypocholesterolemic effect of Lactobacillus reuteri in hypercholesterolemic mice.](#)

Journal of dairy science , Volume: 81 Issue: 9 1998 Sep

Authors Taranto MP,Medici M,Perdigón G,Ruiz Holgado AP,Valdez GF

[Targeted modification of gut microbiota and related metabolites via dietary fiber.](#)

Carbohydrate polymers , Volume: 316 2023 Sep 15

Authors Nie Q,Sun Y,Li M,Zuo S,Chen C,Lin Q,Nie S

[Astragalus polysaccharide ameliorated complex factor-induced chronic fatigue syndrome by modulating the gut microbiota and metabolites in mice.](#)

Biomedicine & pharmacotherapy = Biomedecine & pharmacotherapie , Volume: 163 2023 May 9

Authors Wei X,Xin J,Chen W,Wang J,Lv Y,Wei Y,Li Z,Ding Q,Shen Y,Xu X,Zhang X,Zhang W,Zu X

[Gut microbiota mediated hypoglycemic effect of Astragalus membranaceus polysaccharides in db/db mice.](#)

Frontiers in pharmacology , Volume: 13 2022

Authors Song Q,Cheng SW,Li D,Cheng H,Lai YS,Han Q,Wu HY,Shaw PC,Zuo Z

[Hypoglycemic effect of the polysaccharides from Astragalus membranaceus on type 2 diabetic mice based on the "gut microbiota-mucosal barrier".](#)

Food & function , Volume: 13 Issue: 19 2022 Oct 3

Authors Chen X,Chen C,Fu X

[Shen-Ling-Bai-Zhu-San \(SL\) and SL Derived-Polysaccharide \(PL\) Ameliorate the Severity of Diarrhea-Induced by High Lactose via Modification of Colonic Fermentation.](#)

Frontiers in pharmacology , Volume: 13 2022

Authors Xue H,Ma J,Wang Y,Lu M,Wang F,Tang X

[Effects of Bile Acid Modulation by Dietary Fat, Cholecystectomy, and Bile Acid Sequestrant on Energy, Glucose, and Lipid Metabolism and Gut Microbiota in Mice.](#)

International journal of molecular sciences , Volume: 23 Issue: 11 2022 May 25

Authors Park S,Zhang T,Yue Y,Wu X

[Substitution of Refined Conventional Wheat Flour with Wheat High in Resistant Starch Modulates the Intestinal Microbiota and Fecal Metabolites in Healthy Adults: A Randomized, Controlled Trial.](#)

The Journal of nutrition , 2022 Jan 31

Authors Gondalia SV,Wymond B,Benassi-Evans B,Berbezy P,Bird AR,Belobrajdic DP

[Effects of Dietary Supplementation With Bacillus subtilis, as an Alternative to Antibiotics, on Growth Performance, Serum Immunity, and Intestinal Health in Broiler Chickens.](#)

Frontiers in nutrition , Volume: 8 2021

Authors Qiu K,Li CL,Wang J,Qi GH,Gao J,Zhang HJ,Wu SG

[Bacillus subtilis Attenuates Hepatic and Intestinal Injuries and Modulates Gut Microbiota and Gene Expression Profiles in Mice Infected with Schistosoma japonicum.](#)

Frontiers in cell and developmental biology , Volume: 9 2021

Authors Lin D,Song Q,Zhang Y,Liu J,Chen F,Du S,Xiang S,Wang L,Wu X,Sun X

[Cinnamaldehyde Promotes the Intestinal Barrier Functions and Reshapes Gut Microbiome in Early Weaned Rats.](#)

Frontiers in nutrition , Volume: 8 2021

Authors Qi L,Mao H,Lu X,Shi T,Wang J

[Positive Synergistic Effects of Quercetin and Rice Bran on Human Gut Microbiota Reduces Enterobacteriaceae Family Abundance and Elevates Propionate in a Bioreactor Model.](#)

Frontiers in microbiology , Volume: 12 2021

Authors Ghimire S,Wongkuna S,Sankaranarayanan R,Ryan EP,Bhat GJ,Scaria J

[Effects of ShenLing BaiZhu San Supplementation on Gut Microbiota and Oxidative Stress in Rats with Ulcerative Colitis.](#)

Evidence-based complementary and alternative medicine : eCAM , Volume: 2021 2021

Authors Gu D,Zhou S,Yao L,Tan Y,Chi X,Shi D,Guo S,Liu C

[Treatment with a spore-based probiotic containing five strains of Bacillus induced changes in the metabolic activity and community composition of the gut microbiota in a SHIME® model of the human gastrointestinal system.](#)

Food research international (Ottawa, Ont.) , Volume: 149 2021 Nov

Authors Marzorati M, Van den Abbeele P,Bubeck S,Bayne T,Krishnan K,Young A

[Bacillus pumilus and Bacillus subtilis Promote Early Maturation of Cecal Microbiota in Broiler Chickens.](#)

Microorganisms , Volume: 9 Issue: 9 2021 Sep 7

Authors Bilal M,Achard C,Barbe F,Chevaux E,Ronholm J,Zhao X

[The Prebiotic Potential of Inulin-type Fructans: A Systematic Review.](#)

Advances in nutrition (Bethesda, Md.) , 2021 Sep 23

Authors Hughes RL,Alvarado DA,Swanson KS,Holscher HD

[Low-Dose Lactulose as a Prebiotic for Improved Gut Health and Enhanced Mineral Absorption.](#)

Frontiers in nutrition , Volume: 8 2021

Authors Karakan T,Tuohy KM,Janssen-van Solingen G

[Vitamin D and The Gut Microbiota: a Narrative Literature Review.](#)

Clinical nutrition research , Volume: 10 Issue: 3 2021 Jul

Authors Tangestani H,Boroujeni HK,Djafarian K,Emamat H,Shab-Bidar S

[Home-based exercise training influences gut bacterial levels in multiple sclerosis.](#)

Complementary therapies in clinical practice , Volume: 45 2021 Jul 30

Authors Mokhtarzade M,Molanouri Shamsi M,Abolhasani M,Bakhshi B,Sahraian MA,Quinn LS,Negaresh R

[Immunosuppressive activity is attenuated by Astragalus polysaccharides through remodeling the gut microenvironment in melanoma mice.](#)

Cancer science , Volume: 112 Issue: 10 2021 Oct

Authors Ding G,Gong Q,Ma J,Liu X,Wang Y,Cheng X

[Dietary oregano essential oil supplementation improves intestinal functions and alters gut microbiota in late-phase laying hens.](#)

Journal of animal science and biotechnology , Volume: 12 Issue: 1 2021 Jul 6

Authors Feng J,Lu M,Wang J,Zhang H,Qiu K,Qi G,Wu S

[Dietary oregano essential oil supplementation improves intestinal functions and alters gut microbiota in late-phase laying hens.](#)

Journal of animal science and biotechnology , Volume: 12 Issue: 1 2021 Jul 6

Authors Feng J,Lu M,Wang J,Zhang H,Qiu K,Qi G,Wu S

[Resveratrol and its derivative pterostilbene ameliorate intestine injury in intrauterine growth-retarded weanling piglets by modulating redox status and gut microbiota.](#)

Journal of animal science and biotechnology , Volume: 12 Issue: 1 2021 Jun 10

Authors Chen Y,Zhang H,Chen Y,Jia P, Ji S,Zhang Y,Wang T

[Effect of Vitamin A Supplementation on Growth Performance, Serum Biochemical Parameters, Intestinal Immunity Response and Gut Microbiota in American Mink \(Neovison vison\).](#)

Animals : an open access journal from MDPI , Volume: 11 Issue: 6 2021 May 28

Authors Nan W,Si H,Yang Q,Shi H,Zhang T,Shi Q,Li G,Zhang H,Liu H

[The influence of exercise training volume alterations on the gut microbiome in highly-trained middle-distance runners.](#)

European journal of sport science , 2021 May 26

Authors Craven J,Cox AJ,Bellinger P,Desbrow B,Irwin C,Buchan J,McCartney D,Sabapathy S

[Intensive, prolonged exercise seemingly causes gut dysbiosis in female endurance runners.](#)

Journal of clinical biochemistry and nutrition , Volume: 68 Issue: 3 2021 May

Authors Morishima S,Aoi W,Kawamura A,Kawase T,Takagi T,Naito Y,Tsukahara T,Inoue R

Impaired Intestinal Akkermansia muciniphila and Aryl Hydrocarbon Receptor Ligands Contribute to Nonalcoholic Fatty Liver Disease in Mice.

mSystems , Volume: 6 Issue: 1 2021 Feb 23

Authors Shi Z,Lei H,Chen G,Yuan P,Cao Z,Ser HL,Zhu X,Wu F,Liu C,Dong M,Song Y,Guo Y,Chen C,Hu K,Zhu Y,Zeng XA,Zhou J,Lu Y,Patterson AD,Zhang L

Effects of colon-targeted vitamins on the composition and metabolic activity of the human gut microbiome- a pilot study.

Gut microbes , Volume: 13 Issue: 1 2021 Jan-Dec

Authors Pham VT,Fehlbaum S,Seifert N,Richard N,Bruins MJ,Sybesma W,Rehman A,Steinert RE

Active Vitamin D₃ Treatment Attenuated Bacterial Translocation via Improving Intestinal Barriers in Cirrhotic Rats.

Molecular nutrition & food research , 2020 Nov 30

Authors Lee PC,Hsieh YC,Huo TI,Yang UC,Lin CH,Li CP,Huang YH,Hou MC,Lin HC,Lee KC

Modulatory Effects of Triphala and Manjistha Dietary Supplementation on Human Gut Microbiota: A Double-Blind, Randomized, Placebo-Controlled Pilot Study.

Journal of alternative and complementary medicine (New York, N.Y.) , 2020 Sep 18

Authors Peterson CT,Pourang A,Dhaliwal S,Kohn JN,Uchitel S,Singh H,Mills PJ,Peterson SN,Sivamani RK

Modulatory Effects of Triphala and Manjistha Dietary Supplementation on Human Gut Microbiota: A Double-Blind, Randomized, Placebo-Controlled Pilot Study.

Journal of alternative and complementary medicine (New York, N.Y.) , Volume: 26 Issue: 11 2020 Nov

Authors Peterson CT,Pourang A,Dhaliwal S,Kohn JN,Uchitel S,Singh H,Mills PJ,Peterson SN,Sivamani RK

Soy food intake associates with changes in the metabolome and reduced blood pressure in a gut microbiota dependent manner.

Nutrition, metabolism, and cardiovascular diseases : NMCD , 2020 May 18

Authors Shah RD,Tang ZZ,Chen G,Huang S,Ferguson JF

Cocoa Polyphenols and Gut Microbiota Interplay: Bioavailability, Prebiotic Effect, and Impact on Human Health.

Nutrients , Volume: 12 Issue: 7 2020 Jun 27

Authors Sorrenti V,Ali S,Mancin L,Davinelli S,Paoli A,Scapagnini G

Cocoa Polyphenols and Gut Microbiota Interplay: Bioavailability, Prebiotic Effect, and Impact on Human Health.

Nutrients , Volume: 12 Issue: 7 2020 Jun 27

Authors Sorrenti V,Ali S,Mancin L,Davinelli S,Paoli A,Scapagnini G

The influence of wasabi on the gut microbiota of high-carbohydrate, high-fat diet-induced hypertensive Wistar rats.

Journal of human hypertension , 2020 May 26

Authors Thomaz FS,Altermani F,Panchal SK,Worrall S,Dekker Nitert M

The influence of wasabi on the gut microbiota of high-carbohydrate, high-fat diet-induced hypertensive Wistar rats.

Journal of human hypertension , 2020 May 26

Authors Thomaz FS,Altermani F,Panchal SK,Worrall S,Dekker Nitert M

Cocoa diet modulates gut microbiota composition and improves intestinal health in Zucker diabetic rats.

Food research international (Ottawa, Ont.) , Volume: 132 2020 Jun

Authors Álvarez-Cilleros D,Ramos S,López-Oliva ME,Escrivá F,Álvarez C,Fernández-Millán E,Martín MÁ

Cocoa diet modulates gut microbiota composition and improves intestinal health in Zucker diabetic rats.

Food research international (Ottawa, Ont.) , Volume: 132 2020 Jun

Authors Álvarez-Cilleros D,Ramos S,López-Oliva ME,Escrivá F,Álvarez C,Fernández-Millán E,Martín MÁ

Cultivation of the Next-Generation Probiotic Akkermansia muciniphila, Methods of Its Safe Delivery to the Intestine, and Factors Contributing to Its Growth In Vivo.

Current microbiology , Volume: 77 Issue: 8 2020 Aug

Authors Ropot AV,Karamzin AM,Sergeyev OV

2'-fucosyllactose Supplementation Improves Gut-Brain Signaling and Diet-Induced Obese Phenotype and Changes the Gut Microbiota in High Fat-Fed Mice.

Nutrients , Volume: 12 Issue: 4 2020 Apr 5

Authors Lee S,Goodson M,Vang W,Kalanetra K,Barile D,Raybould H

Increase of Akkermansia muciniphila by a Diet Containing Japanese Traditional Medicine Bofutsushosan in a Mouse Model of Non-Alcoholic Fatty Liver Disease.

Nutrients , Volume: 12 Issue: 3 2020 Mar 20

Authors Nishiyama M,Ohtake N,Kaneko A,Tsuchiya N,Imamura S,Iizuka S,Ishizawa S,Nishi A,Yamamoto M,Taketomi A,Kono T

Bofutsushosan improves gut barrier function with a bloom of Akkermansia muciniphila and improves glucose metabolism in mice with diet-induced obesity.

Scientific reports , Volume: 10 Issue: 1 2020 Mar 26

Authors Fujisaka S,Usui I,Nawaz A,Igarashi Y,Okabe K,Furusawa Y,Watanabe S,Yamamoto S,Sasahara M,Watanabe Y,Nagai

Y,Yagi K,Nakagawa T,Tobe K

[Dietary prophage inducers and antimicrobials: toward landscaping the human gut microbiome.](#)

Gut microbes , 2020 Jan 13

Authors Boling L,Cuevas DA,Grasis JA,Kang HS,Knowles B,Levi K,Maughan H,McNair K,Rojas MI,Sanchez SE,Smurthwaite C,Rohwer F

[The Structure Features and Improving Effects of Polysaccharide from Astragalus membranaceus on Antibiotic-Associated Diarrhea.](#)

Antibiotics (Basel, Switzerland) , Volume: 9 Issue: 1 2019 Dec 23

Authors Li S,Qi Y,Ren D,Qu D,Sun Y

[The Association Between Smoking and Gut Microbiome in Bangladesh.](#)

Nicotine & tobacco research : official journal of the Society for Research on Nicotine and Tobacco , Volume: 22 Issue: 8 2020 Jul 16

Authors Nolan-Kenney R,Wu F,Hu J,Yang L,Kelly D,Li H,Jasmine F,Kibriya MG,Parvez F,Shaheen I,Sarwar G,Ahmed A,Eunus M,Islam T,Pei Z,Ahsan H,Chen Y

[Shen-Ling-Bai-Zhu-San alleviates functional dyspepsia in rats and modulates the composition of the gut microbiota.](#)

Nutrition research (New York, N.Y.) , Volume: 71 2019 Nov

Authors Zhang S,Lin L,Liu W,Zou B,Cai Y,Liu D,Xiao D,Chen J,Li P,Zhong Y,Liao Q,Xie Z

[Physiological and Biochemical Effects of Intrinsically High and Low Exercise Capacities Through Multiomics Approaches.](#)

Frontiers in physiology , Volume: 10 2019

Authors Tung YT,Hsu YJ,Liao CC,Ho ST,Huang CC,Huang WC

[Regulatory Function of Buckwheat-Resistant Starch Supplementation on Lipid Profile and Gut Microbiota in Mice Fed with a High-Fat Diet.](#)

Journal of food science , Volume: 84 Issue: 9 2019 Sep

Authors Zhou Y,Zhao S,Jiang Y,Wei Y,Zhou X

[Immunomodulatory and Prebiotic Effects of 2`-Fucosyllactose in Suckling Rats.](#)

Frontiers in immunology , Volume: 10 2019

Authors Azagra-Boronat I,Massot-Cladera M,Mayneris-Perxachs J,Knipping K,Van` t Land B,Tims S,Stahl B,Garssen J,Franch À,Castell M,Rodríguez-Lagunas MJ,Pérez-Cano FJ

[Systems Pharmacology and Microbiome Dissection of Shen Ling Bai Zhu San Reveal Multiscale Treatment Strategy for IBD.](#)

Oxidative medicine and cellular longevity , Volume: 2019 2019

Authors Lv WJ,Liu C,Li YF,Chen WQ,Li ZQ,Li Y,Xiong Y,Chao LM,Xu XL,Guo SN

[Dietary Factors and Modulation of Bacteria Strains of <i>Akkermansia muciniphila</i> and <i>Faecalibacterium prausnitzii</i>: A Systematic Review.](#)

Nutrients , Volume: 11 Issue: 7 2019 Jul 11

Authors Verhoog S,Taneri PE,Roa Díaz ZM,Marques-Vidal P,Troup JP,Bally L,Franco OH,Glisic M,Muka T

[Supplementation of diet with non-digestible oligosaccharides alters the intestinal microbiota, but not arthritis development, in IL-1 receptor antagonist deficient mice.](#)

PLoS one , Volume: 14 Issue: 7 2019

Authors Rogier R,Ederveen THA,Wopereis H,Hartog A,Boekhorst J,van Hijum SAFT,Knol J,Garssen J,Walgreen B,Helsen MM,van der Kraan PM,van Lent PLEM,van de Loo FAJ,Abdollahi-Roodsaz S,Koenders MI

[Resveratrol attenuates high-fat diet-induced non-alcoholic steatohepatitis by maintaining gut barrier integrity and inhibiting gut inflammation through regulation of the endocannabinoid system.](#)

Clinical nutrition (Edinburgh, Scotland) , 2019 May 30

Authors Chen M,Hou P,Zhou M,Ren Q,Wang X,Huang L,Hui S,Yi L,Mi M

[Dietary Quercetin Increases Colonic Microbial Diversity and Attenuates Colitis Severity in <i>Citrobacter rodentium</i>-Infected Mice.](#)

Frontiers in microbiology , Volume: 10 2019

Authors Lin R,Piao M,Song Y

[The role of short-chain fatty acids in microbiota-gut-brain communication.](#)

Nature reviews. Gastroenterology & hepatology , Volume: 16 Issue: 8 2019 Aug

Authors Dalile B,Van Oudenhove L,Vervliet B,Verbeke K

[Intestinal Morphologic and Microbiota Responses to Dietary <i>Bacillus</i> spp. in a Broiler Chicken Model.](#)

Frontiers in physiology , Volume: 9 2018

Authors Li CL,Wang J,Zhang HJ,Wu SG,Hui QR,Yang CB,Fang RJ,Qi GH

[Identification of factors involved in Enterococcus faecalis biofilm under quercetin stress.](#)

Microbial pathogenesis , Volume: 126 2019 Jan

Authors Qayyum S,Sharma D,Bisht D,Khan AU

[Strategies to promote abundance of <i>Akkermansia muciniphila</i>, an emerging probiotics in the gut, evidence from](#)

dietary intervention studies.

Journal of functional foods , Volume: 33 2017 Jun

Authors Zhou K

Simultaneous Supplementation of *Bacillus subtilis* and Antibiotic Growth Promoters by Stages Improved Intestinal Function of Pullets by Altering Gut Microbiota.

Frontiers in microbiology , Volume: 9 2018

Authors Li X,Wu S,Li X,Yan T,Duan Y,Yang X,Duan Y,Sun Q,Yang X

In vitro fermentation of raffinose by the human gut bacteria.

Food & function , Volume: 9 Issue: 11 2018 Nov 14

Authors Mao B,Tang H,Gu J,Li D,Cui S,Zhao J,Zhang H,Chen W

Antimicrobial activity of spices essential oils and its effectiveness on mature biofilms of human pathogens.

Natural product research , 2018 Oct 13

Authors Condò C,Anacorso I,Sabia C,Iseppi R,Anfelli I,Forti L,de Niederhäusern S,Bondi M,Messi P

Analysis of Temporal Changes in Growth and Gene Expression for Commensal Gut Microbes in Response to the Polyphenol Naringenin.

Microbiology insights , Volume: 11 2018

Authors Firrman J,Liu L,Argoty GA,Zhang L,Tomasula P,Wang M,Pontious S,Kobori M,Xiao W

Inulin fiber dose-dependently modulates energy balance, glucose tolerance, gut microbiota, hormones and diet preference in high-fat-fed male rats.

The Journal of nutritional biochemistry , Volume: 59 2018 Sep

Authors Singh A,Zapata RC,Pezeshki A,Reidelberger RD,Chelikani PK

Composition and metabolism of fecal microbiota from normal and overweight children are differentially affected by melibiose, raffinose and raffinose-derived fructans.

Anaerobe , Volume: 52 2018 Aug

Authors Adamborg K,Adamborg S,Ernits K,Larionova A,Voor T,Jaagura M,Visnapuu T,Alamäe T

Role of probiotics in the treatment of minimal hepatic encephalopathy in patients with HBV-induced liver cirrhosis.

The Journal of international medical research , Volume: 46 Issue: 9 2018 Sep

Authors Xia X,Chen J,Xia J,Wang B,Liu H,Yang L,Wang Y,Ling Z

Catechin supplemented in a FOS diet induces weight loss by altering cecal microbiota and gene expression of colonic epithelial cells.

Food & function , Volume: 9 Issue: 5 2018 May 23

Authors Luo J,Han L,Liu L,Gao L,Xue B,Wang Y,Ou S,Miller M,Peng X

Microbiome Responses to an Uncontrolled Short-Term Diet Intervention in the Frame of the Citizen Science Project.

Nutrients , Volume: 10 Issue: 5 2018 May 8

Authors Klimenko NS,Tyakht AV,Popenko AS,Vasiliev AS,Altukhov IA,Ischenko DS,Shashkova TI,Efimova DA,Nikogosov DA,Osipenko DA,Musienko SV,Selezneva KS,Baranova A,Kurilshikov AM,Toshchakov SM,Korzhenkov AA,Samarov NI,Shevchenko MA,Tepluk AV,Alexeev DG

Prebiotic Potential of Herbal Medicines Used in Digestive Health and Disease.

Journal of alternative and complementary medicine (New York, N.Y.) , Volume: 24 Issue: 7 2018 Jul

Authors Peterson CT,Sharma V,Uchitel S,Denniston K,Chopra D,Mills PJ,Peterson SN

Xylan supplement improves 1,3-propanediol fermentation by *Clostridium butyricum*.

Journal of bioscience and bioengineering , 2018 Mar 10

Authors Apiwatanapiwat W,Vaithanomsat P,Thapanase W,Ratanakhanokchai K,Kosugi A

Fermentation of non-digestible raffinose family oligosaccharides and galactomannans by probiotics.

Food & function , Volume: 9 Issue: 3 2018 Mar 1

Authors Zartl B,Silberbauer K,Loeppert R,Viernstein H,Praznik W,Mueller M

Evaluation of the effects of different diets on microbiome diversity and fatty acid composition of rumen liquor in dairy goat.

Animal : an international journal of animal bioscience , 2018 Jan 8

Authors Cremonesi P,Conte G,Severgnini M,Turri F,Monni A,Capra E,Rapetti L,Colombini S,Chessa S,Battelli G,Alves SP,Mele M,Castiglioni B

Bolus Weekly Vitamin D3 Supplementation Impacts Gut and Airway Microbiota in Adults With Cystic Fibrosis: A Double-Blind, Randomized, Placebo-Controlled Clinical Trial.

The Journal of clinical endocrinology and metabolism , Volume: 103 Issue: 2 2018 Feb 1

Authors Kanhere M,He J,Chassaing B,Ziegler TR,Alvarez JA,Ivie EA,Hao L,Hanfelt J,Gewirtz AT,Tangricha V

An *in vitro* Comparative Evaluation of Efficacy of Disinfecting Ability of Garlic Oil, Neem Oil, Clove Oil, and Tulsi Oil with autoclaving on Endodontic K Files tested against *Enterococcus faecalis*.

International journal of clinical pediatric dentistry , Volume: 10 Issue: 3 2017 Jul-Sep

Authors Hugar S,M Patel P,Nagmoti J,Uppin C,Mistry L,Dhariwal N

Dietary ZnO nanoparticles alters intestinal microbiota and inflammation response in weaned piglets.

Oncotarget , Volume: 8 Issue: 39 2017 Sep 12

Authors Xia T,Lai W,Han M,Han M,Ma X,Zhang L

Dietary soy, meat, and fish proteins modulate the effects of prebiotic raffinose on composition and fermentation of gut microbiota in rats.

International journal of food sciences and nutrition , Volume: 69 Issue: 4 2018 Jun

Authors Bai G,Tsuruta T,Nishino N

Reduced obesity, diabetes, and steatosis upon cinnamon and grape pomace are associated with changes in gut microbiota and markers of gut barrier.

American journal of physiology. Endocrinology and metabolism , Volume: 314 Issue: 4 2018 Apr 1

Authors Van Hul M,Geurts L,Plovier H,Druart C,Everard A,Ståhlman M,Rhimi M,Chira K,Teissedre PL,Delzenne NM,Maguin E,Guilbot A,Brochot A,Gérard P,Bäckhed F,Cani PD

Worse inflammatory profile in omnivores than in vegetarians associates with the gut microbiota composition.

Diabetology & metabolic syndrome , Volume: 9 2017

Authors Franco-de-Moraes AC,de Almeida-Pititto B,da Rocha Fernandes G,Gomes EP,da Costa Pereira A,Ferreira SRG

Microbiota, metabolome, and immune alterations in obese mice fed a high-fat diet containing type 2 resistant starch.

Molecular nutrition & food research , Volume: 61 Issue: 11 2017 Nov

Authors Barouei J,Bendiks Z,Martinic A,Mishchuk D,Heeney D,Hsieh YH,Kieffer D,Zaragoza J,Martin R,Slupsky C,Marco ML

Effect of Soy Isoflavones on Growth of Representative Bacterial Species from the Human Gut.

Nutrients , Volume: 9 Issue: 7 2017 Jul 8

Authors Vázquez L,Flórez AB,Guadamuro L,Mayo B

Prebiotic Potential and Chemical Composition of Seven Culinary Spice Extracts.

Journal of food science , Volume: 82 Issue: 8 2017 Aug

Authors Lu QY,Summanen PH,Lee RP,Huang J,Henning SM,Heber D,Finegold SM,Li Z

Bile acid binding resin prevents fat accumulation through intestinal microbiota in high-fat diet-induced obesity in mice.

Metabolism: clinical and experimental , Volume: 71 2017 Jun

Authors Kusumoto Y,Irie J,Iwabu K,Tagawa H,Itoh A,Kato M,Kobayashi N,Tanaka K,Kikuchi R,Fujita M,Nakajima Y,Morimoto K,Sugizaki T,Yamada S,Kawai T,Watanabe M,Oike Y,Itoh H

The effects of micronutrient deficiencies on bacterial species from the human gut microbiota.

Science translational medicine , Volume: 9 Issue: 390 2017 May 17

Authors Hibberd MC,Wu M,Rodionov DA,Li X,Cheng J,Griffin NW,Barratt MJ,Giannone RJ,Hettich RL,Osterman AL,Gordon JI

Gut microbiota interactions with the immunomodulatory role of vitamin D in normal individuals.

Metabolism: clinical and experimental , Volume: 69 2017 Apr

Authors Luthold RV,Fernandes GR,Franco-de-Moraes AC,Folchetti LG,Ferreira SR

Key bacterial families (Clostridiaceae, Erysipelotrichaceae and Bacteroidaceae) are related to the digestion of protein and energy in dogs.

PeerJ , Volume: 5 2017

Authors Bermingham EN,Maclea P,Thomas DG,Cave NJ,Young W

Raw meat based diet influences faecal microbiome and end products of fermentation in healthy dogs.

BMC veterinary research , Volume: 13 Issue: 1 2017 Feb 28

Authors Sandri M,Dal Monego S,Conte G,Sgorlon S,Stefanon B

Structural modulation of gut microbiota during alleviation of antibiotic-associated diarrhea with herbal formula.

International journal of biological macromolecules , Volume: 105 Issue: Pt 3 2017 Dec

Authors Lv W,Liu C,Ye C,Sun J,Tan X,Zhang C,Qu Q,Shi D,Guo S

Vitamin A deficiency impacts the structural segregation of gut microbiota in children with persistent diarrhea.

Journal of clinical biochemistry and nutrition , Volume: 59 Issue: 2 2016 Sep

Authors Lv Z,Wang Y,Yang T,Zhan X,Li Z,Hu H,Li T,Chen J

Efficacy and role of inulin in mitigation of enteric sulfur-containing odor in pigs.

Journal of the science of food and agriculture , Volume: 97 Issue: 8 2017 Jun

Authors Deng YF,Liu YY,Zhang YT,Wang Y,Liang JB,Tufarelli V,Laudadio V,Liao XD

Dietary Casein and Soy Protein Isolate Modulate the Effects of Raffinose and Fructooligosaccharides on the Composition and Fermentation of Gut Microbiota in Rats.

Journal of food science , Volume: 81 Issue: 8 2016 Aug

Authors Bai G,Ni K,Tsuruta T,Nishino N

Microbial Community of Healthy Thai Vegetarians and Non-Vegetarians, Their Core Gut Microbiota, and Pathogen Risk.

Journal of microbiology and biotechnology , Volume: 26 Issue: 10 2016 Oct 28

Authors Ruengsomwong S,La-Ongkham O,Jiang J,Wannissorn B,Nakayama J,Nitisinprasert S

Significant pharmacokinetic differences of berberine are attributable to variations in gut microbiota between Africans and

Chinese.**Scientific reports** , Volume: 6 2016 Jun 10Authors *Alolga RN,Fan Y,Chen Z,Liu LW,Zhao YJ,Li J,Chen Y,Lai MD,Li P,Qi LW*Fermentation of purple Jerusalem artichoke extract to improve the α -glucosidase inhibitory effect in vitro and ameliorate blood glucose in db/db mice.**Nutrition research and practice** , Volume: 10 Issue: 3 2016 JunAuthors *Wang Z,Hwang SH,Lee SY,Lim SS*Effects of two different probiotics on microflora, morphology, and morphometry of gut in organic laying hens.**Poultry science** , Volume: 95 Issue: 11 2016 Nov 1Authors *Forte C,Acuti G,Manuali E,Casagrande Proietti P,Pavone S,Trabalza-Marinucci M,Moscato L,Onofri A,Lorenzetti C,Franciosi MP*In vitro extraction and fermentation of polyphenols from grape seeds (*Vitis vinifera*) by human intestinal microbiota.**Food & function** , Volume: 7 Issue: 4 2016 AprAuthors *Zhou L,Wang W,Huang J,Ding Y,Pan Z,Zhao Y,Zhang R,Hu B,Zeng X*Effects of Cocoa Husk Feeding on the Composition of Swine Intestinal Microbiota.**Journal of agricultural and food chemistry** , Volume: 64 Issue: 10 2016 Mar 16Authors *Magistrelli D,Zanchi R,Malagutti L,Galassi G,Canzi E,Rosi F*Effect of *Bacillus subtilis* CGMCC 1.1086 on the growth performance and intestinal microbiota of broilers.**Journal of applied microbiology** , Volume: 120 Issue: 1 2016 JanAuthors *Li Y,Xu Q,Huang Z,Lv L,Liu X,Yin C,Yan H,Yuan J*Equol status and changes in fecal microbiota in menopausal women receiving long-term treatment for menopause symptoms with a soy-isoflavone concentrate.**Frontiers in microbiology** , Volume: 6 2015Authors *Guadamuro L,Delgado S,Redruello B,Flórez AB,Suárez A,Martínez-Cambor P,Mayo B*Sex differences in gut fermentation and immune parameters in rats fed an oligofructose-supplemented diet.**Biology of sex differences** , Volume: 6 2015Authors *Shastri P,McCarville J,Kalmokoff M,Brooks SP,Green-Johnson JM*Dietary modulation of the gut microbiota—a randomised controlled trial in obese postmenopausal women.**The British journal of nutrition** , Volume: 114 Issue: 3 2015 Aug 14Authors *Brahe LK,Le Chatelier E,Prifti E,Pons N,Kennedy S,Blædel T,Håkansson J,Dalsgaard TK,Hansen T,Pedersen O,Astrup A,Ehrlich SD,Larsen LH*Lack of Vitamin D Receptor Causes Dysbiosis and Changes the Functions of the Murine Intestinal Microbiome.**Clinical therapeutics** , Volume: 37 Issue: 5 2015 May 1Authors *Jin D,Wu S,Zhang YG,Lu R,Xia Y,Dong H,Sun J*Effects of dietary linseed oil and propionate precursors on ruminal microbial community, composition, and diversity in Yanbian yellow cattle.**PloS one** , Volume: 10 Issue: 5 2015Authors *Li XZ,Park BK,Shin JS,Choi SH,Smith SB,Yan CG*

Additional APriori Analysis Available

Available at: <https://microbiomeprescription.com/Library/PubMed>

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