

Microbiome Information for: Ankylosing spondylitis

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 Ankylosing spondylitis

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	Helicobacter	genus	Low	209
Bacilli	class	High	91061	Lachnospira	genus	Low	28050
Bacteroidia	class	High	200643	Lactobacillus	genus	Low	1578
Dothideomycetes	class	High	147541	Megamonas	genus	High	158846
Bacteroidaceae	family	High	815	Neisseria	genus	High	482
Lachnospiraceae	family	High	186803	Oscillibacter	genus	High	459786
Porphyromonadaceae	family	High	171551	Parasutterella	genus	Low	577310
Prevotellaceae	family	Low	171552	Prevotella	genus	High	838
Rikenellaceae	family	High	171550	Rothia	genus	High	32207
Ruminococcaceae	family	High	541000	Ruminococcus	genus	Low	1263
Veillonellaceae	family	Low	31977	Salmonella	genus	High	590
Actinomyces	genus	High	1654	Shigella	genus	High	620
Alloprevotella	genus	High	1283313	Streptococcus	genus	High	1301
Bacteroides	genus	Low	816	Veillonella	genus	High	29465
Bifidobacterium	genus	High	1678	Klebsiella pneumoniae subsp. rhinoscleromatis ATCC 13884	norank	High	667127
Blautia	genus	High	572511	Agaricales	order	Low	5338
Citrobacter	genus	Low	544	Bacteroides nordii	species	High	291645
Collinsella	genus	High	102106	Desulfovibrio desulfuricans	species	High	876
Comamonas	genus	High	283	Escherichia coli	species	High	562
Desulfovibrio	genus	High	872	Flavonifractor plautii	species	High	292800
Dialister	genus	High	39948	Klebsiella pneumoniae	species	High	573
Dorea	genus	High	189330	Parabacteroides distasonis	species	High	823
Enterobacter	genus	Low	547	Prevotella copri	species	High	165179
Escherichia	genus	High	561	Prevotella melaninogenica	species	High	28132
Eubacterium	genus	Low	1730	Ruminococcus gnavus	species	Low	33038
Fusobacterium	genus	Low	848	Salmonella enterica	species	High	28901

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.

arabinogalactan (prebiotic) 21 gram/day	L-proline
aspartame (sweetner)	non-starch polysaccharides
bacillus licheniformis,(probiotics) 1000 mg/day	oligosaccharides (prebiotic)
berberine 1.5 gram/day	Pulses
bifidobacterium catenulatum,(probiotics)	raffinose(sugar beet)
bifidobacterium longum (probiotics) 10 BCFU/day	resistant starch
bifidobacterium pseudocatenulatum,(probiotics)	saccharin 450 mg/day
Cacao 20 gram/day	saccharomyces boulardii (probiotics) 6 BCFU/day
fat	saccharomyces cerevisiae (probiotics)
fructo-oligosaccharides (prebiotic) 15 gram/day	salt (sodium chloride)
gynostemma pentaphyllum (Jiaogulan)	Shen Ling Bai Zhu San
Human milk oligosaccharides (prebiotic, Holigos, Stachyose) 2 gram/day	Slippery Elm
inulin (prebiotic) 32 gram/day	soy 25 gram/day
ku ding cha tea	Ursolic acid
lactose	vitamin d 50000 IU/day
lactulose	wheat
lard	wheat bran

Retail Probiotics

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

jarrow formulas / bifidus balance® + fos
optibac / for every day
Swiss BioEnergetics / Full Spectrum Probiotic Defence
spain (es) / ultralevura
Bromatech (IT) / Serobiome
Ombre / Metabolic Booster
spain (es) / axiboulardi
naturopathica (au) / gastrohealth probiotic daily care
nature's instincts / ultra spore probiotic
PrecisionBiotics / Immune
Genesis Bifidobacterium Complex BB Probiotic
cytoplan(uk) / dentavital bifidophilus
CustomProbiotics.com / B. Longum Probiotic Powder
Dr.Max / ProtectMax ATB
nature's way (au) / restore probiotic 30 billion 30s
Bromatech (IT) / Rotanelle plus
blackmores (au) / probiotics+ immune defence
SuperSmart / Oral Health
PharmExtracta (IT) / Gliadines buccal stickpacks
ISCON Elegance/ Ochek Capsule 10
Nutrition Essentials / Probiotic (900 BCFU)
microbiome labs/ megasporebiotic
optibac / bifidobacteria & fibre
Sanogermina / AB-Kolicare
Energybalance / ColoBiotica 28 Colon Support
jarrow formulas / jarro-dophilus mood
SuperSmart / Saccharomyces Boulardii
naturopathica (au) / gastrohealth probiotics
blackmore (au) / probiotics+ bowel support
PoolPharma (IT) / ProbioTKMIO
organic 3 / yeastbiotic
CVSHealth / Daily Probiotic
Metabolics / Bifidobacterium Longum Powder
nature's way (au) / restore probiotic daily health 90s
microbiome labs / restorflora
optibac / saccharomyces boulardii
Bromatech (IT) / Bifiselle
wakamoto (jp) / wakamoto pharmaceutical intestinal drug
custom probiotics / five strain bifidobacteria
Microbiome Labs / ZENBIOME Dual
canada (ca) / calmbiotic
klair labs / ther-biotic factor 4
InnovixLabs / Mood Probiotic
Bromatech (IT) / Enterelle
HLH BIOPHARMA(DE) / LACTOBACT ® AAD
naturopathica (au) / gastrohealth probiotic adults 50+
florastor / florastor
PrecisionBiotics / Zenflore
PharmExtracta / Bowell
Bromatech (IT) / Lautoselle
custom probiotics / d-lactate free probiotics powder
naturopathica (au) / gastrohealth fibrepro
philips / colon health
blackmore (au) / probiotics+ eczema relief

imaglin / NutriLots Replenish

Ombre / Endless Energy

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.

Arbutin (polyphenol)
Caffeine
chitosan,(sugar)
cinnamon (oil. spice)
clostridium butyricum (probiotics),Miya,Miyarisan
diosmin,(polyphenol)
foeniculum vulgare,fennel
garlic (allium sativum)
ginger
Hesperidin (polyphenol)
lactobacillus casei (probiotics)
lactobacillus paracasei (probiotics)
lactobacillus plantarum (probiotics)
luteolin (flavonoid)

melatonin supplement
N-Acetyl Cysteine (NAC),
oregano (origanum vulgare, oil) |
quercetin
retinoic acid,(Vitamin A derivative)
rosmarinus officinalis,rosemary
salvia officinalis (sage)
syzygium aromaticum (clove)
thyme (thymol, thyme oil)
triphala
Vitamin B1,thiamine hydrochloride
Vitamin B-12
vitamin B3,niacin
Vitamin B6,pyridoxine hydrochloride
vitamin B7, biotin

Sample of Literature Used

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

[The Association of Fecal Microbiota in Ankylosing Spondylitis Cases with C-Reactive Protein and Erythrocyte Sedimentation Rate.](#)

Mediators of inflammation , Volume: 2020 2020

Authors Liu G,Hao Y,Yang Q,Deng S

[Variations in gut microbial profiles in ankylosing spondylitis: disease phenotype-related dysbiosis.](#)

Annals of translational medicine , Volume: 7 Issue: 20 2019 Oct

Authors Chen Z,Qi J,Wei Q,Zheng X,Wu X,Li X,Liao Z,Lin Z,Gu J

[Metagenome-wide association study of the alterations in the intestinal microbiome composition of ankylosing spondylitis patients and the effect of traditional and herbal treatment.](#)

Journal of medical microbiology , 2019 Nov 28

Authors Huang R,Li F,Zhou Y,Zeng Z,He X,Fang L,Pan F,Chen Y,Lin J,Li J,Qiu D,Tian Y,Tan X,Song Y,Xu Y,Lai Y,Yi H,Gao Q,Fang X,Shi M,Zhou C,Huang J,He Y

[A distinct gut microbiota composition in patients with ankylosing spondylitis is associated with increased levels of fecal calprotectin.](#)

Arthritis research & therapy , Volume: 21 Issue: 1 2019 Nov 27

Authors Klingberg E,Magnusson MK,Strid H,Deminger A,Stahl A,Sundin J,Simrén M,Carlsten H,Öhman L,Forsblad-d`Elia H

[Fecal microbiota in patients with ankylosing spondylitis: Correlation with dietary factors and disease activity.](#)

Clinica chimica acta; international journal of clinical chemistry , Volume: 497 2019 Oct

Authors Zhang L,Han R,Zhang X,Fang G,Chen J,Li J,Xu S,Qian L,Chen W,Pan F

[Altered Bacterial-Fungal Interkingdom Networks in the Guts of Ankylosing Spondylitis Patients.](#)

mSystems , Volume: 4 Issue: 2 2019 Mar-Apr

Authors Li M,Dai B,Tang Y,Lei L,Li N,Liu C,Ge T,Zhang L,Xu Y,Hu Y,Li P,Zhang Y,Yuan J,Li X

[Gut Microbiota is Altered in Patients with Alzheimer`s Disease.](#)

Journal of Alzheimer`s disease : JAD , Volume: 63 Issue: 4 2018

Authors Zhuang ZQ,Shen LL,Li WW,Fu X,Zeng F,Gui L,Lü Y,Cai M,Zhu C,Tan YL,Zheng P,Li HY,Zhu J,Zhou HD,Bu XL,Wang YJ

[Quantitative metagenomics reveals unique gut microbiome biomarkers in ankylosing spondylitis.](#)

Genome biology , Volume: 18 Issue: 1 2017 Jul 27

Authors Wen C,Zheng Z,Shao T,Liu L,Xie Z,Le Chatelier E,He Z,Zhong W,Fan Y,Zhang L,Li H,Wu C,Hu C,Xu Q,Zhou J,Cai S,Wang D,Huang Y,Breban M,Qin N,Ehrlich SD

[Brief Report: Intestinal Dysbiosis in Ankylosing Spondylitis.](#)

Arthritis & rheumatology (Hoboken, N.J.) , Volume: 67 Issue: 3 2015 Mar

Authors Costello ME,Ciccia F,Willner D,Warrington N,Robinson PC,Gardiner B,Marshall M,Kenna TJ,Triolo G,Brown MA

[Brief Report: Intestinal Dysbiosis in Ankylosing Spondylitis.](#)

Arthritis & rheumatology (Hoboken, N.J.) , Volume: 67 Issue: 3 2015 Mar

Authors Costello ME,Ciccia F,Willner D,Warrington N,Robinson PC,Gardiner B,Marshall M,Kenna TJ,Triolo G,Brown MA

[Comparison of the faecal microflora of patients with ankylosing spondylitis and controls using molecular methods of analysis.](#)

Rheumatology (Oxford, England) , Volume: 41 Issue: 12 2002 Dec

Authors Stebbings S,Munro K,Simon MA,Tannock G,Highton J,Harmsen H,Welling G,Seksik P,Dore J,Grame G,Tilsala-Timisjarvi A

[Antibodies against bacterial lipopolysaccharides in Japanese patients with ankylosing spondylitis.](#)

British journal of rheumatology , Volume: 36 Issue: 4 1997 Apr

Authors Tani Y,Sato H,Tanaka N,Hukuda S

[Positive efficacy of Lactiplantibacillus plantarum MH-301 as a postoperative adjunct to endoscopic sclerotherapy for internal hemorrhoids: a randomized, double-blind, placebo-controlled trial.](#)

Food & function , 2023 Sep 1

Authors Zhang K,Liu H,Liu P,Feng Q,Gan L,Yao L,Huang G,Fang Z,Chen T,Fang N

[Supplementation of ginger root extract into broiler chicken diet: effects on growth performance and immunocompetence.](#)

Poultry science , Volume: 102 Issue: 10 2023 Jul 11

Authors Dosu G,Obanla TO,Zhang S,Sang S,Adetunji AO,Fahrenholz AC,Ferket PR,Nagabhushanam K,Fasina YO

[Influences of wheat bran fiber on growth performance, nutrient digestibility, and intestinal epithelium functions in Xiangcun pigs.](#)

Heliyon , Volume: 9 Issue: 7 2023 Jul

Authors Liu J,Luo Y,Kong X,Yu B,Zheng P,Huang Z,Mao X,Yu J,Luo J,Yan H,He J

[Cinnamon oil solid self-microemulsion mediates chronic mild stress-induced depression in mice by modulating monoamine neurotransmitters, corticosterone, inflammation cytokines, and intestinal flora.](#)

Heliyon , Volume: 9 Issue: 6 2023 Jun

Authors Ma T,Tang B,Wang Y,Shen M,Ping Y,Wang L,Su J

[Dietary Prebiotic Oligosaccharides and Arachidonate Alter the Fecal Microbiota and Mucosal Lipid Composition of Suckling Pigs.](#)

The Journal of nutrition , 2023 Jun 20

Authors Eudy BJ,Odle J,Lin X,Maltecca C,Walter KR,McNulty NP,Fellner V,Jacobi SK

[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

[Gut microbiota-derived metabolites mediate the neuroprotective effect of melatonin in cognitive impairment induced by sleep deprivation.](#)

Microbiome , Volume: 11 Issue: 1 2023 Jan 31

Authors Wang X,Wang Z,Cao J,Dong Y,Chen Y

[Effects of a *Saccharomyces cerevisiae* fermentation product on fecal characteristics, metabolite concentrations, and microbiota populations of dogs subjected to exercise challenge.](#)

Journal of animal science , 2022 Dec 27

Authors Oba PM,Carroll MQ,Sieja KM,Nogueira JPS,Yang X,Epp TY,Warzecha CM,Varney JL,Fowler JW,Coon CN,Swanson KS

[Effects of Dietary Oregano Essential Oil on Cecal Microorganisms and Muscle Fatty Acids of Luhua Chickens.](#)

Animals : an open access journal from MDPI , Volume: 12 Issue: 22 2022 Nov 20

Authors Wu T,Yang F,Jiao T,Zhao S

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

Applied microbiology and biotechnology , Volume: 106 Issue: 24 2022 Dec

Authors Zhai T,Ren W,Wang P,Zheng L

[Ursolic acid regulates gut microbiota and corrects the imbalance of Th17/Treg cells in T1DM rats.](#)

PloS one , Volume: 17 Issue: 11 2022

Authors Chen W,Yu Y,Liu Y,Song C,Chen H,Tang C,Song Y,Zhang X

[Shen-Ling-Bai-Zhu-San Enhances the Antipneumonia Effect of Cefixime in Children by Ameliorating Gut Microflora, Inflammation, and Immune Response.](#)

Evidence-based complementary and alternative medicine : eCAM , Volume: 2022 2022

Authors Feng J,Zhang C,Chen H,Chen Z,Chen Y,He D,Pan Q,Zhou Y,Chen Z,Zhuang 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

[Miya Improves Osteoarthritis Characteristics via the Gut-Muscle-Joint Axis According to Multi-Omics Analyses.](#)

Frontiers in pharmacology , Volume: 13 2022

Authors Xu T,Yang D,Liu K,Gao Q,Liu Z,Li G

[Ursolic Acid Ameliorates Spinal Cord Injury in Mice by Regulating Gut Microbiota and Metabolic Changes.](#)

Frontiers in cellular neuroscience , Volume: 16 2022

Authors Rong ZJ,Cai HH,Wang H,Liu GH,Zhang ZW,Chen M,Huang YL

[Effect of Dietary *Bacillus licheniformis* Supplementation on Growth Performance and Microbiota Diversity of Pekin Ducks.](#)

Frontiers in veterinary science , Volume: 9 2022

Authors Li L,Lv X,Han X,Sun C,An K,Gao W,Xia Z

[Alterations in the composition of the gut microbiota affect absorption of cholecalciferol in severe osteoporosis.](#)

Journal of bone and mineral metabolism , 2022 Feb 1

Authors Cheng J,Zhong WL,Zhao JW,Zhai JH,Chen C,Chao AJ,Ren Z,Zhou L,Wang BM

[Chitosan Protects Immunosuppressed Mice Against *Cryptosporidium parvum* Infection Through TLR4/STAT1 Signaling Pathways and Gut Microbiota Modulation.](#)

Frontiers in immunology , Volume: 12 2021

Authors Rahman SU,Gong H,Mi R,Huang Y,Han X,Chen Z

[The relationship between human milk, a functional nutrient, and microbiota.](#)

Critical reviews in food science and nutrition , 2021 Dec 6

Authors Sakarya E,Sanlier NT,Sanlier N

[Fructooligosaccharides Increase in Plasma Concentration of \(-\)-Epigallocatechin-3-Gallate in Rats.](#)

Journal of agricultural and food chemistry , Volume: 69 Issue: 49 2021 Dec 15

Authors Unno T,Araki Y,Inagaki S,Kobayashi M,Ichitani M,Takahara T,Kinugasa H

Multidimensional exploration of essential oils generated via eight oregano cultivars: Compositions, chemodiversities, and antibacterial capacities.

Food chemistry , Volume: 374 2022 Apr 16

Authors Hao Y,Kang J,Yang R,Li H,Cui H,Bai H,Tsitsilin A,Li J,Shi L

Oregano Essential Oils Promote Rumen Digestive Ability by Modulating Epithelial Development and Microbiota Composition in Beef Cattle.

Frontiers in nutrition , Volume: 8 2021

Authors Zhang R,Wu J,Lei Y,Bai Y,Jia L,Li Z,Liu T,Xu Y,Sun J,Wang Y,Zhang K,Lei Z

Antimicrobial, immunological and biochemical effects of florfenicol and garlic (*Allium sativum*) on rabbits infected with *Escherichia coli* serotype O55: H7.

Veterinary research communications , 2021 Nov 10

Authors Farag VM,El-Shafei RA,Elkenany RM,Ali HS,Eladl AH

Dietary supplementation of gingerols- and shogaols-enriched ginger root extract attenuate pain-associated behaviors while modulating gut microbiota and metabolites in rats with spinal nerve ligation.

The Journal of nutritional biochemistry , 2021 Nov 5

Authors Shen CL,Wang R, Ji G,Elmassry MM,Zabet-Moghaddam M,Vellers H,Hamood AN,Gong X,Mirzaei P,Sang S,Neugebauer V

Effects of molecular weight of chitosan on anti-inflammatory activity and modulation of intestinal microflora in an ulcerative colitis model.

International journal of biological macromolecules , 2021 Nov 5

Authors Niu W,Dong Y,Fu Z,Lv J,Wang L,Zhang Z,Huo J,Ju J

A Comparison of Production Performance, Egg Quality, and Cecal Microbiota in Laying Hens Receiving Graded Levels of Vitamin B₁₂.

Frontiers in veterinary science , Volume: 8 2021

Authors Wang R,Bai Y,Yang Y,Wu X,Li R

Synergistic Antibiofilm Effect of Thymol and Piperine in Combination with Aminoglycosides Antibiotics against Four *Salmonella enterica* Serovars.

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

Authors Tokam Kuaté CR,Bisso Ndezo B,Dzoyem JP

Combined effect of carvacrol, thymol and nisin against *Staphylococcus aureus* and *Salmonella* Enteritidis.

Anais da Academia Brasileira de Ciências , Volume: 93 Issue: suppl 4 2021

Authors Heckler C,Sant`anna V,Brandelli A,Malheiros PS

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

Bifidobacterium catabolism of human milk oligosaccharides overrides endogenous competitive exclusion driving colonization and protection.

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

Authors Heiss BE,Ehrlich AM,Maldonado-Gomez MX,Taft DH,Larke JA,Goodson ML,Slupsky CM,Tancredi DJ,Raybould HE,Mills DA

Effects of fermented wheat bran and yeast culture on growth performance, immunity and intestinal microflora in growing-finishing pigs.

Journal of animal science , 2021 Oct 23

Authors He W,Gao Y,Guo Z,Yang Z,Wang X,Liu H,Sun H,Shi B

The Association between Vitamin D and Gut Microbiota: A Systematic Review of Human Studies.

Nutrients , Volume: 13 Issue: 10 2021 Sep 26

Authors Bellerba F,Muzio V,Gnagnarella P,Facciotti F,Chiocca S,Bossi P,Cortinovis D,Chiaradonna F,Serrano D,Raimondi S,Zerbato B,Palorini R,Canova S,Gaeta A,Gandini S

Supplementation with *Lactiplantibacillus plantarum* IMC 510 Modifies Microbiota Composition and Prevents Body Weight Gain Induced by Cafeteria Diet in Rats.

International journal of molecular sciences , Volume: 22 Issue: 20 2021 Oct 16

Authors Micioni Di Bonaventura MV,Coman MM,Tomassoni D,Micioni Di Bonaventura E,Botticelli L,Gabrielli MG,Rossolini GM,Di Pilato V,Cecchini C,Amedei A,Silvi S,Verdenelli MC,Cifani C

In Vitro Study of Cricket Chitosan`s Potential as a Prebiotic and a Promoter of Probiotic Microorganisms to Control Pathogenic Bacteria in the Human Gut.

Foods (Basel, Switzerland) , Volume: 10 Issue: 10 2021 Sep 29

Authors Kipkoech C,Kinyuru JN,Imathiu S,Meyer-Rochow VB,Roos N

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

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

Dietary and Pharmacologic Manipulations of Host Lipids and Their Interaction With the Gut Microbiome in Non-human Primates.

Frontiers in medicine , Volume: 8 2021

Authors Lang JM, Sedgeman LR, Cai L, Layne JD, Wang Z, Pan C, Lee R, Temel RE, Lusa AJ

Lactocaseibacillus paracasei NK112 mitigates Escherichia coli-induced depression and cognitive impairment in mice by regulating IL-6 expression and gut microbiota.

Beneficial microbes , 2021 Sep 13

Authors Yun SW, Kim JK, Han MJ, Kim DH

The Protection of Lactiplantibacillus plantarum CCFM8661 Against Benzopyrene-Induced Toxicity via Regulation of the Gut Microbiota.

Frontiers in immunology , Volume: 12 2021

Authors Yu L, Zhang L, Duan H, Zhao R, Xiao Y, Guo M, Zhao J, Zhang H, Chen W, Tian F

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

Prebiotic fructans have greater impact on luminal microbiology and CD3+ T cells in healthy siblings than patients with Crohn` s disease: A pilot study investigating the potential for primary prevention of inflammatory bowel disease.

Clinical nutrition (Edinburgh, Scotland) , Volume: 40 Issue: 8 2021 Jun 23

Authors Hedin CR, McCarthy NE, Louis P, Farquharson FM, McCartney S, Stagg AJ, Lindsay JO, Whelan K

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

Clostridium butyricum relieve the visceral hypersensitivity in mice induced by Citrobacter rodentium infection with chronic stress.

PeerJ , Volume: 9 2021

Authors Wang T, Li L, Li S, Zhao H, Qu J, Xia Y, Li Y

Effects of Fermented Milk Containing Lactocaseibacillus paracasei Strain Shirota on Constipation in Patients with Depression: A Randomized, Double-Blind, Placebo-Controlled Trial.

Nutrients , Volume: 13 Issue: 7 2021 Jun 29

Authors Zhang X, Chen S, Zhang M, Ren F, Ren Y, Li Y, Liu N, Zhang Y, Zhang Q, Wang R

Millet shell polyphenols prevent atherosclerosis by protecting the gut barrier and remodeling the gut microbiota in ApoE^{-/-} mice.

Food & function , 2021 Jun 25

Authors Liu F, Shan S, Li H, Shi J, Hao R, Yang R, Li Z

Effects of Ursolic Acid on Intestinal Health and Gut Bacteria Antibiotic Resistance in Mice.

Frontiers in physiology , Volume: 12 2021

Authors Peng F, Zhang H, He X, Song Z

Effect of Dietary Inulin Supplementation on the Gut Microbiota Composition and Derived Metabolites of Individuals Undergoing Hemodialysis: A Pilot Study.

Journal of renal nutrition : the official journal of the Council on Renal Nutrition of the National Kidney Foundation , 2021 Jun 11

Authors Biruete A, Cross TL, Allen JM, Kistler BM, de Loor H, Evenepoel P, Fahey GC Jr, Bauer L, Swanson KS, Wilund KR

Lactobacillus paracasei modulates the gut microbiota and improves inflammation in type 2 diabetic rats.

Food & function , 2021 Jun 11

Authors Zeng Z,Guo X,Zhang J,Yuan Q,Chen S

[Effect of *Lactocaseibacillus paracasei* Strain Shirota on Improvement in Depressive Symptoms, and Its Association with Abundance of Actinobacteria in Gut Microbiota.](#)

Microorganisms , Volume: 9 Issue: 5 2021 May 10

Authors Otaka M,Kikuchi-Hayakawa H,Ogura J,Ishikawa H,Yomogida Y,Ota M,Hidese S,Ishida I,Aida M,Matsuda K,Kawai M,Yoshida S,Kunugi H

[Vitamin D ameliorates high-fat-diet-induced hepatic injury via inhibiting pyroptosis and alters gut microbiota in rats.](#)

Archives of biochemistry and biophysics , Volume: 705 2021 Jul 15

Authors Zhang X,Shang X,Jin S,Ma Z,Wang H,Ao N,Yang J,Du J

[Lactobacillus Sps in Reducing the Risk of Diabetes in High-Fat Diet-Induced Diabetic Mice by Modulating the Gut Microbiome and Inhibiting Key Digestive Enzymes Associated with Diabetes.](#)

Biology , Volume: 10 Issue: 4 2021 Apr 20

Authors Gulnaz A,Nadeem J,Han JH,Lew LC,Son JD,Park YH,Rather IA,Hor YY

[Aberrant Gut Microbiome Contributes to Intestinal Oxidative Stress, Barrier Dysfunction, Inflammation and Systemic Autoimmune Responses in MRL/lpr Mice.](#)

Frontiers in immunology , Volume: 12 2021

Authors Wang H,Wang G,Banerjee N,Liang Y,Du X,Boor PJ,Hoffman KL,Khan MF

[Modulation of the fecal microbiome and metabolome by resistant dextrin ameliorates hepatic steatosis and mitochondrial abnormalities in mice.](#)

Food & function , 2021 Apr 22

Authors Zhang Z,Chen X,Cui B

[Cholecalciferol Supplementation Does Not Prevent the Development of Metabolic Syndrome or Enhance the Beneficial Effects of Omega-3 Fatty Acids in Obese Mice.](#)

The Journal of nutrition , 2021 Apr 13

Authors Valle M,Mitchell PL,Pilon G,St-Pierre P,Varin T,Richard D,Vohl MC,Jacques H,Delvin E,Levy E,Gagnon C,Bazinet L,Marette A

[The Anti-Inflammatory Effect and Mucosal Barrier Protection of *Clostridium butyricum* RH2 in Ceftriaxone-Induced Intestinal Dysbacteriosis.](#)

Frontiers in cellular and infection microbiology , Volume: 11 2021

Authors Li Y,Liu M,Liu H,Sui X,Liu Y,Wei X,Liu C,Cheng Y,Ye W,Gao B,Wang X,Lu Q,Cheng H,Zhang L,Yuan J,Li M

[\[Ginger-separated moxibustion for chronic fatigue syndrome and its effect on intestinal flora\].](#)

Zhongguo zhen jiu = Chinese acupuncture & moxibustion , Volume: 41 Issue: 3 2021 Mar 12

Authors Lin YF,Jin XQ,Zhu JF,Chen YD,Sheng JL,He JJ,Jin YY

[Beverages containing *Lactobacillus paracasei* LC-37 improved functional dyspepsia through regulation of the intestinal microbiota and their metabolites.](#)

Journal of dairy science , 2021 Mar 10

Authors Sun E,Zhang X,Zhao Y,Li J,Sun J,Mu Z,Wang R

[Potato resistant starch inhibits diet-induced obesity by modifying the composition of intestinal microbiota and their metabolites in obese mice.](#)

International journal of biological macromolecules , Volume: 180 2021 Mar 9

Authors Liang D,Zhang L,Chen H,Zhang H,Hu H,Dai X

[Effect of Quercetin on Lipids Metabolism Through Modulating the Gut Microbial and AMPK/PPAR Signaling Pathway in Broilers.](#)

Frontiers in cell and developmental biology , Volume: 9 2021

Authors Wang M,Wang B,Wang S,Lu H,Wu H,Ding M,Ying L,Mao Y,Li Y

[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

[Bifidobacterium pseudocatenulatum Ameliorates DSS-Induced Colitis by Maintaining Intestinal Mechanical Barrier, Blocking Proinflammatory Cytokines, Inhibiting TLR4/NF- \$\kappa\$ B Signaling, and Altering Gut Microbiota.](#)

Journal of agricultural and food chemistry , Volume: 69 Issue: 5 2021 Feb 10

Authors Chen Y,Yang B,Stanton C,Ross RP,Zhao J,Zhang H,Chen W

[Pretreatment with chitosan oligosaccharides attenuate experimental severe acute pancreatitis via inhibiting oxidative stress and modulating intestinal homeostasis.](#)

Acta pharmacologica Sinica , 2021 Jan 25

Authors Mei QX,Hu JH,Huang ZH,Fan JJ,Huang CL,Lu YY,Wang XP,Zeng Y

[Lactulose ingestion causes an increase in the abundance of gut-resident bifidobacteria in Japanese women: a randomised,](#)

double-blind, placebo-controlled crossover trial.

Beneficial microbes , 2021 Jan 4

Authors Sakai Y,Hamano H,Ochi H,Abe F,Masuda K,Iino H

Selective Utilization of the Human Milk Oligosaccharides 2`-Fucosyllactose, 3-Fucosyllactose, and Difucosyllactose by Various Probiotic and Pathogenic Bacteria.

Journal of agricultural and food chemistry , Volume: 69 Issue: 1 2021 Jan 13

Authors Salli K,Hirvonen J,Siitonen J,Ahonen I,Angenius H,Maukonen J

Exopolysaccharides from Lactobacillus plantarum YW11 improve immune response and ameliorate inflammatory bowel disease symptoms.

Acta biochimica Polonica , Volume: 67 Issue: 4 2020 Dec 17

Authors Min Z,Xiaona H,Aziz T,Jian Z,Zhennai Y

Administration of Saccharomyces boulardii maffio-1701 improves feed conversion ratio, promotes antioxidant capacity, alleviates intestinal inflammation and modulates gut microbiota in weaned piglets.

Journal of animal science and biotechnology , Volume: 11 Issue: 1 2020 Dec 4

Authors Zhang W,Bao C,Wang J,Zang J,Cao Y

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

The Osteoporosis/Microbiota Linkage: The Role of miRNA.

International journal of molecular sciences , Volume: 21 Issue: 23 2020 Nov 24

Authors De Martinis M,Ginaldi L,Allegra A,Sirufi MM,Pioggia G,Tonacci A,Gangemi S

Adjunctive treatment with probiotics partially alleviates symptoms and reduces inflammation in patients with irritable bowel syndrome.

European journal of nutrition , 2020 Nov 22

Authors Xu H,Ma C,Zhao F,Chen P,Liu Y,Sun Z,Cui L,Kwok LY,Zhang H

Effects of Different Human Milk Oligosaccharides on Growth of Bifidobacteria in Monoculture and Co-culture With Faecalibacterium prausnitzii.

Frontiers in microbiology , Volume: 11 2020

Authors Cheng L,Kiewiet MBG,Logtenberg MJ,Groeneveld A,Nauta A,Schols HA,Walvoort MTC,Harmsen HJM,de Vos P

Prebiotic-like effects of chitosan on the intestinal microflora in mice.

Pakistan journal of pharmaceutical sciences , Volume: 33 Issue: 3 2020 May

Authors Zhang D,Xing Y,Liu LK,Li XL

The Effect of Bacillus licheniformis-Fermented Products and Postpartum Dysgalactia Syndrome on Litter Performance Traits, Milk Composition, and Fecal Microbiota in Sows.

Animals : an open access journal from MDPI , Volume: 10 Issue: 11 2020 Nov 5

Authors Yu YH,Hsu TY,Chen WJ,Hong YB,Cheng YH

A high-fat diet and high-fat and high-cholesterol diet may affect glucose and lipid metabolism differentially through gut microbiota in mice.

Experimental animals , 2020 Oct 1

Authors Liang H,Jiang F,Cheng R,Luo Y,Wang J,Luo Z,Li M,Shen X,He F

Relationship between gut environment, feces-to-food ratio, and androgen deficiency-induced metabolic disorders.

Gut microbes , Volume: 12 Issue: 1 2020 Nov 9

Authors Harada N,Minami Y,Hanada K,Hanaoka R,Kobayashi Y,Izawa T,Sato T,Kato S,Inui H,Yamaji R

Synergistic Effect of Berberine-Based Chinese Medicine Assembled Nanostructures on Diarrhea-Predominant Irritable Bowel Syndrome In Vivo.

Frontiers in pharmacology , Volume: 11 2020

Authors Li L,Cui H,Li T,Qi J,Chen H,Gao F,Tian X,Mu Y,He R,Lv S,Chu F,Xu B,Wang P,Lei H,Xu H,Wang C

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

Relative abundance of the Prevotella genus within the human gut microbiota of elderly volunteers determines the inter-individual responses to dietary supplementation with wheat bran arabinoxylan-oligosaccharides.

BMC microbiology , Volume: 20 Issue: 1 2020 Sep 14

Authors Chung WSF, Walker AW, Bosscher D, Garcia-Campayo V, Wagner J, Parkhill J, Duncan SH, Flint HJ

Impacts of Habitual Diets Intake on Gut Microbial Counts in Healthy Japanese Adults.

Nutrients , Volume: 12 Issue: 8 2020 Aug 12

Authors Sugimoto T, Shima T, Amamoto R, Kaga C, Kado Y, Watanabe O, Shiinoki J, Iwazaki K, Shigemura H, Tsuji H, Matsumoto S

Vitamin D Supplementation in Laboratory-Bred Mice: An In Vivo Assay on Gut Microbiome and Body Weight.

Microbiology insights , Volume: 13 2020

Authors Badger-Emeka LI, AlJaziri ZY, Almulhim CF, Aldrees AS, AlShakhs ZH, AlAithan RI, Alotman FA

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

Antioxidant, Anti-Inflammatory, and Microbial-Modulating Activities of Essential Oils: Implications in Colonic Pathophysiology.

International journal of molecular sciences , Volume: 21 Issue: 11 2020 Jun 10

Authors Spisni E, Petrocelli G, Imbesi V, Spigarelli R, Azzinnari D, Donati Sarti M, Campieri M, Valerii MC

The ameliorative effect of Lactobacillus plantarum Y44 oral administration on inflammation and lipid metabolism in obese mice fed with a high fat diet.

Food & function , Volume: 11 Issue: 6 2020 Jun 24

Authors Liu Y, Gao Y, Ma F, Sun M, Mu G, Tuo Y

The Protective Effects of 2`-Fucosyllactose against E. Coli O157 Infection Are Mediated by the Regulation of Gut Microbiota and the Inhibition of Pathogen Adhesion.

Nutrients , Volume: 12 Issue: 5 2020 May 1

Authors Wang Y, Zou Y, Wang J, Ma H, Zhang B, Wang S

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

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

Conserved and variable responses of the gut microbiome to resistant starch type 2

Nutrition research (New York, N.Y.) , Volume: 77 2020 Feb 22

Authors Bendiks ZA, Knudsen KEB, Keenan MJ, Marco ML

Effect of Berberine on Atherosclerosis and Gut Microbiota Modulation and Their Correlation in High-Fat Diet-Fed ApoE^{-/-} Mice.

Frontiers in pharmacology , Volume: 11 2020

Authors Wu M, Yang S, Wang S, Cao Y, Zhao R, Li X, Xing Y, Liu L

Prebiotic activity of garlic (*Allium sativum*) extract on *Lactobacillus acidophilus*.

Veterinary world , Volume: 12 Issue: 12 2019 Dec

Authors Sunu P, Sunarti D, Mahfudz LD, Yuniarto VD

The effects of high doses of vitamin D on the composition of the gut microbiome of adolescent girls.

Clinical nutrition ESPEN , Volume: 35 2020 Feb

Authors Tabatabaeizadeh SA, Fazeli M, Meshkat Z, Khodashenas E, Esmaeili H, Mazloun S, Ferns GA, Abdizadeh MF, Ghayour-Mobarhan M

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 Effect of Various Doses of Oral Vitamin D³ Supplementation on Gut Microbiota in Healthy Adults: A

Randomized, Double-blinded, Dose-response Study.

Anticancer research , Volume: 40 Issue: 1 2020 Jan

Authors Charoenngam N,Shirvani A,Kalajian TA,Song A,Holick MF

Carboxymethyl chitosan perturbs inflammation profile and colonic microbiota balance in mice.

Journal of food and drug analysis , Volume: 28 Issue: 1 2020 Jan

Authors Liu Y,Zong S,Li J

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

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