

Microbiome Information for: Type 1 Diabetes

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 Type 1 Diabetes

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
Bacteroidia	class	High	200643	Lachnospira	genus	Low	28050
Deferribacteres	class	High	68337	Lactobacillus	genus	Low	1578
Deltaproteobacteria	class	Low	28221	Megamonas	genus	Low	158846
Lachnospiraceae	family	High	186803	Parasutterella	genus	Low	577310
Paenibacillaceae	family	Low	186822	Phascolarctobacterium	genus	Low	33024
Pasteurellaceae	family	Low	712	Prevotella	genus	Low	838
Porphyromonadaceae	family	High	171551	Romboutsia	genus	Low	1501226
Prevotellaceae	family	High	171552	Roseburia	genus	Low	841
Ruminococcaceae	family	Low	541000	Ruminococcus	genus	High	1263
Veillonellaceae	family	Low	31977	Staphylococcus	genus	Low	1279
Acidaminococcus	genus	Low	904	Streptococcus	genus	Low	1301
Bacteroides	genus	High	816	Turicibacter	genus	Low	191303
Bilophila	genus	High	35832	Caulobacteriales	order	Low	204458
Blautia	genus	High	572511	Acetanaerobacterium elongatum	species	Low	258515
Clostridium	genus	Low	1485	Agathobaculum desmolans	species	Low	39484
Dialister	genus	Low	39948	Anaerobutyricum hallii	species	Low	39488
Escherichia	genus	High	561	Bacteroides fragilis	species	High	817
Eubacterium	genus	Low	1730	Bacteroides ovatus	species	High	28116
Faecalibacterium	genus	Low	216851	Bifidobacterium adolescentis	species	Low	1680
Haemophilus	genus	Low	724	Bifidobacterium pseudocatenulatum	species	Low	28026
Intestinimonas	genus	Low	1392389	Peptoniphilus gorbachii	species	Low	411567
				Roseburia faecis	species	Low	301302

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.

Aloe

bacillus licheniformis,(probiotics) 1000 mg/day

banana

berberine 1.5 gram/day

bile (acid/salts)

Bile Acid Sequestrant

Bofutsushosan

broccoli

cinnamon (oil. spice) 6 gram/day

coptis chinensis, Chinese goldthread

cranberry bean flour

Curcumin 3 gram/day

gallate (food additive)

glycerol monolaurate (Monolaurin)

glycyrrhizic acid (licorice) 32 gram/day

Human milk oligosaccharides (prebiotic, HoliGos, Stachyose) 2

gram/day

iron 400 mg/day

kombucha

lemongrass oil

Manuka Honey 40 ml/day

Moringa Oleifera

non-starch polysaccharides

propionate

red alga *Laurencia tristicha*

Reishi Mushroom 3.4 gram/day

resistant maltodextrin 50 gram/day

resistant starch

saccharin 450 mg/day

Sauerkraut

Silver

smoking

stevia 800 mg/day

syzygium aromaticum (clove)

thyme (thymol, thyme oil)

trachyspermum ammi, Ajwain

Umcka

Umeboshi (Japanese Apricot or *Prunus mume*)

vitamin d 50000 UI/day

xylitol

Retail Probiotics

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

optibac / for daily immunity

Bromatech (IT) / Lautoselle

Bromatech (IT) / Serobiome

blackmore (au) / probiotics+ bowel support

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.

almonds/ almond skins	lactobacillus plantarum (probiotics)
arabinogalactan (prebiotic)	lactobacillus reuteri (probiotics)
bacillus subtilis (probiotics)	lactulose
barley	Nicotine, Nicotine Patch
Burdock Root	noni
Cacao	pediococcus acidilactic (probiotic)
clostridium butyricum (probiotics), Miya, Miyarisan	Pistachio
Conjugated Linoleic Acid	pomegranate
fructo-oligosaccharides (prebiotic)	raffinose(sugar beet)
garlic (allium sativum)	resveratrol (grape seed/polyphenols/red wine)
grape polyphenols	Shen Ling Bai Zhu San
inulin (prebiotic)	soy
jerusalem artichoke (prebiotic)	β -glucan
lactobacillus casei (probiotics)	walnuts
Lactobacillus Johnsonii (probiotic)	whey
	whole-grain barley

Sample of Literature Used

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

[Changes in the gut microbiota: a possible factor influencing peripheral blood immune indexes in non-obese diabetic mice.](#)

Antonie van Leeuwenhoek , 2021 Aug 9

Authors Wu Y,You Q,Fei J,Wu J

[Gut Microbiota in T1DM-Onset Pediatric Patients: Machine-Learning Algorithms to Classify Microorganisms as Disease Linked.](#)

The Journal of clinical endocrinology and metabolism , Volume: 105 Issue: 9 2020 Sep 1

Authors Biassoni R,Di Marco E,Squillario M,Barla A,Piccolo G,Ugolotti E,Gatti C,Minuto N,Patti G,Maghnie M,d`Annunzio G

[Type 1 diabetes induces cognitive dysfunction in rats associated with alterations of the gut microbiome and metabolomes in serum and hippocampus.](#)

Biochimica et biophysica acta. Molecular basis of disease , Volume: 1865 Issue: 12 2019 Aug 28

Authors Gao H,Jiang Q, Ji H,Ning J,Li C,Zheng H

[Changes of intestinal flora in patients with systemic lupus erythematosus in northeast China.](#)

PloS one , Volume: 14 Issue: 3 2019

Authors Wei F,Xu H,Yan C,Rong C,Liu B,Zhou H

[The bacteriome at the onset of type 1 diabetes: A study from four geographically distant African and Asian countries.](#)

Diabetes research and clinical practice , Volume: 144 2018 Oct

Authors Cinek O,Kramna L,Mazankova K,Odeh R,Alassaf A,Ibekwe MU,Ahmadov G,Elmahi BME,Mekki H,Lebl J,Abdullah MA

[Gut microbiota profiling in Han Chinese with type 1 diabetes.](#)

Diabetes research and clinical practice , Volume: 141 2018 Jul

Authors Huang Y,Li SC,Hu J,Ruan HB,Guo HM,Zhang HH,Wang X,Pei YF,Pan Y,Fang C

[Gut microbiota profiling in Han Chinese with type 1 diabetes.](#)

Diabetes research and clinical practice , Volume: 141 2018 May 5

Authors Huang Y,Li SC,Hu J,Ruan HB,Guo HM,Zhang HH,Wang X,Pei YF,Pan Y,Fang C

[Duodenal Mucosa of Patients With Type 1 Diabetes Shows Distinctive Inflammatory Profile and Microbiota.](#)

The Journal of clinical endocrinology and metabolism , Volume: 102 Issue: 5 2017 May 1

Authors Pellegrini S,Sordi V,Bolla AM,Saita D,Ferrarese R,Canducci F,Clementi M,Invernizzi F,Mariani A,Bonfanti R,Barera G,Testoni PA,Dogliani C,Bosi E,Piemonti L

[Imbalance of Fecal Microbiota at Newly Diagnosed Type 1 Diabetes in Chinese Children.](#)

Chinese medical journal , Volume: 129 Issue: 11 2016 Jun 5

Authors Qi CJ,Zhang Q,Yu M,Xu JP,Zheng J,Wang T,Xiao XH

[Imbalance of Fecal Microbiota at Newly Diagnosed Type 1 Diabetes in Chinese Children.](#)

Chinese medical journal , Volume: 129 Issue: 11 2016 Jun 5

Authors Qi CJ,Zhang Q,Yu M,Xu JP,Zheng J,Wang T,Xiao XH

[Alterations in Intestinal Microbiota Correlate With Susceptibility to Type 1 Diabetes.](#)

Diabetes , Volume: 64 Issue: 10 2015 Oct

Authors Alkanani AK,Hara N,Gottlieb PA,Ir D,Robertson CE,Wagner BD, Frank DN,Zipris D

[Alterations in Intestinal Microbiota Correlate With Susceptibility to Type 1 Diabetes.](#)

Diabetes , Volume: 64 Issue: 10 2015 Oct

Authors Alkanani AK,Hara N,Gottlieb PA,Ir D,Robertson CE,Wagner BD, Frank DN,Zipris D

[Consumption of acidic water alters the gut microbiome and decreases the risk of diabetes in NOD mice.](#)

The journal of histochemistry and cytochemistry : official journal of the Histochemistry Society , Volume: 62 Issue: 4 2014 Apr

Authors Wolf KJ, Daft JG, Tanner SM, Hartmann R, Khafipour E, Lorenz RG

[Fecal microbiota imbalance in Mexican children with type 1 diabetes.](#)

Scientific reports , Volume: 4 2014 Jan 22

Authors Mejía-León ME, Petrosino JF, Ajami NJ, Domínguez-Bello MG, de la Barca AM

[Fecal microbiota composition differs between children with \$\beta\$ -cell autoimmunity and those without.](#)

Diabetes , Volume: 62 Issue: 4 2013 Apr

Authors de Goffau MC, Luopajarvi K, Knip M, Ilonen J, Ruotula T, Härkönen T, Orivuori L, Hakala S, Welling GW, Harmsen HJ, Vaarala O

[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

[The anti-hyperlipidemic effect and underlying mechanisms of barley \(*Hordeum vulgare* L.\) grass polysaccharides in mice induced by a high-fat diet.](#)

Food & function , 2023 Jul 14

Authors Yan JK,Chen TT,Li LQ,Liu F,Liu X,Li L

[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

[Effects of liposoluble components of highland barley spent grains on physiological indexes, intestinal microorganisms, and the liver transcriptome in mice fed a high-fat diet.](#)

Food science & nutrition , Volume: 11 Issue: 6 2023 Jun

Authors Zhang J,Luo Y,Feng S,Sun W,Li S,Kong L

[Investigating the modulatory effects of *Moringa oleifera* on the gut microbiota of chicken model through metagenomic approach.](#)

Frontiers in veterinary science , Volume: 10 2023

Authors Soundararajan S,Selvakumar J,Maria Joseph ZM,Gopinath Y,Saravanan V,Santhanam R

[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

[Moringa oleifera Leaf Powder as New Source of Protein-Based Feedstuff Improves Growth Performance and Cecal Microbial Diversity of Broiler Chicken.](#)

Animals : an open access journal from MDPI , Volume: 13 Issue: 6 2023 Mar 20

Authors Zhang H,Huang L,Hu S,Qin X,Wang X

[Moringa oleifera leaf ethanolic extract benefits cashmere goat semen quality via improving rumen microbiota and metabolome.](#)

Frontiers in veterinary science , Volume: 10 2023

Authors Liang J,Wu T,Wang T,Ma Y,Li Y,Zhao S,Guo Y,Liu B

[Effects of Polyphenols and Glucosinolates in Broccoli Extract on Human Gut Microorganisms Based on Simulation In Vitro.](#)

ACS omega , Volume: 7 Issue: 49 2022 Dec 13

Authors Zhang Y,Jiang C,Huang S,Sun J,Song X,Nishanbaev SZ,Benito MJ,Wu Y

[Resveratrol modulates the gut microbiota of cholestasis in pregnant rats.](#)

Journal of physiology and pharmacology : an official journal of the Polish Physiological Society , Volume: 73 Issue: 2 2022 Apr

Authors Li Z,Lei L,Ling L,Liu Y,Xiong Z,Shao Y

[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

[Comprehensive analysis of microbiome, metabolome and transcriptome revealed the mechanisms of *Moringa oleifera* polysaccharide on preventing ulcerative colitis.](#)

International journal of biological macromolecules , Volume: 222 Issue: Pt A 2022 Dec 1

Authors Tian H,Wen Z,Liu Z,Guo Y,Liu G,Sun B

[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

[Dietary *Moringa oleifera* leaf powder improves jejunal permeability and digestive function by modulating the microbiota composition and mucosal immunity in heat stressed rabbits.](#)

Environmental science and pollution research international , Volume: 29 Issue: 53 2022 Nov

Authors Khalid AR,Yasob TB,Zhang Z,Zhu X,Hang S

[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

[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

[Crude Polysaccharide Extracted From *Moringa oleifera* Leaves Prevents Obesity in Association With Modulating Gut](#)

Microbiota in High-Fat Diet-Fed Mice.**Frontiers in nutrition** , Volume: 9 2022

Authors Li L, Ma L, Wen Y, Xie J, Yan L, Ji A, Zeng Y, Tian Y, Sheng J

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

Licorice extract ameliorates hyperglycemia through reshaping gut microbiota structure and inhibiting TLR4/NF- κ B signaling pathway in type 2 diabetic mice.**Food research international (Ottawa, Ont.)** , Volume: 153 2022 Mar

Authors Zhang Y, Xu Y, Zhang L, Chen Y, Wu T, Liu R, Sui W, Zhu Q, Zhang M

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

Curcumin β -D-Glucuronide Modulates an Autoimmune Model of Multiple Sclerosis with Altered Gut Microbiota in the Ileum and Feces.**Frontiers in cellular and infection microbiology** , Volume: 11 2021

Authors Khadka S, Omura S, Sato F, Nishio K, Kakeya H, Tsunoda I

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

Active Smoking Induces Aberrations in Digestive Tract Microbiota of Rats.**Frontiers in cellular and infection microbiology** , Volume: 11 2021

Authors Wang X, Ye P, Fang L, Ge S, Huang F, Polverini PJ, Heng W, Zheng L, Hu Q, Yan F, Wang W

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, Takihara T, Kinugasa H

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

Regulatory Effect of Resveratrol on Inflammation Induced by Lipopolysaccharides via Reprogramming Intestinal Microbes and Ameliorating Serum Metabolism Profiles.**Frontiers in immunology** , Volume: 12 2021

Authors Ding S, Jiang H, Fang J, Liu G

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

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 digestibility and prebiotic activities of a bioactive polysaccharide from *Moringa oleifera* leaves.**Journal of food biochemistry** , Volume: 45 Issue: 11 2021 Nov

Authors Li C, Zhou S, Fu X, Huang Q, Chen Q

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

Glycerol Monolaurate Ameliorated Intestinal Barrier and Immunity in Broilers by Regulating Intestinal Inflammation, Antioxidant Balance, and Intestinal Microbiota.

Frontiers in immunology , Volume: 12 2021

Authors Kong L,Wang Z,Xiao C,Zhu Q,Song Z

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

Influences of Xylitol Consumption at Different Dosages on Intestinal Tissues and Gut Microbiota in Rats.

Journal of agricultural and food chemistry , Volume: 69 Issue: 40 2021 Oct 13

Authors Zuo QL, Cai X, Zheng XY, Chen DS, Li M, Liu ZQ, Chen KQ, Han FF, Zhu X

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

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

Alterations in microbiota and their metabolites are associated with beneficial effects of bile acid sequestrant on icteric primary biliary Cholangitis.

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

Authors Li B, Zhang J, Chen Y, Wang Q, Yan L, Wang R, Wei Y, You Z, Li Y, Miao Q, Xiao X, Lian M, Chen W, Qiu D, Fang J, Gershwin ME, Tang R, Ma X

Regulatory effects of Lactobacillus fermented black barley on intestinal microbiota of NAFLD rats.

Food research international (Ottawa, Ont.) , Volume: 147 2021 Sep

Authors Zhu C, Guan Q, Song C, Zhong L, Ding X, Zeng H, Nie P, Song L

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

Dose-response and functional role of whey permeate as a source of lactose and milk oligosaccharides on intestinal health and growth of nursery pigs.

Journal of animal science , Volume: 99 Issue: 1 2021 Jan 1

Authors Jang KB, Purvis JM, Kim SW

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

Nrf2/ARE Activators Improve Memory in Aged Mice via Maintaining of Mitochondrial Quality Control of Brain and the Modulation of Gut Microbiome.

Pharmaceuticals (Basel, Switzerland) , Volume: 14 Issue: 7 2021 Jun 23

Authors Sadovnikova IS, Gureev AP, Ignatyeva DA, Gryaznova MV, Chernyshova EV, Krutskikh EP, Novikova AG, Popov VN

Lactic acid production ability of Lactobacillus sp. from four tropical fruits using their by-products as carbon source.

Heliyon , Volume: 7 Issue: 5 2021 May

Authors Ngouénam JR, Momo Kenfack CH, Foko Kouam EM, Kaktcham PM, Maharjan R, Ngoufack FZ

Metabolome and Microbiota Analysis Reveals the Conducive Effect of Pediococcus acidilactici BCC-1 and Xylan Oligosaccharides on Broiler Chickens.

Frontiers in microbiology , Volume: 12 2021

Authors Wu Y, Lei Z, Wang Y, Yin D, Aggrey SE, Guo Y, Yuan J

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*
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
Modulatory Effects of *Bacillus subtilis* on the Performance, Morphology, Cecal Microbiota and Gut Barrier Function of Laying Hens.
Animals : an open access journal from MDPI , Volume: 11 Issue: 6 2021 May 24
Authors Zhang G,Wang H,Zhang J,Tang X,Raheem A,Wang M,Lin W,Liang L,Qi Y,Zhu Y,Jia Y,Cui S,Qin T
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
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
Pediococcus acidilactici Strains Improve Constipation Symptoms and Regulate Intestinal Flora in Mice.
Frontiers in cellular and infection microbiology , Volume: 11 2021
Authors Qiao Y,Qiu Z,Tian F,Yu L,Zhao J,Zhang H,Zhai Q,Chen W
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
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
Effects of Banana Resistant Starch on the Biochemical Indexes and Intestinal Flora of Obese Rats Induced by a High-Fat Diet and Their Correlation Analysis.
Frontiers in bioengineering and biotechnology , Volume: 9 2021
Authors Fu J,Wang Y,Tan S,Wang J
Prevention and Alleviation of Dextran Sulfate Sodium Salt-Induced Inflammatory Bowel Disease in Mice With *Bacillus subtilis*-Fermented Milk via Inhibition of the Inflammatory Responses and Regulation of the Intestinal Flora.
Frontiers in microbiology , Volume: 11 2020
Authors Zhang X,Tong Y,Lyu X,Wang J,Wang Y,Yang R
Effects of Iron and Zinc Biofortified Foods on Gut Microbiota In Vivo (*Gallus gallus*): A Systematic Review.
Nutrients , Volume: 13 Issue: 1 2021 Jan 9
Authors Juste Contin Gomes M,Stampini Duarte Martino H,Tako E
Blueberry and cranberry anthocyanin extracts reduce bodyweight and modulate gut microbiota in C57BL/6J mice fed with a high-fat diet.
European journal of nutrition , 2021 Jan 3
Authors Liu J,Hao W,He Z,Kwek E,Zhu H,Ma N,Ma KY,Chen ZY
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
Food Addiction and Tobacco Use Disorder: Common Liability and Shared Mechanisms.
Nutrients , Volume: 12 Issue: 12 2020 Dec 15
Authors Zawertailo L,Attwells S,deRuiter WK,Le TL,Dawson D,Selby P
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
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

[Dynamic gut microbiome changes to low-iron challenge.](#)

Applied and environmental microbiology , 2020 Nov 13

Authors Coe GL,Pinkham NV,Celis AI,Johnson C,DuBois JL,Walk ST

[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

[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

[Cultural isolation of spore-forming bacteria in human feces using bile acids.](#)

Scientific reports , Volume: 10 Issue: 1 2020 Sep 14

Authors Tanaka M,Onizuka S,Mishima R,Nakayama J

[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,Boscher D,Garcia-Campayo V,Wagner J,Parkhill J,Duncan SH,Flint HJ

[Gut microbiome and osteoporosis: a review.](#)

Bone & joint research , Volume: 9 Issue: 8 2020 Aug

Authors Li S,Mao Y,Zhou F,Yang H,Shi Q,Meng B

[Lactobacillus johnsonii BS15 Prevents Psychological Stress-Induced Memory Dysfunction in Mice by Modulating the Gut-Brain Axis.](#)

Frontiers in microbiology , Volume: 11 2020

Authors Wang H,Sun Y,Xin J,Zhang T,Sun N,Ni X,Zeng D,Bai Y

[Functional modulation of gut microbiota in diabetic rats following dietary intervention with pistachio nuts \(*Pistacia vera* L.\).](#)

Metabolism open , Volume: 7 2020 Sep

Authors Yanni AE,Mitropoulou G,Prapa I,Agrogiannis G,Kostomitsopoulos N,Bezirtzoglou E,Kourkoutas Y,Karathanos VT

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

Microbiology insights , Volume: 13 2020

Authors Badger-Ernika LI,AJaziri ZY,Almulhim CF,Aldrees AS,AIshakhs ZH,AIAithan RI,Alothman FA

[Nuts and their Effect on Gut Microbiota, Gut Function and Symptoms in Adults: A Systematic Review and Meta-Analysis of Randomised Controlled Trials.](#)

Nutrients , Volume: 12 Issue: 8 2020 Aug 6

Authors Creedon AC,Hung ES,Berry SE,Whelan K

[Effects of banana powder \(*Musa acuminata* Colla\) on the composition of human fecal microbiota and metabolic output using in vitro fermentation.](#)

Journal of food science , Volume: 85 Issue: 8 2020 Aug

Authors Tian DD,Xu XQ,Peng Q,Zhang YW,Zhang PB,Qiao Y,Shi B

[Effect of banana pulp dietary fibers on metabolic syndrome and gut microbiota diversity in high-fat diet mice.](#)

Journal of food biochemistry , 2020 Jul 14

Authors Wei G,Ye Y,Yan X,Chao X,Yang F,Wang M,Zhang W,Yuan C,Zeng Q

[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

Thyroid-Gut-Axis: How Does the Microbiota Influence Thyroid Function?**Nutrients** , Volume: 12 Issue: 6 2020 Jun 12

Authors Knezevic J, Starchl C, Trnava Berisha A, Amrein K

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

Alleviating effects of noni fruit polysaccharide on hepatic oxidative stress and inflammation in rats under a high-fat diet and its possible mechanisms.**Food & function** , Volume: 11 Issue: 4 2020 Apr 30

Authors Yang X, Mo W, Zheng C, Li W, Tang J, Wu X

Effect of resveratrol on intestinal tight junction proteins and the gut microbiome in high-fat diet-fed insulin resistant mice.**International journal of food sciences and nutrition** , Volume: 71 Issue: 8 2020 Dec

Authors Chen K, Zhao H, Shu L, Xing H, Wang C, Lu C, Song G

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

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

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

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

Anti-inflammatory activity of alkali-soluble polysaccharides from Arctium lappa L. and its effect on gut microbiota of mice with inflammation.**International journal of biological macromolecules** , Volume: 154 2020 Jul 1

Authors Zhang X, Zhang N, Kan J, Sun R, Tang S, Wang Z, Chen M, Liu J, Jin C

Moringa Oleifera Oil Modulates Rumen Microflora to Mediate In Vitro Fermentation Kinetics and Methanogenesis in Total Mix Rations.**Current microbiology** , Volume: 77 Issue: 7 2020 Jul

Authors Ebeid HM, Mengwei L, Kholif AE, Hassan FU, Lijuan P, Xin L, Chengjian Y

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

Effect of Dose and Timing of Burdock (*Arctium lappa*) Root Intake on Intestinal Microbiota of Mice.**Microorganisms** , Volume: 8 Issue: 2 2020 Feb 6

Authors Watanabe A, Sasaki H, Miyakawa H, Nakayama Y, Lyu Y, Shibata S

Anti-obesity effects of α -amylase inhibitor enriched-extract from white common beans (*Phaseolus vulgaris* L.) associated

with the modulation of gut microbiota composition in high-fat diet-induced obese rats.

Food & function , Volume: 11 Issue: 2 2020 Feb 26

Authors Shi Z,Zhu Y,Teng C,Yao Y,Ren G,Richel A

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,Esmaili H,Mazloun S,Ferns GA,Abdizadeh MF,Ghayour-Mobarhan M

Pistachio Consumption Alleviates Inflammation and Improves Gut Microbiota Composition in Mice Fed a High-Fat Diet.

International journal of molecular sciences , Volume: 21 Issue: 1 2020 Jan 6

Authors Terzo S,Mulè F,Caldara GF,Baldassano S,Puleio R,Vitale M,Cassata G,Ferrantelli V,Amato A

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

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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