

Microbiome Information for: Hashimoto's thyroiditis

For 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 Hashimoto's thyroiditis

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
Lachnospiraceae	family	High	186803	Lachnoclostridium	genus	Low	1506553
Lactobacillaceae	family	Low	33958	Lactonifactor	genus	High	420345
Akkermansia	genus	High	239934	Phascolarctobacterium	genus	High	33024
Alistipes	genus	High	239759	Prevotella	genus	Low	838
Bifidobacterium	genus	Low	1678	Romboutsia	genus	High	1501226
Bilophila	genus	Low	35832	Roseburia	genus	High	841
Blautia	genus	High	572511	Subdoligranulum	genus	High	292632
Dorea	genus	High	189330	Lachnospiraceae incertae sedis	no_rank	High	2840493
Faecalibacterium	genus	Low	216851	[Ruminococcus] torques	species	High	33039
Fusicatenibacter	genus	High	1407607	Anaerobutyricum hallii	species	High	39488
Klebsiella	genus	Low	570	Klebsiella pneumoniae	species	High	573

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.

Antibiotics annotated with [CFS] have been used with various degree of success with Myalgic Encephalomyelitis, Chronic Fatigue Syndrome, Chronic Lyme, Chronic Q-Fever and Long COVID conditions. Rotation of antibiotics with 3 weeks off between courses is recommended.

animal-based diet

barley 60 gram/day

berberine 1.5 gram/day

high-fat diets

inulin (prebiotic) 32 gram/day

ku ding cha tea

lactobacillus rhamnosus gg (probiotics) 48 BCFU/day

MINOCYCLINE (ANTIBIOTIC)[CFS]

safflower oil

salt (sodium chloride)

tetracycline (antibiotic)

vitamin a 25000 IU/day

Retail Probiotics

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

Dr.Max / ProtectMax ATB

SuperSmart / Lactobacillus rhamnosus GG

spain (es) / suerobivos

culturelle / culturelle

spain (es) / bivos

blackmore (au) / probiotics+ eczema relief

PureGG

Ombre / Heart Health

spain (es) / kaleidon

digestive care

spain (es) / ns florabiotic instant

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.

acarbose,(prescription)	lactobacillus casei (probiotics)
acetylsalicylic acid,aspirin	lactulose
amikacin hydrate (antibiotic)	linseed(flaxseed)
apple	mediterranean diet
arabinogalactan (prebiotic)	navy bean
aztreonam (antibiotic)	norfloxacin (antibiotic)
bacillus subtilis (probiotics)	oligosaccharides (prebiotic)
Cacao	partially hydrolyzed guar gum
carboxymethyl cellulose (prebiotic)	pectin
fat	quercetin
fructo-oligosaccharides (prebiotic)	raffinose(sugar beet)
galacto-oligosaccharides (prebiotic)	resistant starch
gentamicin (antibiotic)s	resveratrol (grape seed/polyphenols/red wine)
Glucomannan	rifaximin (antibiotic)s
glycyrrhizic acid (licorice)	sesame cake/meal
gum arabic (prebiotic)	soy
Human milk oligosaccharides (prebiotic, Holigos, Stachyose)	Vitamin B9,folic acid
jerusalem artichoke (prebiotic)	whey
lactobacillus acidophilus (probiotics)	zinc

Sample of Literature Used

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

[Analysis of gut microbiota diversity in Hashimoto`s thyroiditis patients.](#)

BMC microbiology , Volume: 22 Issue: 1 2022 Dec 24

Authors Liu J,Qin X,Lin B,Cui J,Liao J,Zhang F,Lin Q

[Detection of Alterations in the Gut Microbiota and Intestinal Permeability in Patients With Hashimoto Thyroiditis.](#)

Frontiers in immunology , Volume: 12 2021

Authors Cayres LCF,de Salis LV,Rodrigues GSP,Lengert AVH,Biondi APC,Sargentini LDB,Brisotti JL,Gomes E,de Oliveira GLV

[The Composition of Gut Microbiota in Patients Bearing Hashimoto`s Thyroiditis with Euthyroidism and Hypothyroidism.](#)

International journal of endocrinology , Volume: 2020 2020

Authors Liu S,An Y,Cao B,Sun R,Ke J,Zhao D

[Thyroid-Gut-Axis: How Does the Microbiota Influence Thyroid Function?](#)

Nutrients , Volume: 12 Issue: 6 2020 Jun 12

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

[Acute Suppurative Thyroiditis with Thyroid Abscess by *Klebsiella pneumoniae*: An Unusual Presentation.](#)

Indian journal of critical care medicine : peer-reviewed, official publication of Indian Society of Critical Care Medicine , Volume: 22 Issue: 8 2018 Aug

Authors Nasa P,Mathew KG,Sanker R,Chaudhary S,Singhal V

[Alterations of the Gut Microbiota in Hashimoto`s Thyroiditis Patients.](#)

Thyroid : official journal of the American Thyroid Association , Volume: 28 Issue: 2 2018 Feb

Authors Zhao F,Feng J,Li J,Zhao L,Liu Y,Chen H,Jin Y,Zhu B,Wei Y

[Comparing the Influences of Metformin and Berberine on the Intestinal Microbiota of Rats With Nonalcoholic Steatohepatitis.](#)

In vivo (Athens, Greece) , Volume: 37 Issue: 5 2023 Sep-Oct

Authors Chen D,Xiong J,Chen G,Zhang Z,Liu Y,Xu J,Xu H

[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

[Bile Acids and Short-Chain Fatty Acids Are Modulated after Onion and Apple Consumption in Obese Zucker Rats.](#)

Nutrients , Volume: 15 Issue: 13 2023 Jul 5

Authors Balderas C,de Ancos B,Sánchez-Moreno C

[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

[Galactooligosaccharides ameliorate dietary advanced glycation end product-induced intestinal barrier damage in C57BL/6 mice by modulation of the intestinal microbiome.](#)

Food & function , 2022 Dec 20

Authors Nie C,Xie X,Liu H,Yuan X,Ma Q,Tu A,Zhang M,Chen Z,Li J

[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

[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

[Licorice extract ameliorates hyperglycemia through reshaping gut microbiota structure and inhibiting TLR4/NF- \$\kappa\$ 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

[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

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

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

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

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

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

The role of genotype and diet in shaping gut microbiome in a genetic Vitamin A deficient mouse model.

Journal of genetics and genomics = Yi chuan xue bao , 2021 Sep 16

Authors Xu J,Zhang JN,Sun BH,Liu Q,Ma J,Zhang Q,Liu YX,Chen N,Chen F

Selenium-Enriched Lactobacillus acidophilus Ameliorates Dextran Sulfate Sodium-Induced Chronic Colitis in Mice by Regulating Inflammatory Cytokines and Intestinal Microbiota.

Frontiers in medicine , Volume: 8 2021

Authors Wu Z,Pan D,Jiang M,Sang L,Chang B

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,Luis AJ

Pharmacological benefits of Acacia against metabolic diseases: intestinal-level bioactivities and favorable modulation of gut microbiota.

Archives of physiology and biochemistry , 2021 Aug 19

Authors Saha MR,Dey P

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

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

Effects of Bacillus subtilis and Bacillus licheniformis on growth performance, immunity, short chain fatty acid production, antioxidant capacity, and cecal microflora in broilers.

Poultry science , Volume: 100 Issue: 9 2021 Jun 26

Authors Xu Y,Yu Y,Shen Y,Li Q,Lan J,Wu Y,Zhang R,Cao G,Yang C

[Intestinal Microbiota Mediates High-Fructose and High-Fat Diets to Induce Chronic Intestinal Inflammation.](#)

Frontiers in cellular and infection microbiology , Volume: 11 2021

Authors Tan R,Dong H,Chen Z,Jin M,Yin J,Li H,Shi D,Shao Y,Wang H,Chen T,Yang D,Li J

[Habitual Dietary Intake Affects the Altered Pattern of Gut Microbiome by Acarbose in Patients with Type 2 Diabetes.](#)

Nutrients , Volume: 13 Issue: 6 2021 Jun 19

Authors Takewaki F,Nakajima H,Takewaki D,Hashimoto Y,Majima S,Okada H,Senmaru T,Ushigome E,Hamaguchi M,Yamazaki M,Tanaka Y,Nakajima S,Ohno H,Fukui M

[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

[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

[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

[Gut Microbiota Induced by Pterostilbene and Resveratrol in High-Fat-High-Fructose Fed Rats: Putative Role in Steatohepatitis Onset.](#)

Nutrients , Volume: 13 Issue: 5 2021 May 20

Authors Milton-Laskibar I,Marcos-Zambrano LJ,Gómez-Zorita S,Fernández-Quintela A,Carrillo de Santa Pau E,Martínez JA,Portillo MP

[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

[Cloudy Apple Juice Fermented by *Lactobacillus* Prevents Obesity via Modulating Gut Microbiota and Protecting Intestinal Tract Health.](#)

Nutrients , Volume: 13 Issue: 3 2021 Mar 17

Authors Han M,Zhang M,Wang X,Bai X,Yue T,Gao Z

[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

[Navy Bean Supplementation in Established High-Fat Diet-Induced Obesity Attenuates the Severity of the Obese Inflammatory Phenotype.](#)

Nutrients , Volume: 13 Issue: 3 2021 Feb 26

Authors Monk JM,Wu W,Lepp D,Pauls KP,Robinson LE,Power KA

[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

[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

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,Anglenius H,Maukonen J

Impact of Mediterranean Diet on Disease Activity and Gut Microbiota Composition of Rheumatoid Arthritis Patients.

Microorganisms , Volume: 8 Issue: 12 2020 Dec 14

Authors Picchianti Diamanti A,Panebianco C,Salerno G,Di Rosa R,Salemi S,Sorgi ML,Meneguzzi G,Mariani MB,Rai A,Iacono D,Sesti G,Pazienza V,Laganà B

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

Alginate- and Gelatin-Coated Apple Pieces as Carriers for Bifidobacterium animalis subsp. lactis DSM 10140.

Frontiers in microbiology , Volume: 11 2020

Authors Campaniello D,Bevilacqua A,Speranza B,Sinigaglia M,Corbo MR

Enterococcus faecium R0026 combined with Bacillus subtilis R0179 prevent obesity-associated hyperlipidaemia and modulate gut microbiota in C57BL/6 mice.

Journal of microbiology and biotechnology , 2020 Oct 20

Authors Huang J,Huang J,Yin T,Lv H,Zhang P,Li H

Effects of Non-insulin Anti-hyperglycemic Agents on Gut Microbiota: A Systematic Review on Human and Animal Studies.

Frontiers in endocrinology , Volume: 11 2020

Authors Cao TT,Wu KC,Hsu JL,Chang CS,Chou C,Lin CY,Liao YM,Lin PC,Yang LY,Lin HW

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

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

Increased Faecalibacterium abundance is associated with clinical improvement in patients receiving rifaximin treatment.

Beneficial microbes , Volume: 11 Issue: 6 2020 Oct 12

Authors Ponziani FR,Scaldaferri F,De Siena M,Mangiola F,Matteo MV,Pecere S,Petito V,Sterbini FP,Lopetuso LR,Masucci L,Cammarota G,Sanguinetti M,Gasbarrini A

Characterizing the gut microbiota in females with infertility and preliminary results of a water-soluble dietary fiber intervention study.

Journal of clinical biochemistry and nutrition , Volume: 67 Issue: 1 2020 Jul

Authors Komiya S,Naito Y,Okada H,Matsuo Y,Hirota K,Takagi T,Mizushima K,Inoue R,Abe A,Morimoto Y

Effects of reducing dietary crude protein concentration and supplementation with laminarin or zinc oxide on the faecal scores and colonic microbiota in newly weaned pigs.

Journal of animal physiology and animal nutrition , 2020 Aug 6

Authors Rattigan R,Sweeney T,Vigors S,Rajauria G,O`Doherty JV

Dietary supplementation with Bacillus subtilis DSM 32315 alters the intestinal microbiota and metabolites in weaned piglets.

Journal of applied microbiology , 2020 Jul 6

Authors Ding H,Zhao X,Ma C,Gao Q,Yin Y,Kong X,He J

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, Tmava Berisha A, Amrein K

The *in vitro* Effect of Fibers With Different Degrees of Polymerization on Human Gut Bacteria.

Frontiers in microbiology , Volume: 11 2020

Authors Chen M, Fan B, Liu S, Imam KMSU, Xie Y, Wen B, Xin F

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

Prebiotic Effects of Partially Hydrolyzed Guar Gum on the Composition and Function of the Human Microbiota-Results from the PAGODA Trial.

Nutrients , Volume: 12 Issue: 5 2020 Apr 28

Authors Reider SJ, Moosmang S, Tragust J, Trgovec-Greif L, Tragust S, Perschy L, Przysiecki N, Sturm S, Tilg H, Stuppner H, Rattei T, Moschen AR

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, Sergeev OV

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

Beneficial effects of flaxseed polysaccharides on metabolic syndrome via gut microbiota in high-fat diet fed mice.

Food research international (Ottawa, Ont.) , Volume: 131 2020 May

Authors Yang C, Xu Z, Deng Q, Huang Q, Wang X, Huang F

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

Berberine combined with stachyose induces better glycometabolism than berberine alone through modulating gut microbiota and fecal metabolomics in diabetic mice.

Phytotherapy research : PTR , 2019 Dec 13

Authors Li CN, Wang X, Lei L, Liu MZ, Li RC, Sun SJ, Liu SN, Huan Y, Zhou T, Liu Q, Cao H, Bai GL, Han YW, Shen ZF

Steatosis and gut microbiota dysbiosis induced by high-fat diet are reversed by 1-week chow diet administration.

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

Authors Safari Z, Monnoye M, Abuja PM, Mariadassou M, Kashofer K, Gérard P, Zatloukal K

Dietary resistant starch modifies the composition and function of caecal microbiota of broilers.

Journal of the science of food and agriculture , Volume: 100 Issue: 3 2020 Feb

Authors Zhang Y, Liu Y, Li J, Xing T, Jiang Y, Zhang L, Gao F

The effect of inulin and resistant maltodextrin on weight loss during energy restriction: a randomised, placebo-controlled, double-blinded intervention.

European journal of nutrition , 2019 Oct 11

Authors Hess AL, Benítez-Páez A, Blædel T, Larsen LH, Iglesias JR, Madera C, Sanz Y, Larsen TM, MyNewGut Consortium.

[Lactulose drives a reversible reduction and qualitative modulation of the faecal microbiota diversity in healthy dogs.](#)

Scientific reports, Volume: 9 Issue: 1 2019 Sep 16

Authors Ferreira MDF, Salavati Schmitz S, Schoenebeck JJ, Clements DN, Campbell SM, Gaylor DE, Mellanby RJ, Gow AG, Salavati M

[Partially hydrolyzed guar gum alleviates small intestinal mucosal damage after massive small bowel resection along with changes in the intestinal microbiota.](#)

Journal of pediatric surgery, Volume: 54 Issue: 12 2019 Dec

Authors Fujii T, Chiba Y, Nakayama-Imaohji H, Onishi S, Tanaka A, Katami H, Kaji T, Jeiri S, Miki T, Ueno M, Kuwahara T, Shimono R

[Effect of Repeated Consumption of Partially Hydrolyzed Guar Gum on Fecal Characteristics and Gut Microbiota: A Randomized, Double-Blind, Placebo-Controlled, and Parallel-Group Clinical Trial.](#)

Nutrients, Volume: 11 Issue: 9 2019 Sep 10

Authors Yasukawa Z, Inoue R, Ozeki M, Okubo T, Takagi T, Honda A, Naito Y

[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

[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

[High-fat diet reduces the level of secretory immunoglobulin A coating of commensal gut microbiota.](#)

Bioscience of microbiota, food and health, Volume: 38 Issue: 2 2019

Authors Muhomah TA, Nishino N, Katsumata E, Haoming W, Tsuruta T

[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

[Arabinoxylan from Argentinian whole wheat flour promote the growth of Lactobacillus reuteri and Bifidobacterium breve.](#)

Letters in applied microbiology, Volume: 68 Issue: 2 2019 Feb

Authors Paesani C, Salvucci E, Moiraghi M, Fernandez Canigia L, Pérez GT

[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

[Inulin-type fructans improve active ulcerative colitis associated with microbiota changes and increased short-chain fatty acids levels.](#)

Gut microbes, 2018 Nov 5

Authors Valcheva R, Koleva P, Martínez I, Walter J, Gänzle MG, Dieleman LA

[Prevalence and Antimicrobial Susceptibility of Bacterial Uropathogens Isolated from Pediatric Patients at Yekati 12](#)

Hospital Medical College, Addis Ababa, Ethiopia.

International journal of microbiology , Volume: 2018 2018

Authors Merga Duffa Y, Terfa Kitila K, Mamuye Gebretsadik D, Bitew A

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

Behavioral response to fiber feedings cohort-dependent and associated with gut microbiota composition in mice.

Behavioural brain research , Volume: 359 2019 Feb 1

Authors Mailing LJ, Allen JM, Pence BD, Rytych J, Sun Y, Bhattacharya TK, Park P, Cross TL, McCusker RH, Swanson KS, Fahey GC, Rhodes JS, Kelley KW, Johnson RW, Woods JA

The Effects of Berberine on the Gut Microbiota in Apc^{min/+} Mice Fed with a High Fat Diet.

Molecules (Basel, Switzerland) , Volume: 23 Issue: 9 2018 Sep 8

Authors Wang H, Guan L, Li J, Lai M, Wen X

[Microbiological profiles of pathogens causing nosocomial bacteremia in 2011, 2013 and 2016].

Sheng wu gong cheng xue bao = Chinese journal of biotechnology , Volume: 34 Issue: 8 2018 Aug 25

Authors Wang X, Zhao C, Li H, Chen H, Jin L, Wang Z, Liao K, Zeng J, Xu X, Jin Y, Su D, Liu W, Hu Z, Cao B, Chu Y, Zhang R, Luo Y, Hu B, Wang H

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

Pectin Alleviates High Fat (Lard) Diet-Induced Nonalcoholic Fatty Liver Disease in Mice: Possible Role of Short-Chain Fatty Acids and Gut Microbiota Regulated by Pectin.

Journal of agricultural and food chemistry , 2018 Jul 20

Authors Li W, Zhang K, Yang H

Acute Exposure to Commonly Ingested Emulsifiers Alters Intestinal Mucus Structure and Transport Properties.

Scientific reports , Volume: 8 Issue: 1 2018 Jul 3

Authors Lock JY, Carlson TL, Wang CM, Chen A, Carrier RL

Gut Microbiome Composition in Non-human Primates Consuming a Western or Mediterranean Diet.

Frontiers in nutrition , Volume: 5 2018

Authors Nagpal R, Shively CA, Appt SA, Register TC, Michalson KT, Vitolins MZ, Yadav H

Oral hydroxysafflor yellow A reduces obesity in mice by modulating the gut microbiota and serum metabolism.

Pharmacological research , 2018 May 19

Authors Liu J, Yue S, Yan Z, Feng W, Meng X, Wang A, Peng C, Wang C, Yan D

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

Prebiotic Mannan-Oligosaccharides Augment the Hypoglycemic Effects of Metformin in Correlation with Modulating Gut Microbiota.

Journal of agricultural and food chemistry , Volume: 66 Issue: 23 2018 Jun 13

Authors Zheng J, Li H, Zhang X, Jiang M, Luo C, Lu Z, Xu Z, Shi J

Modifications in gut microbiota and fermentation metabolites in the hindgut of rats after the consumption of galactooligosaccharide glycosylated with a fish peptide.

Food & function , Volume: 9 Issue: 5 2018 May 1

Authors Jin W, Han K, Dong S, Yang Y, Mao Z, Su M, Zeng M

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