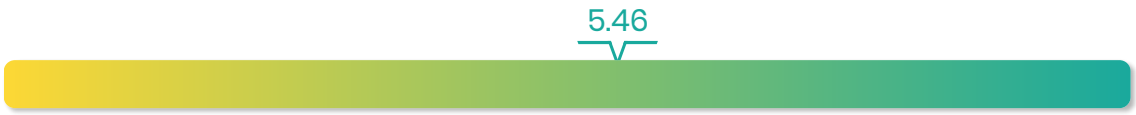
PDF-Report for Demo

Overview

Your intestinal flora balance is outside the reference range 3.49 out of 10

The balance of your intestinal flora depends both on the diversity of your bacteria and the number of harmful bacteria. A balanced intestinal flora typically has many different species - and therefore a high diversity - and the number of harmful bacteria is low.

Your diversity index is within the reference range 5.46 out of 10



The more diverse your bacteria species i.e. the higher the diversity, the more varied are their functions. Therefore, the more different types of bacteria that are present in your intestinal flora, the better your metabolism works.

Your proteobacterial index is outside the reference range 8.48

A healthy intestinal flora should contain only a small proportion of proteobacteria. Because many potential pathogens belong to this bacterial strain. However, having a small number of these bacteria is perfectly normal.

Clues

The number of proteobacteria in your sample is higher than the reference range.
The number of bacteria which can cause inflammation is higher than the reference range.

Explanation of the color scales

The colors used do not represent a diagnosis but serve only to visualize the results of the analysis. Green and ✓ represents a laboratory value within the reference range; yellow and “conspicuous” represents a lab value that is lower or higher than the reference range. A laboratory value alone does not tell us whether a person is ill or healthy. People with laboratory values outside the reference range can still be healthy and people with laboratory values within the reference range can still be ill.

Interpretation overview

Gut lining protection

Your ratio is good.

conspicuous — good ✓

Inflammation indicators

Your ratio is good.

conspicuous — good ✓

Constipation indicators

Your ratio is good.

conspicuous — good ✓

The internal mucosal barrier and immunity

Your ratio is conspicuous.

conspicuous — good ✓

Cytotoxins

Your ratio is good.

conspicuous — good ✓

Appetite and the cholesterol level

Your ratio is good.

conspicuous — good ✓

The energy metabolism and hyperacidity

Your ratio is conspicuous.

conspicuous — good ✓

Intestinal flora type

Your intestinal flora type: 1

Caloric intake

Your caloric intake is: normal

Strength of the immune system

- **Regulating the immune system**
- **Production of vitamin B12**
- **Production of vitamin K**

Nutrition & digestion

- **Proteins and fat**
- **Carbohydrates**
- **Fibers**

Intolerances

- **Lactose, fructose and allergies**

Body weight

- **Weight loss**

The top ten bacteria

Positive bacteria

Name	Lower threshold	Upper threshold	Your ratio	Description
Akkermansia	0.1	5	0	• Maintain the intestinal barrier & stimulate the metabolism • Important against inflammation and overweight
Bacteroides	5	32	31.69	• Help the intestine control the spread of inflammation • Can prevent damage to the intestinal mucosa
Bifidobacterium	0.2	7	5.29	• Can metabolize milk & fiber • Protect against inflammation and pathogens & prevent cardiac damage
Christensenella	0.01	0.5	0	• Have a direct impact on body weight • Typically found in very slim individuals & can be inherited
Eubacterium	0.01	0.3	0	
Faecalibacterium	0.2	10	3.06	• Metabolize fiber to butyrate, which has many positive effects on health • Can protect the intestine against chronic inflammatory diseases
Lactobacillus	0.01	2	0	• • Provide aid for good microbes and combat pathogens • Can counteract inflammation & lower cholesterol levels • Can have a positive effect on mood & reduce anxiety disorders
Ruminococcus	2	9	0.11	• Can cure infectious diarrhea • Can reduce the risk of developing diabetes or bowel cancer

Potenziell negative Bakterien

The following bacteria can have a negative effect on your health if too many of them occur in your intestine. Attention - as INTEST.pro is a lifestyle product and not a medical product with an associated diagnosis, no potentially pathogenic bacteria are listed here. Should your sample contain such bacteria, a comment box will be shown, which emphasizes that you should closely study the detailed report, which lists all bacteria found, including those that are potentially pathogenic.

Name	Lower threshold	Upper threshold	Your ratio	Description
Enterobacteriaceae	0	1.3	0.01	• Many pathogens belong to this family of bacteria Can cause diarrhea and produce toxins that damage the intestine, cause intestinal complaints and affect well-being
Enterococcus	0.01	1.5	0	• Not all representatives of this genus are harmful although it does include some pathogens • Can trigger disease, particularly in people who have an extremely weakened immune system (e.g. after chemotherapy)

Recommendations

Body weight

Low weight

Regular consumption of bitter foods boosts the production of bile acid, which is associated with improved fat metabolism. You should also help your 'good' intestinal microbes by regularly eating high-fiber foods. These foods, in combination with the right intestinal bacteria, provide you with valuable nutrients while calorie intake is very low. In addition, you should "feed" the microbes with fiber-rich foods that can help you lose weight, e.g. by regulating your appetite, making you contributing to faster satiation and preventing chronic inflammation. Initial studies have shown that polyphenol-rich foods can also support weight loss. You can also supplement your intestinal flora with pre- and probiotic products, which can also help you lose weight when accompanied by a calorie-reduced diet and sufficient exercise.

Nutrition

Protein and fat

You don't have enough microbes to help your gut digest proteins and fats. To help you digest foods containing proteins and fats better, it is important that you introduce these microbes into your intestines or increase their number. Therefore, you should gradually include foods rich in proteins and "good" fats in your diet. This is how you can train your microbiome and help it to become more diverse. The consumption of foods containing proteins such as fish, beans, soy foods and nuts is recommended, as is regular physical exercise such as aerobics and athletics also supports these intestinal microbes.

Carbohydrates

The microbes that help you digest carbohydrates are missing from the gut. There are several ways to better support your intestines. On the one hand, it helps if you increase your general intestinal flora diversity with the so-called “Mediterranean diet. On the other hand, you can gradually incorporate more carbohydrate-rich foods in your diet in order to train your microbiome. You don't need to eat more pasta or potatoes. There are also many vegetable and fruit varieties with a high carbohydrate content, such as avocados, pears, berries, artichokes, figs, potatoes, bananas and Brussels sprouts. Pulses such as lentils are also well suited.

Intolerances

Allergies and food intolerance

Your diet needs to be rich in fiber so that microbes can convert it into short-chain fatty acids. This allows you to colonise your intestines with more lactobacilli and bifidobacteria, which, with their many different properties, will help you to digest lactose and fructose and avoid allergic reactions. These fibers are found in prebiotic foods such as bananas, kimchi, lentils, chickpeas, green beans and the like. It can also help you to consume additional prebiotic and probiotic products that will place large amounts of lactobacilli and bifidobacteria in your intestines.

Strength of the immune system

Immune homeostasis

You should consume dairy products such as yoghurt, kefir and buttermilk and soy drinks regularly because they contain the beneficial lactobacilli and bifidobacilli that support your immune system. You can also take probiotic dietary supplements that contain these bacteria and, best of all, fermentable prebiotics (such as inulin). These so-called “synbiotics” combine living bacterial cultures with prebiotics, the food for your beneficial bacteria.

Strength of the immune system

Vitamin B12 production

Vitamin B12 has a direct influence on our immune system. It helps the body produce white blood cells. These in turn are our soldiers in the fight against pathogens. However, your body cannot make vitamin B12 itself, it is produced by bacteria. Therefore, we recommend that you eat many dairy products like yoghurt and kefir. You can also find vitamin B12 in foods such as meat, fish, eggs, mussels and poultry. Taking probiotics that contain Lactobacillus or vitamin B12 supplements can also help.

Vitamin K production

Vitamin K is needed by the human body for a variety of processes, including binding calcium in the bones. It makes an important contribution to our immune system. Our body is barely able to produce vitamin K, but there are a number of bacteria that do this job for us. Fermented dairy products such as kefir and yogurt are natural suppliers of the Lactococcus and Leuconostoc bacteria, which can improve vitamin K production in the intestines. In addition, vitamin K is contained in green leafy vegetables. You can also take probiotic dietary supplements containing bacterial strains that produce vitamin K.

Our tip: Support and improve your intestinal flora with probiotic food supplements

Vermehrungsfähige Bakterienkulturen in möglichst hoher Anzahl (z.B. 9,6 Milliarden / Tag):

Bifidobacterium bifidum, Bifidobacterium lactis, Lactobacillus acidophilus, Lactobacillus casei, Lactobacillus bulgaricus, Lactobacillus paracasei, Lactobacillus plantarum, Lactobacillus reuteri, Lactobacillus rhamnosus, Lactobacillus salivarius, Lactococcus lactis, Streptococcus thermophilus

Präbiotische Bestandteile: Inulin, Reisstärke

Vitamine: A, B1, B2, B3, B5, B6, B7, B9, B12

Further remarks:

Details

Gut lining protection

Your gut lining and the mucus are protective layers that prevent the penetration of potentially harmful pathogens, toxins and other contaminants into the bloodstream. Some gut bacteria may play role in the regeneration of your mucus layer and strengthening of the gut lining. In other words, it is beneficial for your gut health if the bacteria of these genera inhabit in your gut.

Akkermansia

Bacteroides

Bifidobacterium

Faecalibacterium

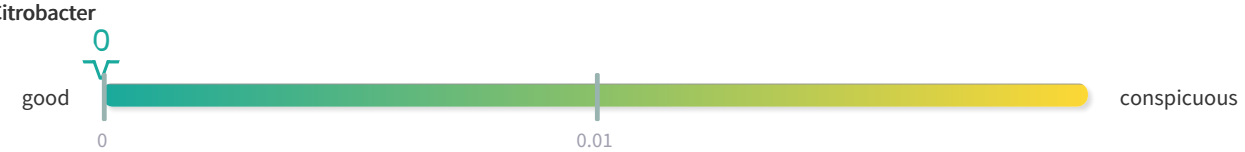
Ruminococcus

The human intestine is covered with a protective mucus layer, which plays an important role in the mucosal barrier system and is crucial for preventing adhesion and binding by many pathogens, toxins and other damaging agents present in the intestine. Various bacteria species of the gut, such as Akkermansia, Bacteroides, Bifidobacterium and Ruminococcus are known as mucin-degrading specialists. Up on degrading mucin, simple sugar is produced as a byproduct that act as nutritional sources for other bacteria that can utilize the mucus-derived sugars but lack the enzymes necessary for cleaving sugar linkages. Overall, mucin-degrading microbes stimulate production and secretion of mucin by our intestinal cells, which maintains an intact intestinal barrier. On the other hand, it provides byproducts for the beneficial microbes to survive. In this scenario, foods rich in dietary fiber improve and maintain the abundance of gut lining protective flora.

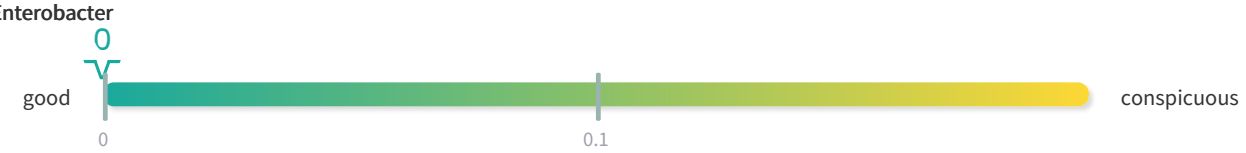
Inflammation indicators

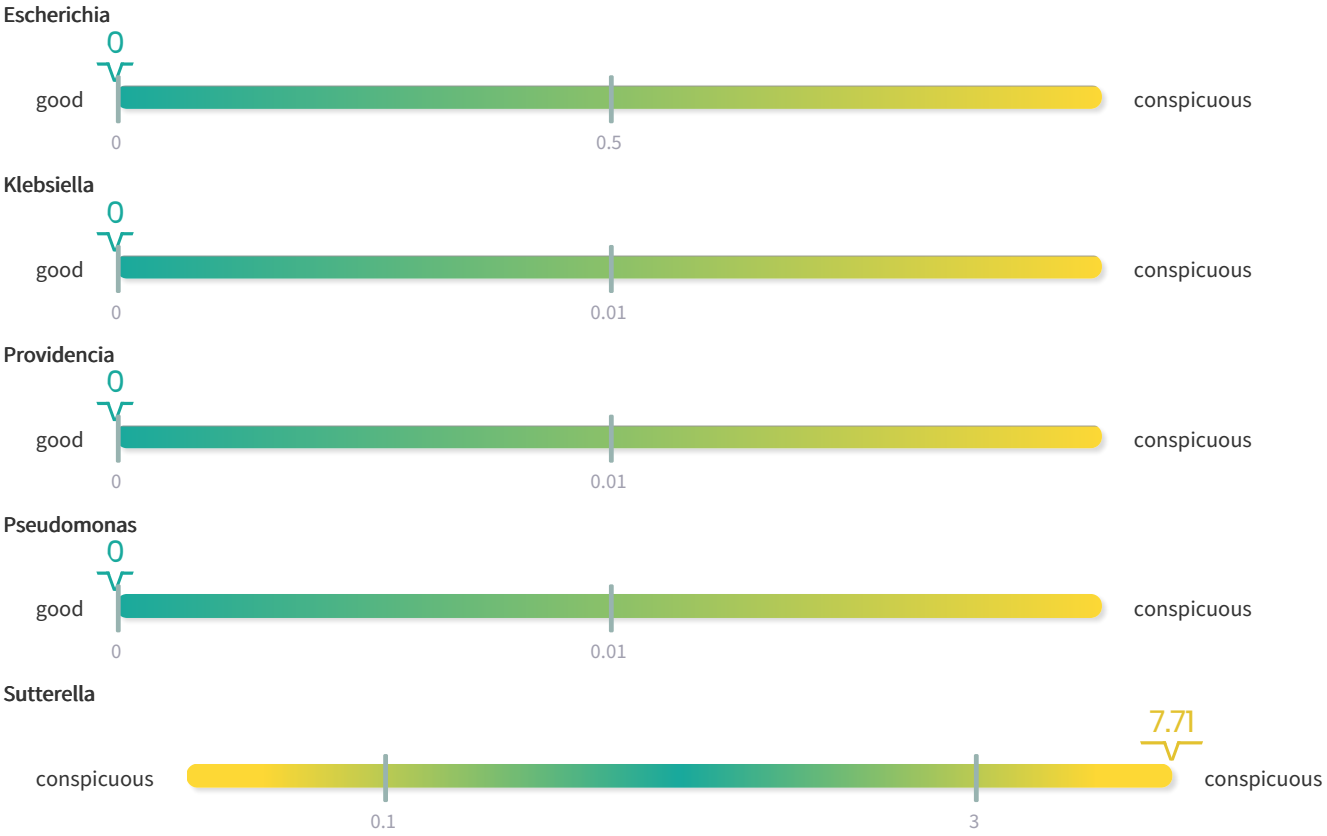
Some bacteria can stimulate inflammation in your bowel and even trigger chronic inflammatory processes outside your bowel. A greatly increased number of these bacteria can even lead to the so-called "leaky gut" syndrome, in which the intestine becomes "permeable" to pathogens and pollutants and can no longer absorb enough nutrients from food. Therefore, it is good if your intestines accommodate as few representatives of these genera as possible.

Citrobacter



Enterobacter

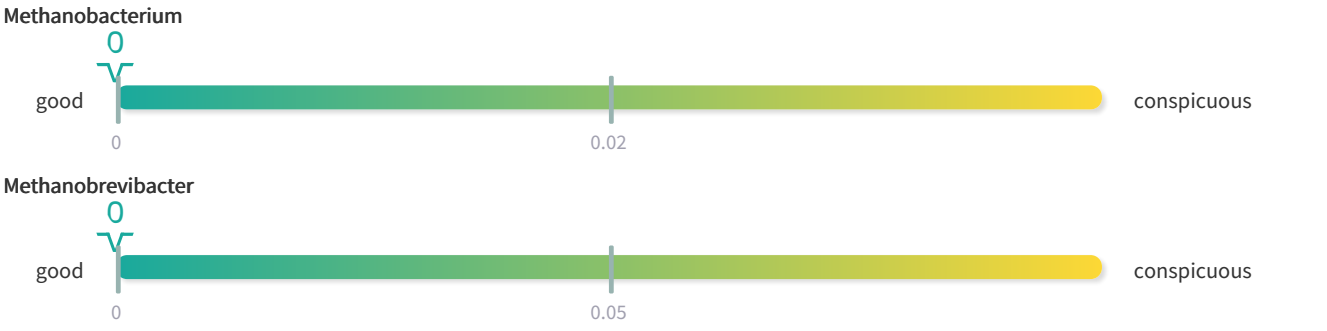




Some bacteria, such as Escherichia, Klebsiella, Pseudomonas, Enterobacter, Citrobacter, Sutterella and Providencia, may produce toxins that cause inflammation in the body. When they enter the body through the intestinal lining - as is the case with the "leaky gut" - they even initiate inflammatory processes outside the intestine, which can lead to a low-grade chronic inflammation ("silent inflammation"). Low-grade chronic inflammations are e.g. associated with metabolic disorders such as diabetes and obesity. In the "leaky gut" syndrome, the intestinal wall becomes "permeable" to pathogens, pollutants and the gut might not absorb enough nutrients from the diet properly.

Constipation indicators

Methane is a gas that is mainly produced by microorganisms during fermentation process. It might promote bloating and it potentially has an inhibitory effect on bowel motility, particularly slowing down of the intestinal transit time, which leads to constipation.



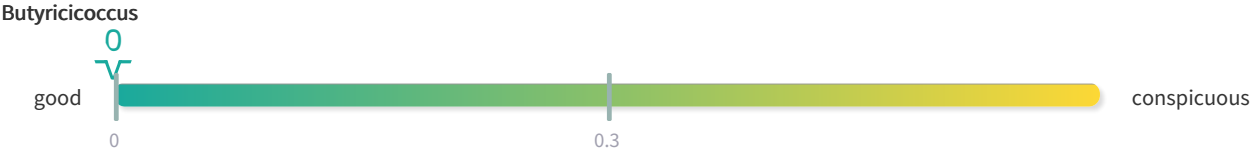
Methane is a gas produced by microorganisms of the Archaea domain, such as Methanobrevibacter and some Methanobacterium species. They are distinguished by their ability to convert bacterial fermentation products, such as hydrogen and carbon dioxide, into methane, thereby supplying the body with more energy. However, methane has an inhibiting effect on intestinal movement and shortens the time spent in the intestinal tract, resulting in constipation. Furthermore, these species may favour the formation of substances that cause inflammation.

The internal mucosal barrier and immunity

These bacteria help our intestines to keep the intestinal mucus wall intact, reduce intestinal inflammation and may even inhibit the proliferation of cancer cells and harmful bacteria. They do this indirectly by forming the short-chain fatty acid butyrate from dietary fibres. This substance is a true marvel; insufficient butyrate levels may promote not only inflammatory processes, but also a number of intestinal diseases.

Anaerostipes

Butyricicoccus



Butyrivibrio

Eubacterium

Faecalibacterium

Roseburia

Ruminococcus

Butyrate is a short-chain fatty acid that is produced when certain bacteria digest fiber from our food. The bacteria that produce butyrate include Ruminococcus, Eubacterium, Butyricicoccus, Butyrivibrio, Faecalibacterium and Roseburia. Butyrates have a very beneficial health effect as they improve and support the integrity of the intestinal barrier, reduce intestinal inflammation and even inhibit the proliferation of cancer cells and harmful bacteria. Butyrates are also the most important source of energy for our intestinal cells, which secrete the mucilage needed for a healthy intestinal mucus wall. If too few bacteria that produce butyrate live in the intestine, this will not only favor "leaky gut" syndrome, but also inflammatory disorders such as Crohn's disease, ulcerative colitis and irritable bowel syndrome, as well as food intolerances and celiac disease.

Appetite and the cholesterol level

These bacteria digest dietary fibers to form the short-chain fatty acids acetate and propionate. These two substances in turn help your intestines regulate your appetite and may even lower cholesterol levels. In this way they can make a positive overall contribution to preventing obesity.

Alistipes

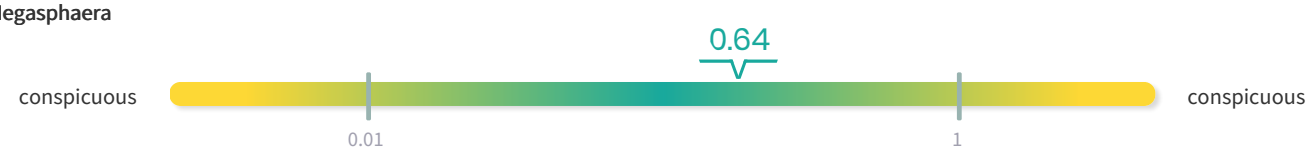
Bacteroides

Bifidobacterium

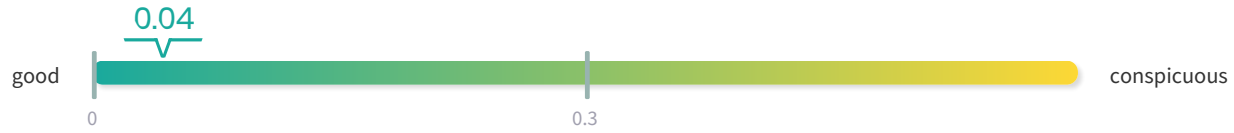
Coprococcus

Dorea

Megasphaera



Veillonella



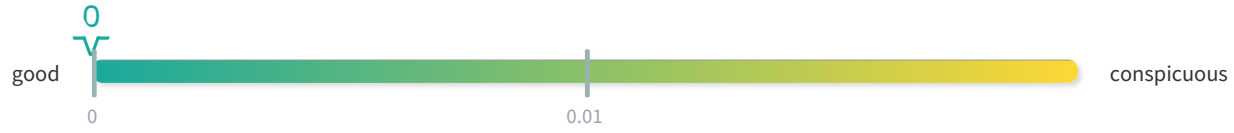
It is mainly the Bacteroides, Veillonella, Alistipes, Bifidobacterium, Dorea and Coprococcus bacteria that are able to produce the short-chain fatty acids acetate and propionate from dietary fibers. These microbial products are used by our bodies and perform a number of health-promoting functions, such as regulating appetite, maintaining body weight, lowering blood cholesterol levels, reducing fat and protecting the intestines from disease-causing bacteria.

Cytotoxins

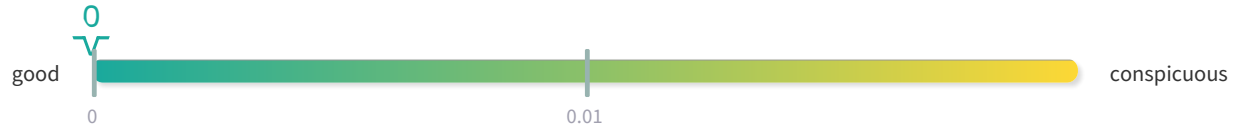
This is where you will find bacteria that process sulfates. These are harmful substances which we consume with our food, for example in the form of preservatives, and which have a damaging effect on our cells. This is because the degradation of sulfates produces cytotoxins. Butyrates, for example, which perform many health-promoting functions (see intestinal mucus wall and immunity) may be inhibited by this. We should therefore reduce the supply of sulfates as much as possible so that we do not need the bacteria that break them down.

Bilophila

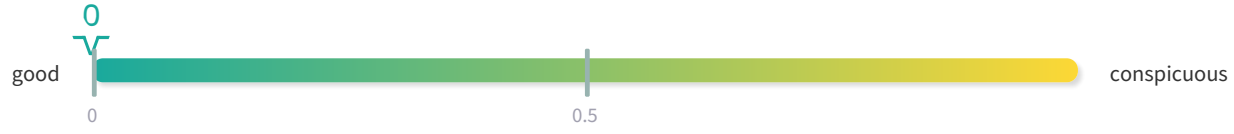
Desulfobacter



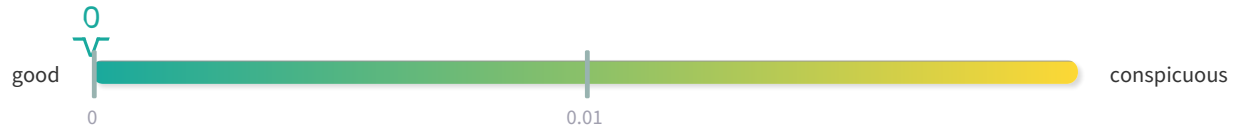
Desulfosarcina



Desulfovibrio



Desulfuromonas



Sulfates and sulfites are substances which we can absorb, for example, from preservatives in foodstuffs (bread, canned meat, dried fruit and wine). This is why around half of the human population harbors sulfate-reducing bacteria such as Desulfovibrio, Desulfomonas and Desulfobacter in their gastrointestinal tracts. However, sulfate-reducing bacteria do produce large amounts of sulfides during sulfate reduction, in particular hydrogen sulfide, which has a negative effect on our health as a cytotoxin. Hydrogen sulfide, for example, can inhibit butyrate, which is very important for a healthy intestine. The proliferation of sulfate-reducing bacteria can lead to such gastrointestinal conditions as chronic inflammation of the intestines. We need to reduce the numbers of these bacteria by consuming as little sulfate as possible in our food.

The energy metabolism and hyperacidity

These bacteria produce lactate, which has a positive effect on our health to some degree. For example, it helps the muscles to convert more energy, though it leads to hyperacidity in higher quantities. You should therefore have neither too many nor too few lactate-forming bacteria.

Bifidobacterium

Enterococcus

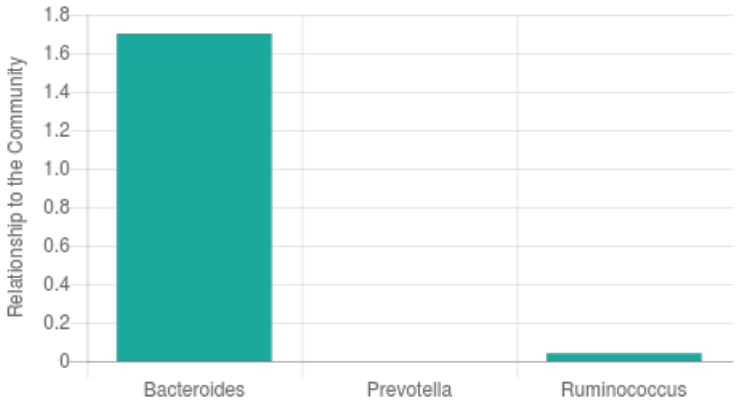
Lactobacillus

Streptococcus

Lactate is a fatty acid and an indispensable component of lactic acid. Lactic acid fermentation is a metabolic process in which carbohydrates are converted into energy and lactate. The most important genus of bacteria that ferment lactic acid is Lactobacillus, although other bacteria can also produce it. Lactic acid may inhibit the growth of other undesirable organisms, since pathogenic bacteria do not tolerate the acidic environment. Lactate is also employed by microbes to produce butyrate - another fatty acid with very positive effects on human health. Lactate is used as an energy substrate and promotes the energy yield in the muscle, especially during body movement. However, too much lactate can lead to acidosis, which causes a variety of physiological and intestinal problems.

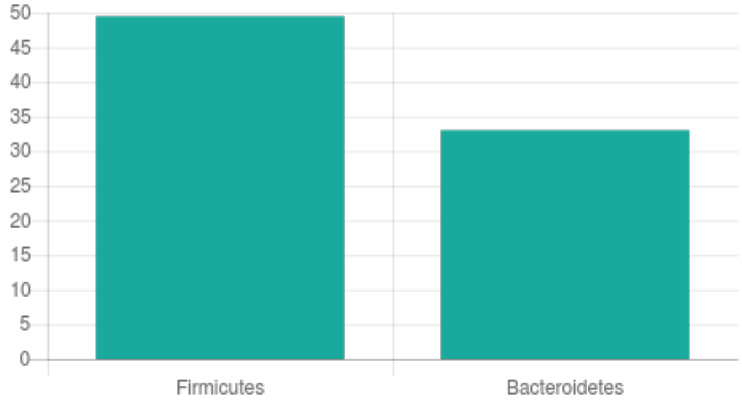
Intestinal flora type

Enterotype 1 is dominated by the Bacteroides. The Bacteroides enterotype are largely associated with animal protein, a variety of amino acids and saturated fats, which are all a typical of a western diet. These microbes therefore ensure that proteins and animal fats can be digested particularly well and absorbed through the large intestine and then utilized by the host as an energy source, so providing a major part of the host's daily energy requirements.



Caloric intake

Firmicutes and Bacteroidetes are the dominant phyla of bacteria in the human microbiome. Studies have shown that people with intestinal microbiomes that have more Firmicutes than Bacteroidetes are generally more likely to be obese. The explanation postulated for this finding is that Firmicutes produce a more complete metabolism of a given energy source than Bacteroidetes do, thus promoting a more efficient absorption of calories which subsequently leads to weight gain. In addition, the proportion of Firmicutes to Bacteroidetes decreases with weight loss on a low-calorie diet. Intestinal microbiomes in Western cultures usually have more Firmicutes and fewer Bacteroidetes, and the proportion of Firmicutes can increase with a higher caloric intake.



Strength of the immune system

Immune homeostasis

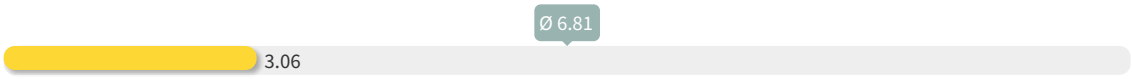
Bacteria also exist that can regulate the immune system with their anti-inflammatory properties and their ability to create vitamins.

Bifidobacterium

These bacteria can protect the intestines from inflammation and prevent damage to the heart and the spread of pathogens. Some types of Bifidobacterium can also suppress allergy-induced inflammatory reactions in intestinal tissue. In addition, studies have shown that Bifidobacteria can protect against tumors and increase the efficacy of cancer treatments.

Faecalibacterium

The Faecalibacterium genus is known for its anti-inflammatory qualities. It can protect us from inflammatory bowel diseases such as Crohn's disease.



Lactobacillus

Some types of Lactobacillus are capable of limiting inflammatory reactions in the intestine caused by pathogens by protecting the epithelial cells from damage. These little helpers can also change the bacterial population by allowing healthy microbes to multiply and by keeping the harmful microbes in check.

Vitamin B12 production

Vitamin B12 is not produced by humans themselves, but by microbes

Bacillus

Bacillus species, e.g Bacillus megaterium, can produce Vitamin B12, also known as cobalamin. It is important for the normal functioning of the brain, nervous system and the formation of red blood cells. Furthermore, it is involved in the metabolism of every cell of the human body, especially affecting DNA synthesis as well as the fatty acid and amino acid metabolisms.

Ø 0.001

0

Lactobacillus

Food-fermenting Lactobacillus species can be subjected to a "de novo" synthesis and supply vitamins. This is important since humans lack the biosynthetic capacity for most vitamins which must thus be provided with exogenous or intestinal microbes.

Ø 0.005

0

Propionibacterium

Vitamin B12 plays a central role for the normal functioning of the brain, nervous system and formation of red blood cells. Unfortunately, humans cannot synthesize vitamin B12 and thus must obtain it from organisms that can. Propionibacterium is one of the limited number of bacteria that is known to produce vitamin B12.

Ø 0.007

0

Vitamin K production

Microbes produce Vitamin K for us

Enterobacter

Vitamin K is a fat-soluble vitamin that is required by the human body in order to complete the synthesis of certain proteins that are vital for blood coagulation. Moreover, vitamin K is also needed to bind the calcium in bones and other tissues. Some bacteria are capable of producing vitamin K; Enterobacter agglomerans in particular is found to produce peak vitamin K levels.

Ø 0.002

0

Flavobacterium

The Flavobacterium genus is usually occurs in soil, freshwater, marine, or saline environments in warm, temperate, or polar locations. However, this genus is also found in our gut at lower amount and involved in the biosynthesis of vitamin K.

Ø 0

0

Lactococcus

Members of the Lactococcus genus are well-known beneficial bacteria that have been commonly used in the dairy industry in the manufacture of fermented dairy products such as cheeses, buttermilk. Morever, having this genus in our gastrointestinal benefits our health; for example, it breaks down the lactose, a milk product that is a problematic in lactose intolerance individuals. In addition, the species of genus Lactococcus are used in the production of proteins and Vitamin K2 that are applied to the food industry.

Ø 0.005

0

Leuconostoc

Member of the Leuconostoc genus are amongst microbes responsible for the fermentation of cabbage, making it sauerkraut. In this process, fresh cabbage is fermented in a light brine, where the sugars in the cabbage are transformed by lactofermentation to lactic acid which gives the cabbage a sour flavour and good keeping qualities. With other symbiotic bacteria and yeast, Leuconostoc species are also involved in the fermentation of kefir, a fermented milk beverage that has had a long history of being beneficial to health, where it is associated with general wellbeing. In addition, the species of Leuconostoc, particularly Leuconostoc lactis produce beneficial amount of Vitamin K.

Ø 0.009

0

Serratia

Vitamin K is a fat-soluble vitamin that is required by the human body in order to complete the synthesis of certain proteins that are prerequisites for blood coagulation. Moreover, vitamin K is also needed for controlling the binding of calcium in bones and other tissues. Some bacteria are capable of producing vitamin K, particularly Serratia marcescens are found to produce peak vitamin k levels.

Ø 0.002

0

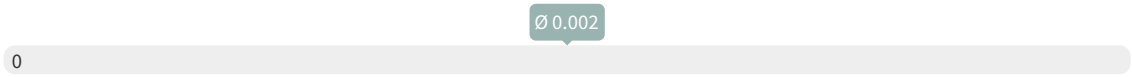
Nutrition & digestion

Protein and fat

Important microbes that play a key role in metabolizing protein and fat molecules

Alistipes

The Alistipes genus has been shown to increase with consumption of an animal-based diet.



Bacteroides

The Bacteroides genus is mainly found in Western societies and plays a key role in the digestion of protein and animal fat. Bacteroides are found in higher levels in people who consume a diet tat is rich in protein and fat.

Bilophila

The Bilophila genus makes up less than 0.01% of the normal human gastrointestinal microbiota flora. This genus is an asaccharolytic, bile-tolerant and sulfate-reducing taxon. An increased abundance of this genus has been associated with an animal-based diet.

Carbohydrates

Break complex sugars down into simpler and more easily digestible ones

Blautia

The Blautia genus digests complex carbohydrates and an abundance of this bacterium is a strong indication of a healthy intestine. Blautia levels are higher in healthy people than in patients with liver disease, colorectal cancer or in children with diabetes, for example.

Eubacterium

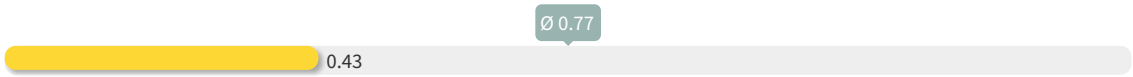
Members of the Eubacterium genus, such as Eubacterium limosum, are signature bacteria in long living people and it was found in a ten-fold increase in centenarians. Eubacterium is associated with fermentation of carbohydrates, resulting in short chain fatty acids (SCFA) production, such as butyrate and propionate. Furthermore, Eubacteria are found to be reduced in patients with inflammatory bowel diseases.

Faecalibacterium

Faecalibacterium is a common intestinal microbe that breaks down complex carbohydrates, particularly "resistant starches" such as legumes and unprocessed whole grains. In addition, they produce short-chain fatty acids that make an extremely positive contribution to our health.

Oscillospira

The Oscillospira genus is part of the symbionts of the gut bacteria, which helps us to digest resistant starches and ferment them in our large intestines. These beneficial microbes are associated with complex carbohydrate consumption and are more prevalent in in the guts of people who eat a low fat and unprocessed carbohydrate diet. Oscillospira are also depleted in the gut of people suffering from Inflammatory Bowel Disease such as Crohn's Disease.



Phascolarctobacterium

The number of bacteria belonging to the Phascolarctobacterium genus increases after the consumption of vegetables, suggesting that these bacteria play a role in cruciferous (cabbage-type) vegetable digestion and the subsequent maintenance of intestinal health.

Prevotella

The Prevotella genus breaks down complex carbohydrates into simpler and more digestible sugars. Studies have shown that this genus is more common in populations with diets high in carbohydrates and fiber.

Roseburia

Roseburia, residing in our intestinal microbiomes, help us to digest the complex carbohydrates that are found in whole grains, for example. As a byproduct of the digestion, this beneficial bacterium releases a chemical called butyrate, which may act as an anti-inflammatory agent and even prevent colon cancer. These microbes are hallmarks of a healthy intestine and are depleted in patients with liver disease and irritable bowel syndrome.

Fiber

These bacteria can make use of hard-to-digest fiber, something which has many positive effects on our health.

Bifidobacterium

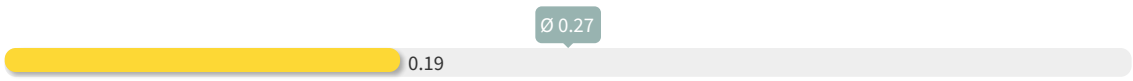
Bacteria of the Bifidobacterium genus convert the otherwise indigestible oligosaccharides (i.e. dietary fibers from our food) into lactates and can thus protect the intestines from inflammation. Studies have shown that Bifidobacteria protect against tumors and increase the efficacy of cancer therapies. Bifidobacteria can also prevent the spread of potential pathogens.

Butyricicoccus

Butyricicoccus belongs to a butyrate-producing clostridial cluster IV genus of the gut microbiota. Butyrate, which is an important end-product of bacterial fermentation of starch and fiber, has been shown to decrease inflammation. Studies have shown that this genus is a mucus-associated bacterium and highly reduced in patients with ulcerative colitis compared with healthy human.

Clostridium

By fermenting fiber, some Clostridia members, particularly Clostridia clusters IV and XIVa, can produce metabolites such as short-chain fatty acids (SCFA) that regulate the immune system and maintain the intestinal health. However, there are some Clostridia such as Clostridium difficile, which (when their number increased excessively) can cause diseases like diarrhea and also produce toxins.



Eggerthella

Intestinal bacteria are indispensable for the bioactivity of natural substances such as lignans. Lignans can be found in a variety of foods, such as linseed, vegetables, fruit and beverages. They can protect us from cardiovascular disease, hyperlipoproteinemia, breast cancer, colon cancer, prostate cancer, osteoporosis and menopausal symptoms. This depends on whether they are bioactivated and transformed into enterolactone (ENL) and enterodiol. The Eggerthella genus is one of the intestinal bacteria that can activate lignans.

Eubacterium

Members of the Eubacterium genus, such as Eubacterium limosum, are signature bacteria in long living people and it was found in a ten-fold increase in centenarians. Eubacterium is associated with fermentation of starch and fiber, resulting in short chain fatty acids (SCFA) production. Furthermore, Eubacteria are found to be reduced in patients with inflammatory bowel diseases

Lachnospira

The Lachnospira genus is capable of fermenting foods high in pectin and fiber such as carrot, cornflakes, peas, peach, apple pomace, citrus peels and carbohydrates like fructose and cellobiose. Lachnospira is part of beneficial gut microbes and a decreased amount of this genus might be linked to some disorders such as allergic asthma.

Peptostreptococcus

Lignans are dietary diphenolic compounds that are usually found in vegetables. They require an activation by intestinal bacteria in order to exert possible beneficial health effects. The Peptostreptococcus genus is also among the intestinal microbes capable of activating dietary lignans.

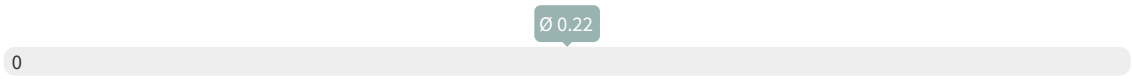
Ruminococcus

The Ruminococcus bacteria is an important member of our gut microbiomes, helping us digest resistant starches and cellulose. This genus is able to digest complex polysaccharides found in high fiber foods such as legumes, lentils, beans and unprocessed whole grains. The digestion of these complex starches by Ruminococci has been associated with numerous health benefits such as reversing infectious diarrhea and reducing risk of diabetes and colon cancer.

Body weight

Low weight
Combating weight gain

Akkermansia
Akkermansia is a type of bacteria with the potential fight against obesity or inflammations. Metabolic disorders are due to a changed intestinal microbiota (microorganisms), which in turn weakens the intestinal barrier, so causing mild inflammations. The Akkermansia count has been shown to be lower in patients with obesity or diabetes. Studies have shown that these bacteria can improve the metabolism and reverse metabolic disorders by sustaining the intestinal barrier and preventing inflammation.



Christensenella
The presence of the Christensenella genus in the intestine is associated with a low body mass index (BMI). Interestingly, scientists have confirmed the association of the genus Christensenella and body weight by transferring some microbial flora with and without Christensenella into the intestines of different subjects and found that recipients who were given the Christensenella genus gained significantly less weight than those receiving transplants with undetectable or low amounts of Christensenella.

Methanobrevibacter
An increased proportion of the Methanobrevibacter genus, particularly Methanobrevibacter smithii, has been observed in anorexic patients. This increase might represent an adaptive use of nutrients of this population.

Intolerances

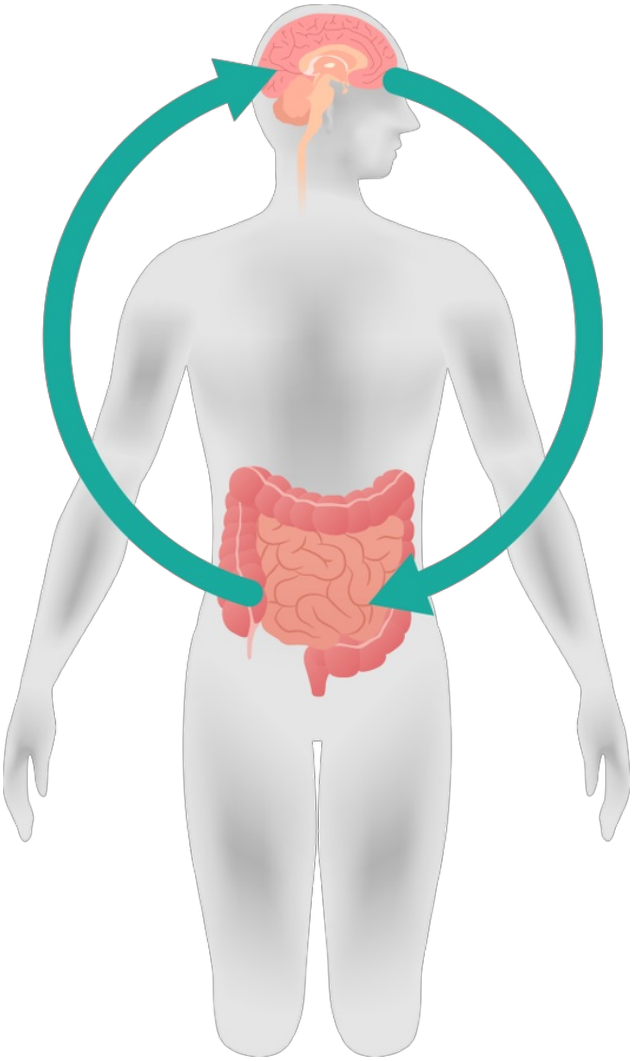
Allergies and food intolerance
Microbes could prevent allergies and digest lactose

Bifidobacterium
Normally, our immune system and our microbes co-evolve mutually from childbirth onwards. And a healthy microbiota trains our immune system not to react to every single harmless foreign particle such as food or pollen particles that individuals encounter. This is known as immune tolerance. Bifidobacterium species that are commercially available in the form of probiotics are also important in preventing allergic reactions by inducing the regulatory immune system. However, several reasons, for instance an antibiotic intake at early age, the industrialization and extreme hygienic practices result in a dysbiosis that increases the incidence of allergic diseases. Some people also have intolerance to certain food types such as lactose and fructose, partly because of a lack of fructose fermenting microbes like Bifidobacterium breve.

Lactobacillus
In general, our immune system and our microbes co-evolve from childbirth onwards. And a healthy microbiota trains our immune system not to react to every single harmless foreign particle such as food or pollen particles that individuals encounter. This is known as immune tolerance. Most Lactobacillus species act as trainers of our immune system to avoid unnecessary immune reactions to food particles. However, several reasons, for instance an antibiotic intake at early age, industrialization and extreme hygienic practices result in a dysbiosis that increases the incidence of allergic diseases. In addition, some individuals have food intolerance (specifically to lactose) and this is partly because of a lack of lactose-fermenting intestinal microbes such as the Lactobacillus species.

The importance of intestinal flora

The intestinal flora has a decisive impact on your well-being



The intestinal flora consists of trillions of microorganisms. The maintenance of the natural relationship between humans and bacteria is essential for a healthy life. The importance of our intestinal bacteria has long been seriously underestimated. Only in recent years – thanks to many scientific studies – has the far-reaching influence of bacteria on our health become clear: they regulate much more than just our digestion. Over many millions of years of evolution, advantageous long-term adaptations have developed including promoting digestion, defending against pathogens and strengthening the immune system.

Which bacteria are contained in our intestine?

Not all bacteria in our intestine are desirable. A balanced, healthy intestinal flora consists mainly of useful bacteria that have a positive effect on the body, but invariably also contains a few undesirable bacteria that have a negative effect on the body.

Useful intestinal bacteria help to neutralize harmful substances that are ingested with the food. This is why a healthy and balanced intestinal flora effectively protects the body from invading and multiplying pathogens. This means the intestine, regulating approximately 80% of all immune responses of the body, is considered the body's most important immune organ.

Impact on well-being

The neuronal connection between the intestine and the brain is of central importance to human beings. For example, the microbes living in the intestine control the production of important hormones such as the happiness hormone serotonin and the sleep hormone melatonin. Neurological processes in the brain are controlled via the gut-brain axis and the intestinal flora has a significant impact on mental health and therefore on our well-being.

An imbalance in intestinal microbiota can be caused by persistent physical and mental stress, unhealthy eating habits, insufficient exercise and medication such as antibiotics. This can cause a variety of complaints:

- Intestinal complaints (constipation, flatulence, etc.)
- Weakening of the immune system
- Autoimmune reactions (e.g. psoriasis)
- Overweight and obesity
- food incompatibility
- Mental disorders

Phylum

Phylum

Microbe name (A-Z)	My ratio	Community value	Difference:
Actinobacteria	9.63	0.83	8.8
Bacteroidetes	33.02	30.1	2.92
Firmicutes	49.47	56.9	-7.43
Proteobacteria	7.72	2.01	5.71

Class

Microbe name (A-Z)	My ratio	Community value	Difference:
Actinobacteria	5.36	0.58	4.78
Bacilli	2.79	0.61	2.18
Bacteroidia	33.02	29.99	3.03
Betaproteobacteria	7.71	0.55	7.16
Clostridia	45.73	52.44	-6.71
Coriobacteriia	4.27	0.14	4.13
Erysipelotrichi	0.94	0.92	0.02
Gammaproteobacteria	0.015	0.198	-0.183

Order

Microbe name (A-Z)	My ratio	Community value	Difference:
Bacteroidales	33.02	29.99	3.03
Bifidobacteriales	5.36	0.25	5.11
Burkholderiales	7.71	0.52	7.19
Clostridiales	45.73	52.44	-6.71
Coriobacteriales	4.27	0.14	4.13
Enterobacteriales	0.015	0.042	-0.027
Erysipelotrichales	0.94	0.92	0.02
Lactobacillales	2.79	0.34	2.45

Family

Microbe name (A-Z)	My ratio	Community value	Difference:
Alcaligenaceae	7.71	0.37	7.34
Bacteroidaceae	31.69	15.7	15.99
Bifidobacteriaceae	5.36	0.25	5.11
Carnobacteriaceae	0.02	0.004	0.016
Clostridiaceae	0.5	0.88	-0.38
Coriobacteriaceae	4.27	0.14	4.13
Enterobacteriaceae	0.015	0.042	-0.027
Erysipelotrichaceae	0.94	0.92	0.02
Lachnospiraceae	26.36	13.94	12.42
Prevotellaceae	0.013	0.138	-0.125
Ruminococcaceae	9.6	23.97	-14.37
Streptococcaceae	2.77	0.17	2.6
Veillonellaceae	3.7	1.14	2.56
[Paraprevotellaceae]	1.32	0.01	1.31
[Tissierellaceae]	0.08	0.03	0.05

Genus

Microbe name (A-Z)	My ratio	Community value	Difference:
Anaerococcus	0.01	0.002	0.008
Anaerostipes	0.013	0.081	-0.068
Bacteroides	31.69	15.7	15.99
Bifidobacterium	5.29	0.24	5.05
Blautia	3.03	1.51	1.52
Bulleidia	0.019	0.009	0.01
Clostridium	0.19	0.27	-0.08
Collinsella	4.08	0.04	4.04
Coprococcus	3.89	1.79	2.1
Dorea	1.75	0.29	1.46
Eggerthella	0.01	0.001	0.009
Faecalibacterium	3.06	6.81	-3.75
Finegoldia	0.04	0.003	0.037
Granulicatella	0.02	0.006	0.014
Lachnospira	1.94	0.58	1.36
Megasphaera	0.64	0.01	0.63
Oscillospira	0.43	0.77	-0.34
Paraprevotella	1.32	0	1.32
Peptoniphilus	0.03	0.004	0.026
Phascolarctobacterium	3.02	0.28	2.74
Prevotella	0.013	0.138	-0.125
Pseudobutyrivibrio	0.025	0	0.025
Roseburia	1.4	0.5	0.9
Ruminococcus	0.11	1.6	-1.49
Streptococcus	2.77	0.15	2.62
Sutterella	7.71	0.35	7.36
Veillonella	0.045	0.015	0.03
[Eubacterium]	0.013	0.022	-0.009
[Ruminococcus]	1.21	0.27	0.94