Sample: Demo 2 of Jan 29, 2022 |
Activation code: VSJ5J-5JQ7S | Demo |
Male | 99 kg | 189 cm | 1988 |
Register at my.BIOMES.world with your activation code to explore your gut flora in the web-based dashboard.

PDF-Report for Demo

Attention

The PDF report does not contain all the information. Please look at your online report first; the PDF report is only for the exceptional case that you want to have a printout.

Overview

Your intestinal flora balance

The intestinal flora balance shows you the overall state of your intestinal flora. All weighted analysis results are included and you can reach a maximum of 100 points.
A value below 40 stands for an unbalanced intestinal flora with weak points, a value above 60 for an intact intestinal flora.

67 / 100 Points

Clues

messages.overview-body-swiper2

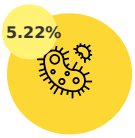
Bacterial diversity (so-called diversity index) - good

The more different your bacterial species are, in other words the higher their diversity, the more varied are their functions. Consequently, the following applies: The greater the number of types of bacteria are present in your intestinal flora, the better your metabolism will function

improvable good

Proportion of harmful bacteria (so-called proteobacterial index) - improvable

Along with other microbes, Proteobacteria are the most common microbes in our gut. However, they should be kept at very low levels as they possess many dangerous human pathogens with the potential to cause a number of diseases. Therefore, adult human intestinal flora naturally only contains a small proportion of Proteobacteria, ranging from 2.5 to 4.6% of the total gut microbiota.



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 “improvable” 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.

Gut lining protection - good

improvable good

Inflammation indicators - good

improvable good

Constipation indicators - good

improvable good

The internal mucosal barrier and immunity - improvable

improvable good

Appetite and the cholesterol level - good

improvable good

The energy metabolism and hyperacidity - good

improvable good

Cytotoxins - good

improvable good

Cardiovascular wellness - good

improvable good

Sleep and the state of mind - good

improvable good

Your intestinal flora type: 1

Intestinal flora type 1

Your caloric intake is: high

Caloric intake high

Nutrition & digestion

- **Protein and fat**
- **Carbohydrates**
- **Fiber**

Strength of the immune system

- **Immune homeostasis**
- **Vitamin B12 production**
- **Vitamin K production**

Weight regulation

- **Weight regulation**

Lactose, fructose and allergies

- **Allergies and food intolerance**

Summary

Your weaknesses

- ▶ Proportion of harmful bacteria (so-called proteobacterial index)
- ▶ The internal mucosal barrier and immunity
- ▶ Caloric intake

Your strengths

- ▶ Bacterial diversity (so-called diversity index)
- ▶ Gut lining protection
- ▶ Inflammation indicators
- ▶ Constipation indicators
- ▶ Appetite and the cholesterol level
- ▶ The energy metabolism and hyperacidity
- ▶ Cytotoxins
- ▶ Cardiovascular wellness
- ▶ Sleep and the state of mind
- ▶ Your intestinal flora type: 1

The top ten bacteria

Positive bacteria

Name	Lower threshold	Upper threshold	Your ratio	Description
Akkermansia	0.1	5	0.007	• Maintain the intestinal barrier & stimulate the metabolism • Important against inflammation and overweight
Bacteroides	5	32	7.78	• Help the intestine control the spread of inflammation • Can prevent damage to the intestinal mucosa
Bifidobacterium	0.2	7	0.34	• 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	• Important for healthy aging & protection of the intestinal mucosa • Strongly over-represented in people more than 100 years old and barely present in people with chronic inflammatory bowel diseases
Faecalibacterium	0.2	10	13.88	• 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	1	9	1.88	• Can cure infectious diarrhea • Can reduce the risk of developing diabetes or bowel cancer

Potentially negative bacteria

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	• 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)

Nutrition & digestion

Protein and fat

- incorporate more proteins and "good" fats into your food
- eat fish, beans, soy products and nuts
- get more exercise

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. Regular physical activity such as yoga or athletics is also beneficial for these intestinal microbes.

Strength of the immune system

Vitamin B12 production

- eat more yogurt or drink kefir
- if your diet allows it, eat more fish, eggs, mussels and poultry
- if you are vegan, try vitamin B12 supplements and probiotic food supplements with lactobacilli

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.

Strength of the immune system

Vitamin K production

- eat more yogurt or drink kefir
- consume more leafy green vegetables, such as spinach, kale, broccoli, chard or Brussels sprouts.
- some fruits such as avocados, kiwis or grapes also contain vitamin K

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. Please note that this test will show you whether there are any bacteria in your intestines that produce vitamin K for you, but not how much vitamin K you actually have in your body.

Weight regulation

Weight regulation

- eat food with bitter substances such as rocket, artichokes, celery or radishes
- incorporate food rich in polyphenols into your diet, such as grapes, cranberries, cloves, star anise, cocoa powder or dark chocolate
- Eat more whole-grain wheat, barley, oatmeal, popcorn, brown rice, nuts, grains, lentils or black beans

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.

On the basis of your test results we recommend you: Type beta

BIOM.uniq "Type beta" probiotics combine cultures of Lactobacillus and Bifidobacterium species (9.6 billion microorganisms) naturally found in the gut with vitamins, active yeast and calcium.

Gut lining protection - good

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 a 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 your gut.

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.

Akkermansia

Bacteroides

Bifidobacterium

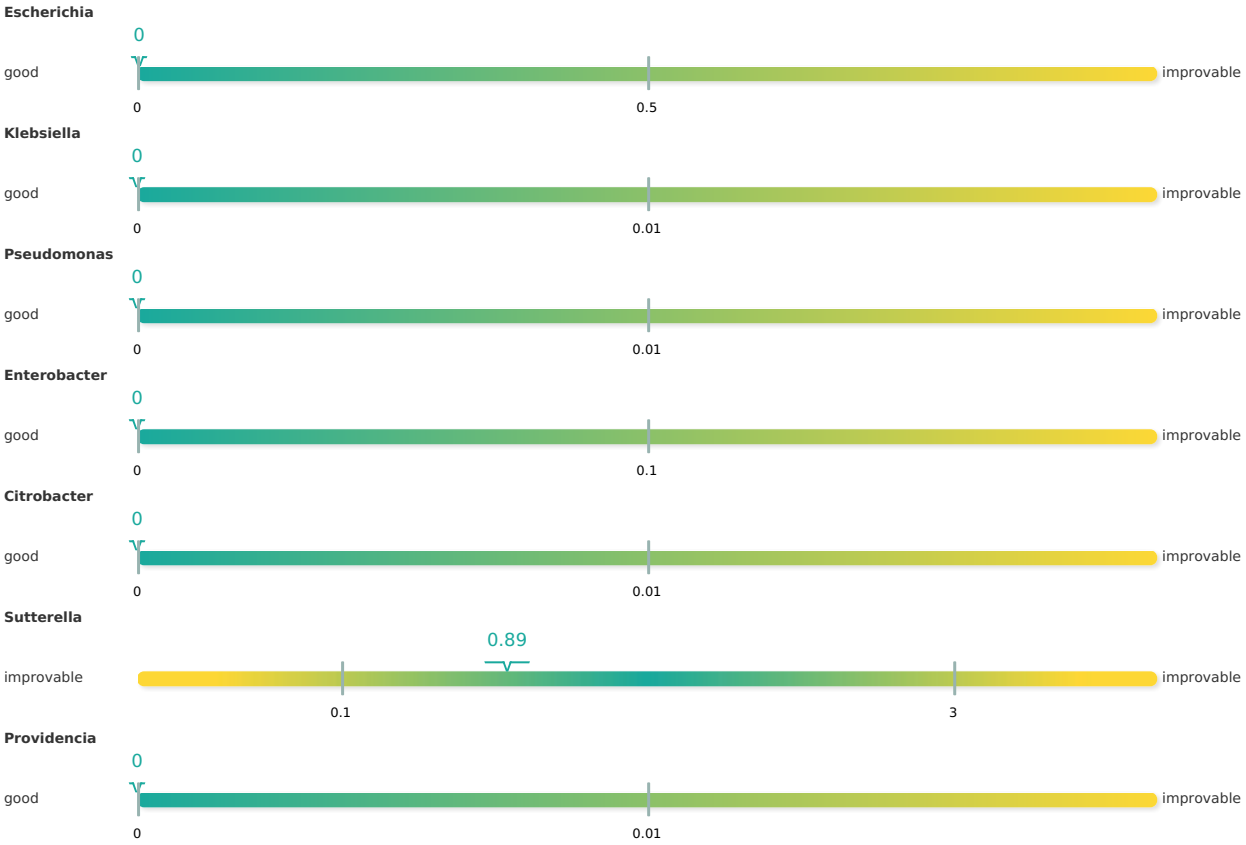
Ruminococcus

Faecalibacterium

Inflammation indicators - good

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.

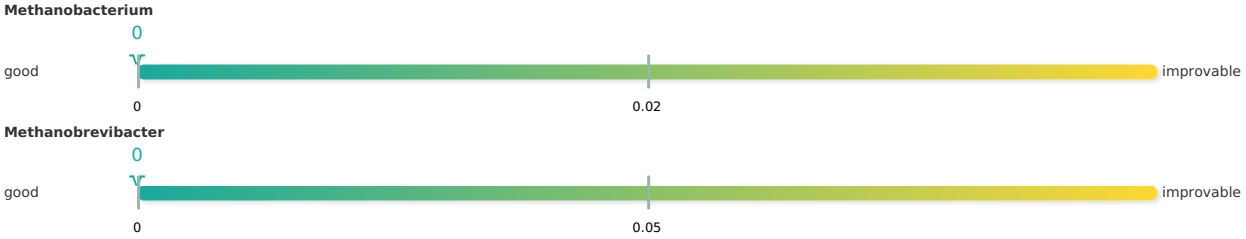
Some bacteria, such as Escherichia, Klebsiella, Pseudomonas, Enterobacter, Citrobacter, Sutterella and Providencia, may produce toxins that cause inflammation in the body. When they enter the body through the intestinal lining - as is the case with the "leaky gut" - they even initiate inflammatory processes 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 - good

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 - improvable

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.

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.

Ruminococcus

Eubacterium

Butyricicoccus

Faecalibacterium

Roseburia

Anaerostipes

Butyrivibrio

Appetite and the cholesterol level - good

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.

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.

Bacteroides

Veillonella

Bifidobacterium

Alistipes

Dorea

Megasphaera

Coprococcus

The energy metabolism and hyperacidity - good

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.

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.

Lactobacillus

Bifidobacterium

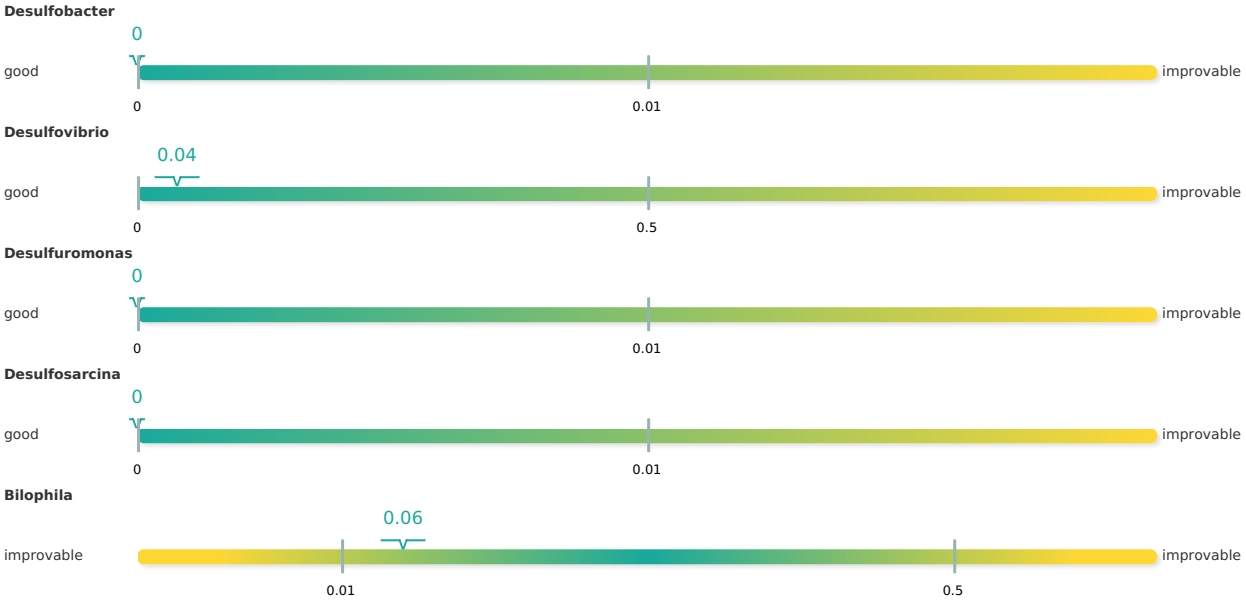
Enterococcus

Streptococcus

Cytotoxins - good

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) 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.

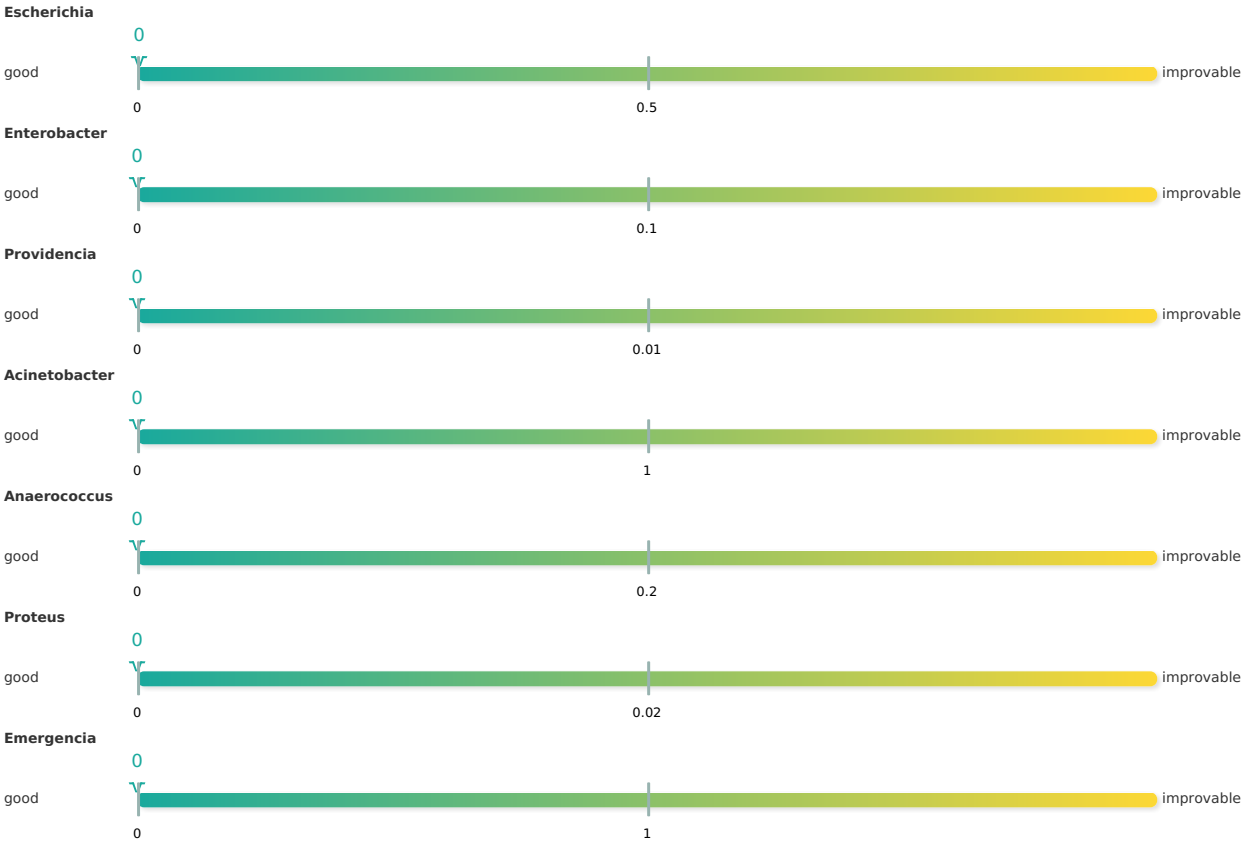
Sulfates and sulfites are substances which we can absorb, for example, from preservatives in foodstuffs (bread, canned meat, dried fruit and wine). This is why around half of the human population harbors sulfate-reducing bacteria such as Desulfovibrio, Desulfomonas and Desulfobacter in their gastrointestinal 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.



Cardiovascular wellness - good

These bacteria process certain nutritional constituents, above all from red meat, into metabolic products that are transformed in the liver - your organ for detoxification - to harmful substances (the so-called TMAO). Increased TMAO levels are common in people with a higher risk of cardiovascular disease (such as arteriosclerosis). This means that you should eat little red meat so that you need only few bacteria to metabolize it.

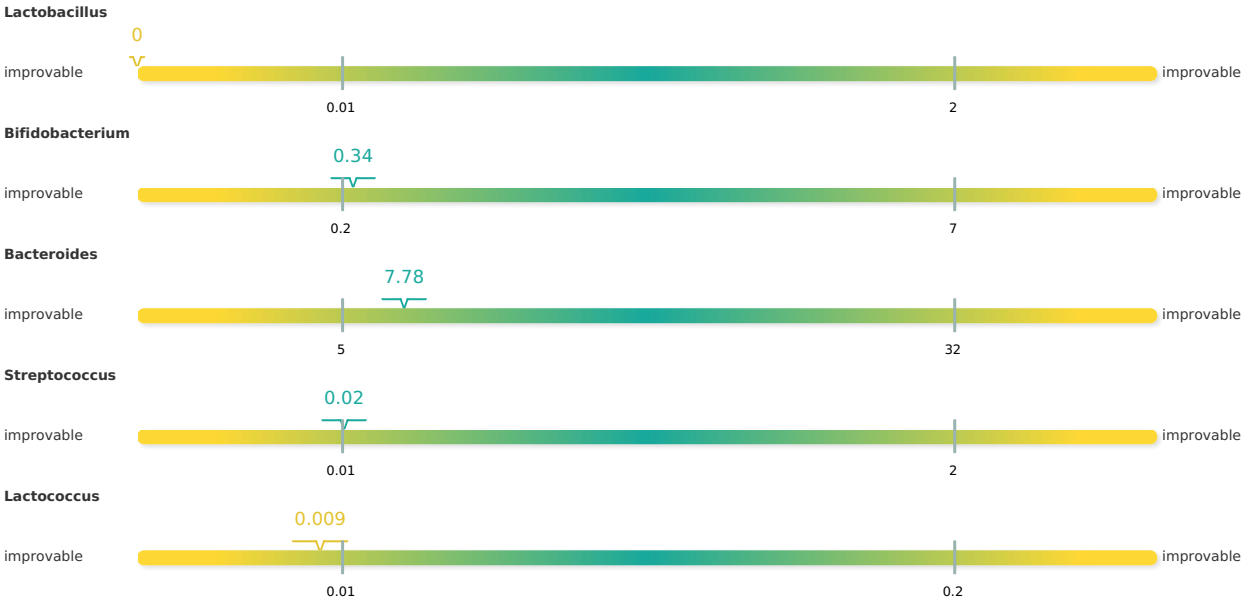
Many meats such as beef, pork, lamb and other animal products contain compounds known as choline and L-carnitine. Some intestinal bacteria convert these compounds into a chemical called trimethylamine (TMA). The liver, the human body's organ for detoxification, then converts the TMA into trimethylamine N-oxide (TMAO). Increased TMAO levels may be observed especially in people with a high risk of cardiovascular diseases, such as arteriosclerosis. The relationship between a Western diet, a microbiota-dependent metabolism in the intestines and the development of cardiovascular diseases has been demonstrated in a number of studies.



Sleep and the state of mind - good

Good sleep is important in “recharging your batteries”. These bacteria form substances that positively influence your sleep cycle and sleep quality and which, with their relaxing effect, are even beneficial to your state of mind. You should therefore give shelter to as many of these “happy” bacteria as possible (up to a certain level).

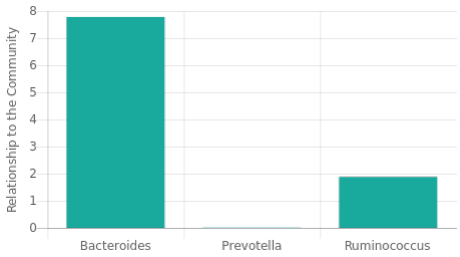
These bacteria support healthy sleep by supplying the body with sleep-promoting neurotransmitters. These are molecules that are released by the nerve cells and which function like chemical messengers. Two of the neurotransmitters that provide a natural sleep rhythm are serotonin and gamma-aminobutyric acid (GABA). First of all, serotonin ensures optimal sleep cycles. Second, it balances the state of mind by influencing feelings of anxiety or depressive states, each of which may prevent a person from falling asleep or remaining asleep. Too much stress can lead to a fall in serotonin levels, which can then lead to sleep disorders. Although most serotonin is produced by your body's own cells, some can be produced by strains of intestinal bacteria. Gamma-aminobutyric acid (GABA) has a calming effect because it reduces the beta waves in the brain and increases the alpha waves, crucial for regenerative deep sleep. Some intestinal bacteria help the body to produce GABA. Disturbed sleep may lead to heart disease, obesity, diabetes, confused thoughts and an increased risk of accidents. Adults regularly require at least seven hours of sleep every night.



Your intestinal flora type: 1

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.

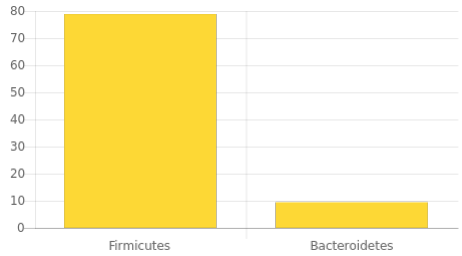
Based on the study of fecal metagenomes, human metagenomes can be divided into three different intestinal types, known as “enterotypes”. These enterotypes are identified by relative amounts of any of three dominant genera: Bacteroides (enterotype 1), Prevotella (enterotype 2) and Ruminococcus (enterotype 3). Interestingly, these enterotypes are independent of geographical origin, gender, age or body mass index (BMI). However, results from a recent study do suggest that enterotypes may be strongly associated with genetics and long-term eating habits, so that they can be influenced to a certain degree. Bacteroides-enriched enterotype 1 is largely associated with the consumption of animal proteins and saturated fats, whereas the Prevotella-enriched enterotype 2 is associated with a carbohydrate-based diet, consisting of simple sugars and fibers. The dominant bacterial strains of intestinal types 2 and 3 metabolize our food particularly efficiently, which means that they take a large number of calories from food and store them in the body.



Your caloric intake is: high

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.

One important task of your intestinal bacteria is to break down your food so that it can be used by your body. Different bacterial strains use the food in different ways. This means that people who eat exactly the same food but have a different ratio of bacterial strains obtain different amounts of calories from their food. The dominant bacterial groups in the human intestine are called Bacteroidetes and Firmicutes. Many studies have already shown a link between the ratio of these bacteria and body weight: The more Firmicutes or the fewer Bacteroidetes, the higher the body weight. This is because Firmicutes are particularly good at breaking down food components into sugars and carbohydrates, which in turn can be absorbed particularly well in the intestine. They can even convert dietary fiber (which the human body alone is unable to digest and excrete) into sugar. In this way, they provide the body with extra energy, which people with a lot of Bacteroidetes cannot absorb. Animals with a higher level of Firmicutes obtain around 8-10% more energy from the food than do members of the same species who have higher levels of Bacteroidetes. If we transfer this to a human scale, it would mean an additional intake of 200-250 calories per meal. However, this does not mean that people with higher Firmicute levels are always heavier than people with more Bacteroidetes, since this differing amounts of calories can be more or less made up for through exercise.



Nutrition & digestion

These bacteria have an influence on how well you process certain food components. They help you break down proteins, fats, carbohydrates and fibre.

Protein and fat

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

Bacteroides

Ø15.7

7.78

Alistipes

Ø0.002

0.16

Bilophila

Ø0.07

0.06

Carbohydrates

Break complex sugars down into simpler and more easily digestible ones

Prevotella

Ø0.004

0.009

Blautia

Ø1.51

8.74

Faecalibacterium

Ø6.81

13.88

Roseburia

Ø0.5

3

Oscillospira

Ø0.77

0

Eubacterium

Ø0.02

0

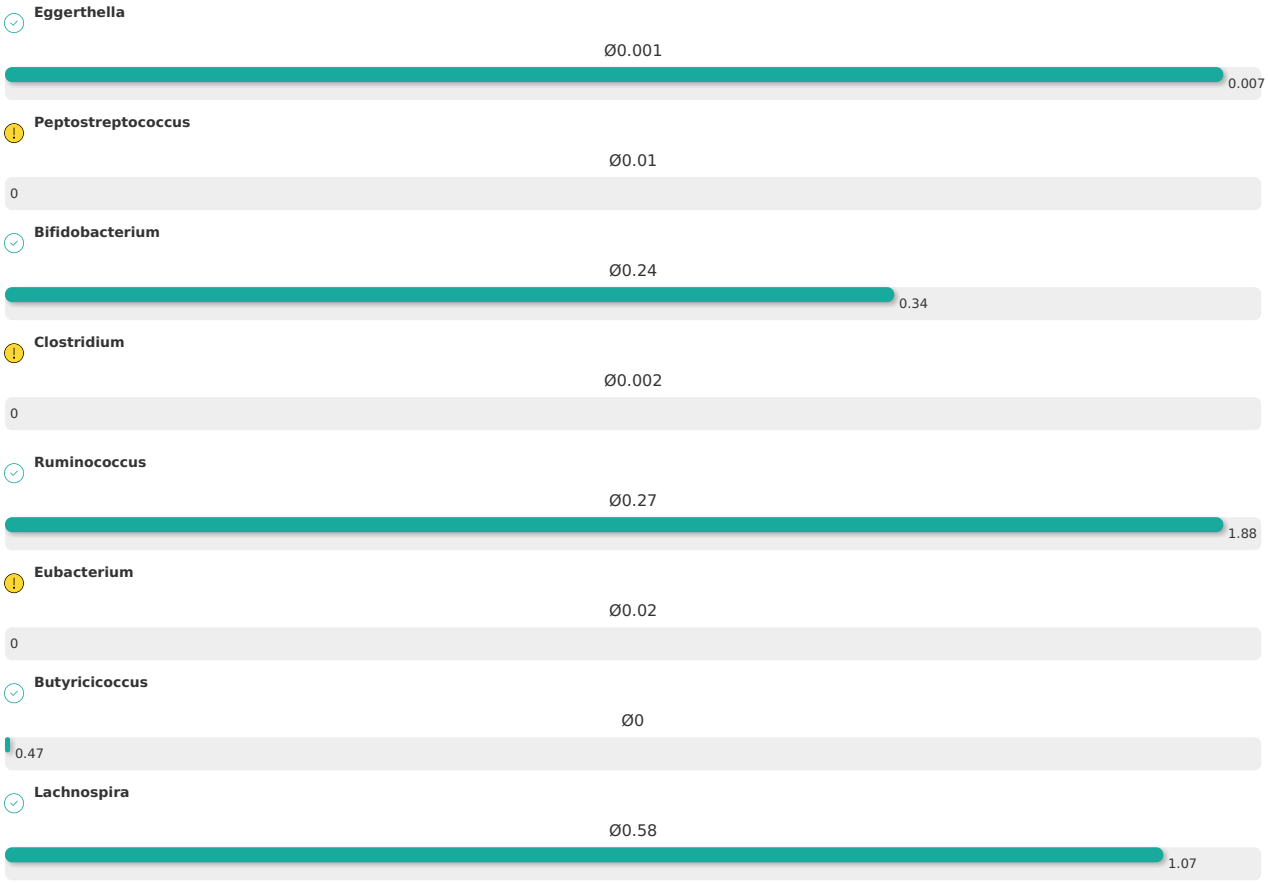
Phascolarctobacterium

Ø0.28

0.35

Fiber

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

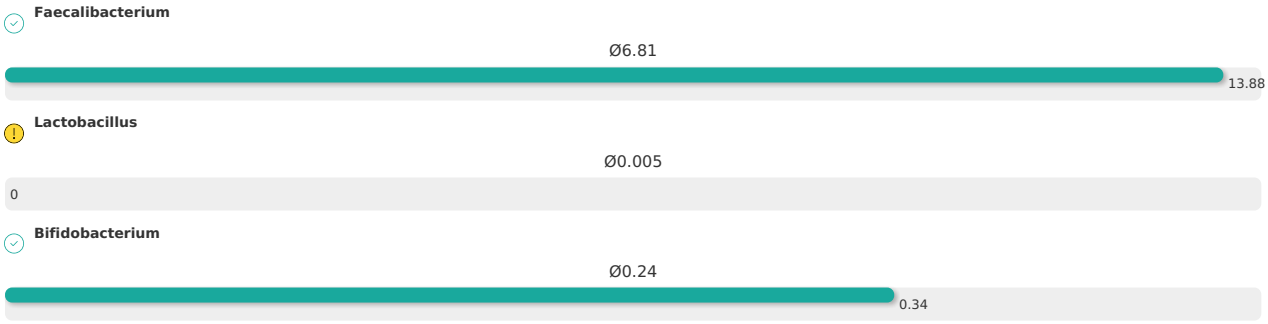


Strength of the immune system

Most of the immune system is located in the intestines, which is partly due to these bacteria that can help your body defend itself against pathogens, produce important vitamins and regulate the immune system.

Immune homeostasis

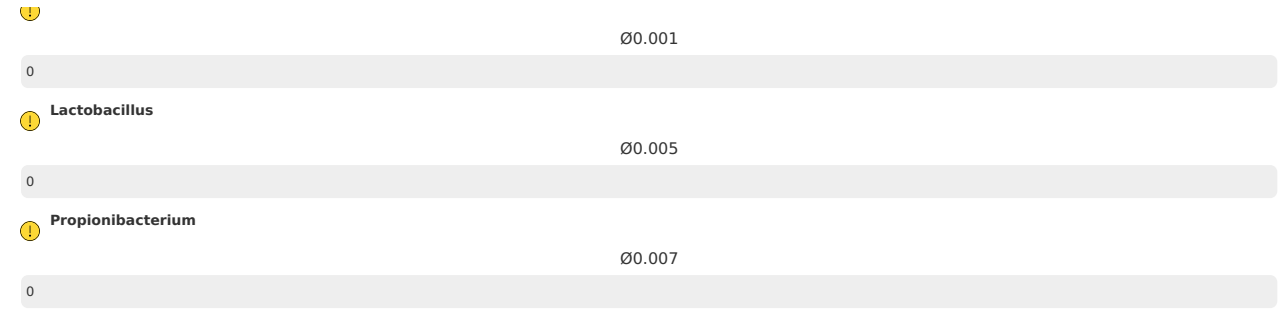
Bacteria also exist that can regulate the immune system with their anti-inflammatory properties and their ability to create vitamins.



Vitamin B12 production

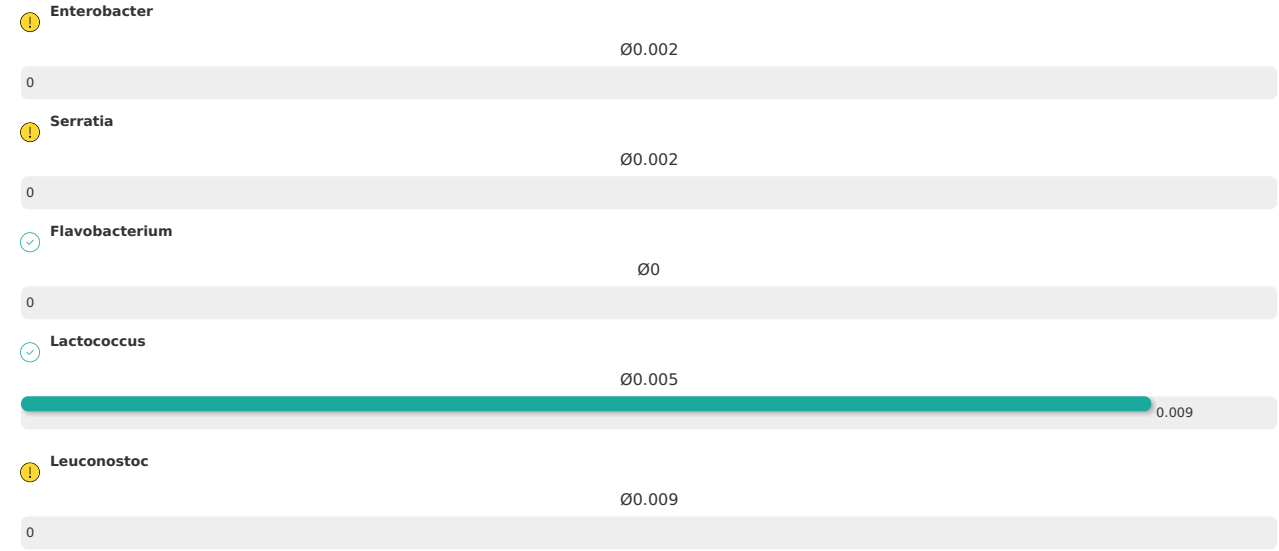
Vitamin B12 is important both for the normal functioning of the brain and nervous system, as well as for the formation of red blood cells. Unfortunately, we humans cannot synthesize vitamin B12 ourselves, which is why the bacteria listed here have to do it for us. Caution: Here you will be able to see whether these bacteria are present in your intestines, but not how much vitamin B12 you actually have in your body.

Bacillus



Vitamin K production

Vitamin K is a fat-soluble vitamin needed by the human body to fully synthesize specific proteins that are important for blood clotting. In addition, vitamin K is also needed for binding calcium in the bones and other tissues. The bacteria listed here can produce vitamin K. Caution: Here you will be able to see whether these bacteria are present in your intestines, but not how much vitamin K you actually have in your body.

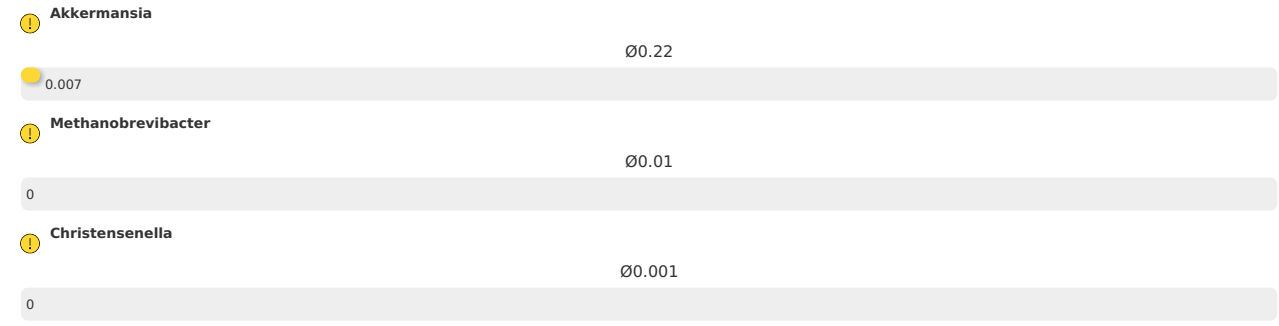


Weight regulation

These bacteria can affect how easily you gain or lose weight by influencing your metabolism, reducing inflammation (which helps with weight loss) and, according to studies, are often found in the intestines of very slim people.

Weight regulation

These bacteria have useful functions for regulating body weight. This means that people with intestines in which these bacteria live tend to find it easier to lose weight. However, this does not mean that people who lack these bacteria have to be overweight. Nevertheless, overweight people will find it harder to lose weight without the help of these bacteria.

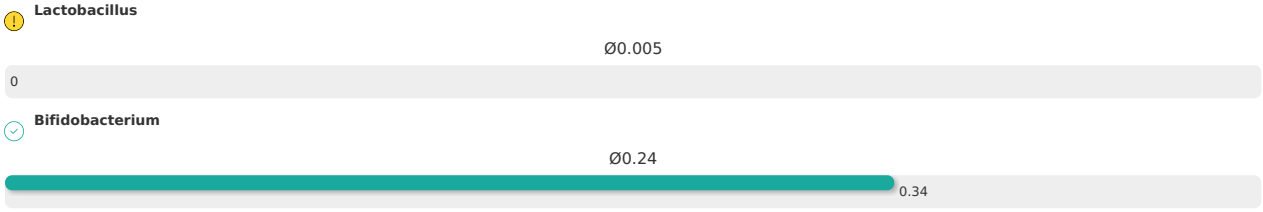


Lactose, fructose and allergies

Attention: Here you can find out if you have enough bacteria that can protect you from allergies & intolerances or reduce them. However, if you have congenital allergies or intolerances, these bacteria cannot help you either, because then you cannot process certain substances, which leads to complaints.

Allergies and food intolerance

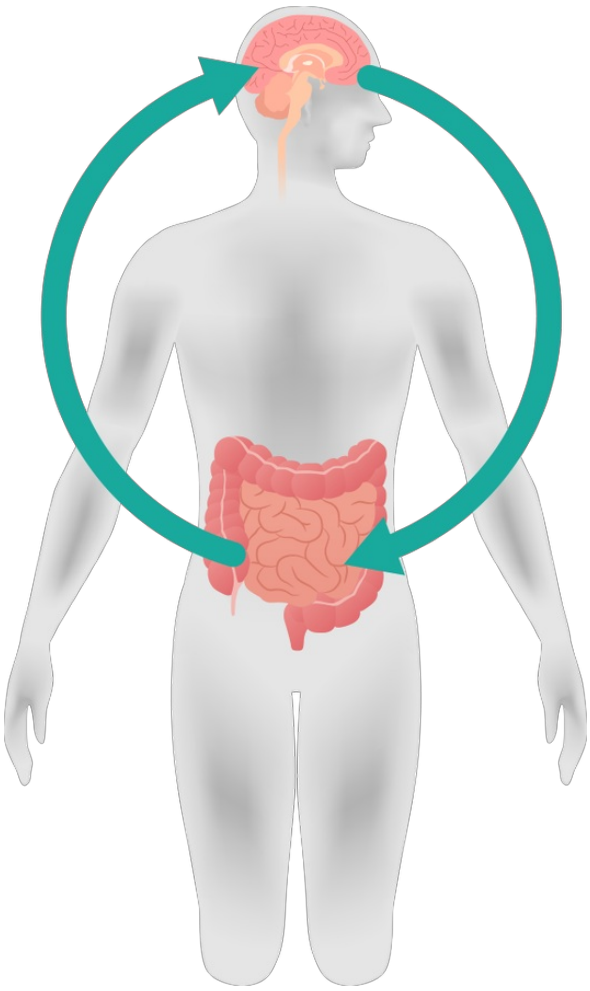
These microbes can prevent allergies and digest both lactose and fructose. This means that you can normally easily tolerate dairy products and fruit if there are many of these intestinal bacteria to help you digest milk and fructose (fruit sugar). Similarly, you will be less susceptible to allergies if your intestines are populated by a lot of these bacteria. The number of these bacteria in your intestinal flora may always change, which is why it is possible that phases in which you can easily tolerate lactose and/or fructose may alternate with phases in which this is not the case. However, if you suffer from any congenital intolerances, no bacteria will be able to help you to balance them out. Your intestinal flora will only affect so-called acquired intolerances.



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

Microbe name (A-Z)	User value	Mean	Difference:
Acidobacteria	0.005	0.002	0
Actinobacteria	0.64	0.83	-0.19
Bacteroidetes	9.45	30.1	-20.65
Cyanobacteria	2.81	0.01	2.8
Fibrobacteres	0.004	0	0
Firmicutes	78.88	56.9	21.98
Lentisphaerae	0.12	0.01	0.11
Nitrospirae	0.003	0	0
Proteobacteria	5.22	2.01	3.21
Verrucomicrobia	0.01	0.228	-0.22

Class

Microbe name (A-Z)	User value	Mean	Difference:
Actinobacteria	0.36	0.58	-0.22
Alphaproteobacteria	4.28	0.05	4.23
Bacilli	1.49	0.61	0.88
Bacteroidia	9.45	29.99	-20.54
Clostridia	76.78	52.44	24.34
Coriobacteriia	0.28	0.14	0.14
Fibrobacteria	0.004	0	0
Gammaproteobacteria	0.94	0.2	0.74
Holophagae	0.003	0	0
Verrucomicrobiae	0.007	0.221	-0.21
[Lentisphaeria]	0.12	0.01	0.11

Order

Microbe name (A-Z)	User value	Mean	Difference:
Actinomycetales	0.008	0.075	-0.07
Bacteroidales	9.42	29.99	-20.57
Bifidobacteriales	0.34	0.25	0.09
Burkholderiales	0.93	0.52	0.41
Clostridiales	0.037	52.438	-52.4
Coriobacteriales	0.28	0.14	0.14
Desulfovibrionales	0.13	0.14	-0.01
Erysipelotrichales	1.43	0.92	0.51
Flavobacteriales	0.018	0.004	0.01
Lactobacillales	0.03	0.338	-0.31
Micrococcales	0.003	0	0
Rhodospirillales	4.22	0	4.22
Sphingobacteriales	0.008	0.001	0.01
Verrucomicrobiales	0.007	0.221	-0.21
Victivallales	0.12	0.01	0.11

Family

Microbe name (A-Z)	User value	Mean	Difference:
Actinomycetaceae	0.008	0.01	-0
Bacteroidaceae	7.78	15.7	-7.92
Bifidobacteriaceae	0.34	0.25	0.09
Christensenellaceae	0.14	0.07	0.07
Clostridiaceae	0.037	0.877	-0.84
Comamonadaceae	0.003	0.001	0
Coriobacteriaceae	0.07	0.14	-0.07
Corynebacteriaceae	0.003	0.02	-0.02
Dermatophilaceae	0.003	0	0
Desulfovibrionaceae	0.13	0.14	-0.01
Enterobacteriaceae	0.002	0.042	-0.04
Erysipelotrichaceae	0.033	0.92	-0.89
Flavobacteriaceae	0.018	0.002	0.02
Lachnospiraceae	50.05	13.94	36.11
Nitrosomonadaceae	0.003	0	0
Oxalobacteraceae	0	0.005	-0
Peptostreptococcaceae	0.003	0.089	-0.09
Prevotellaceae	0.34	0.14	0.2
Rhodocyclaceae	0.002	0.008	-0.01
Rikenellaceae	0.16	2.4	-2.24
Ruminococcaceae	21.67	23.97	-2.3
Streptococcaceae	0.03	0.17	-0.14
Veillonellaceae	0.005	1.141	-1.14
Victivallaceae	0.1	0.01	0.09

Genus

Microbe name (A-Z)	User value	Mean	Difference:
Actinomyces	0.008	0.005	0
Adlercreutzia	0.06	0	0.06
Akkermansia	0.007	0.221	-0.21
Alistipes	0.16	0	0.16
Anaerostipes	2.06	0.08	1.98
Anaerotruncus	0.003	0.004	-0
Asteroleplasma	0.03	0	0.03
Bacteroides	7.78	15.7	-7.92
Barnesiella	0.012	0	0.01
Bifidobacterium	0.34	0.24	0.1
Bilophila	0.06	0.07	-0.01
Blautia	8.74	1.51	7.23
Butyricicoccus	0.47	0	0.47
Butyricimonas	0.12	0.04	0.08
Butyrivibrio	0.003	0	0
Citrobacter	0	0	0
Collinsella	0.07	0.04	0.03
Coprococcus	0.29	1.79	-1.5
Corynebacterium	0.003	0.02	-0.02

Microbe name (A-Z)	User value	Mean	Difference:
Desulfovibrio	0.043	0.001	0.04
Dorea	0.62	0.29	0.33
Eggerthella	0.007	0.001	0.01
Escherichia	0.002	0	0
Faecalibacterium	13.88	6.81	7.07
Herbaspirillum	0	0.012	-0.01
Lachnospira	1.07	0.58	0.49
Lactococcus	0.009	0.005	0
Marvinbryantia	0.07	0	0.07
Megamonas	0.004	0.002	0
Moryella	0.036	0.002	0.03
Odoribacter	0.013	0.046	-0.03
Oribacterium	0.001	0.007	-0.01
Parabacteroides	0.024	1.361	-1.34
Paraprevotella	0.003	0.001	0
Peptoniphilus	0.001	0.004	-0
Phascolarctobacterium	0.35	0.28	0.07
Prevotella	0.009	0.138	-0.13
Roseburia	3	0.5	2.5
Ruminococcus	1.88	1.6	0.28
Shuttleworthia	0.001	0	0
Slackia	0.014	0.005	0.01
Streptococcus	0.021	0.146	-0.12
Sutterella	0.89	0.35	0.54
Veillonella	0.005	0.015	-0.01
Victivallis	0.06	0.01	0.05

Species

Microbe name (A-Z)	User value	Mean	Difference:
g__Bacteroides acidifaciens	0.003	0	0
g__Bifidobacterium adolescentis	0.001	0.124	-0.12
g__Streptococcus anginosus	0	0.01	-0.01
g__Bifidobacterium bifidum	0.001	0.01	-0.01
g__Bifidobacterium breve	0.022	0	0.02
g__Bacteroides caccae	0.023	0	0.02
g__Escherichia coli	0.001	0	0
g__Faecalitalea cylindroides	0.003	0	0
g__Parabacteroides distasonis	0.001	0.518	-0.52
g__Bacteroides eggerthii	0.023	0.003	0.02
g__Bacteroides faecis	0.07	0.25	-0.18
g__Phascolarctobacterium faecium	0.21	0	0.21
g__Citrobacter freundii	0	0	0
g__[Ruminococcus] gnavus group gnavus	0.003	0.032	-0.03
g__Streptococcus gordonii	0	0.004	-0
g__Eggerthella lenta	0.002	0.004	-0
g__Bifidobacterium longum	0.016	0	0.02
g__Akkermansia muciniphila	0.001	0.22	-0.22
g__Blautia obeum	0.047	0.003	0.04
g__Streptococcus oralis	0.003	0	0
g__Bacteroides ovatus	0.07	0	0.07
g__Faecalibacterium prausnitzii	2.48	6.79	-4.31
g__Escherichia sonnei	0	0	0
g__Blautia stercoris	0.026	0.017	0.01
g__Howardella ureilytica	0.001	0	0
g__Victivallis vadensis	0.011	0.006	0.01