



Test report



At-home test



Gut Microbiome Test Medium

 Lab test

 Stool

Name: **Sample Report** Date of test: **10/12/2023** Analysis-ID: **DUMMY-66**

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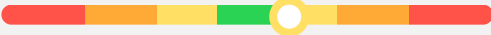
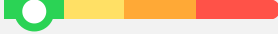
Digestive residues

Your test results

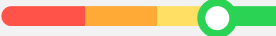
How to interpret your results

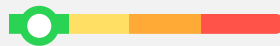
If the arrow on the scale is within the green area, your value is good. If the arrow is within the yellow, orange or red area, it indicates a deviation. Some parameters are not tested too high or too low, in which case the scale starts or ends on the green area, this is completely normal. For an explanation of the various parameters, please see Part 2 entitled Extended information.

Determination of aerobic bacteria

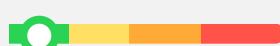
Name	Your value	Unit	Reference value	Scale
Escherichia coli	 $2,0 \times 10^8$	CFU/g stool	$10^6 - 10^7$	
Escherichia coli Biovare	 $< 1,0 \times 10^4$	CFU/g stool	$< 1,0 \times 10^4$	
Proteus spp.	 $< 1,0 \times 10^4$	CFU/g stool	$< 1,0 \times 10^4$	
Klebsiella spp.	 $< 1,0 \times 10^4$	CFU/g stool	$< 1,0 \times 10^4$	
Pseudomonas spp.	 $< 1,0 \times 10^4$	CFU/g stool	$< 1,0 \times 10^4$	
Enterobacter spp.	 $< 1,0 \times 10^4$	CFU/g stool	$< 1,0 \times 10^4$	
Serratia spp.	 $< 1,0 \times 10^4$	CFU/g stool	$< 1,0 \times 10^4$	
Hafnia spp.	 $< 1,0 \times 10^4$	CFU/g stool	$< 1,0 \times 10^4$	
Enterococcus spp.	 $2,0 \times 10^7$	CFU/g stool	$10^6 - 10^7$	

Determination of anaerobic bacteria

Name	Your value	Unit	Reference value	Scale
Bifidobacterium spp.	 $2,0 \times 10^9$	CFU/g stool	$10^9 - 10^{11}$	
Bacteroides spp.	 $1,0 \times 10^9$	CFU/g stool	$10^9 - 10^{11}$	
Lactobacillus spp.	 $< 1,0 \times 10^4$	CFU/g stool	$10^5 - 10^7$	

Name	Your value	Unit	Reference value	Scale
Clostridium spp.	 < 1,0 x 10 ⁵	CFU/g stool	< 1,0 x 10 ⁵	

Mycological stool examination

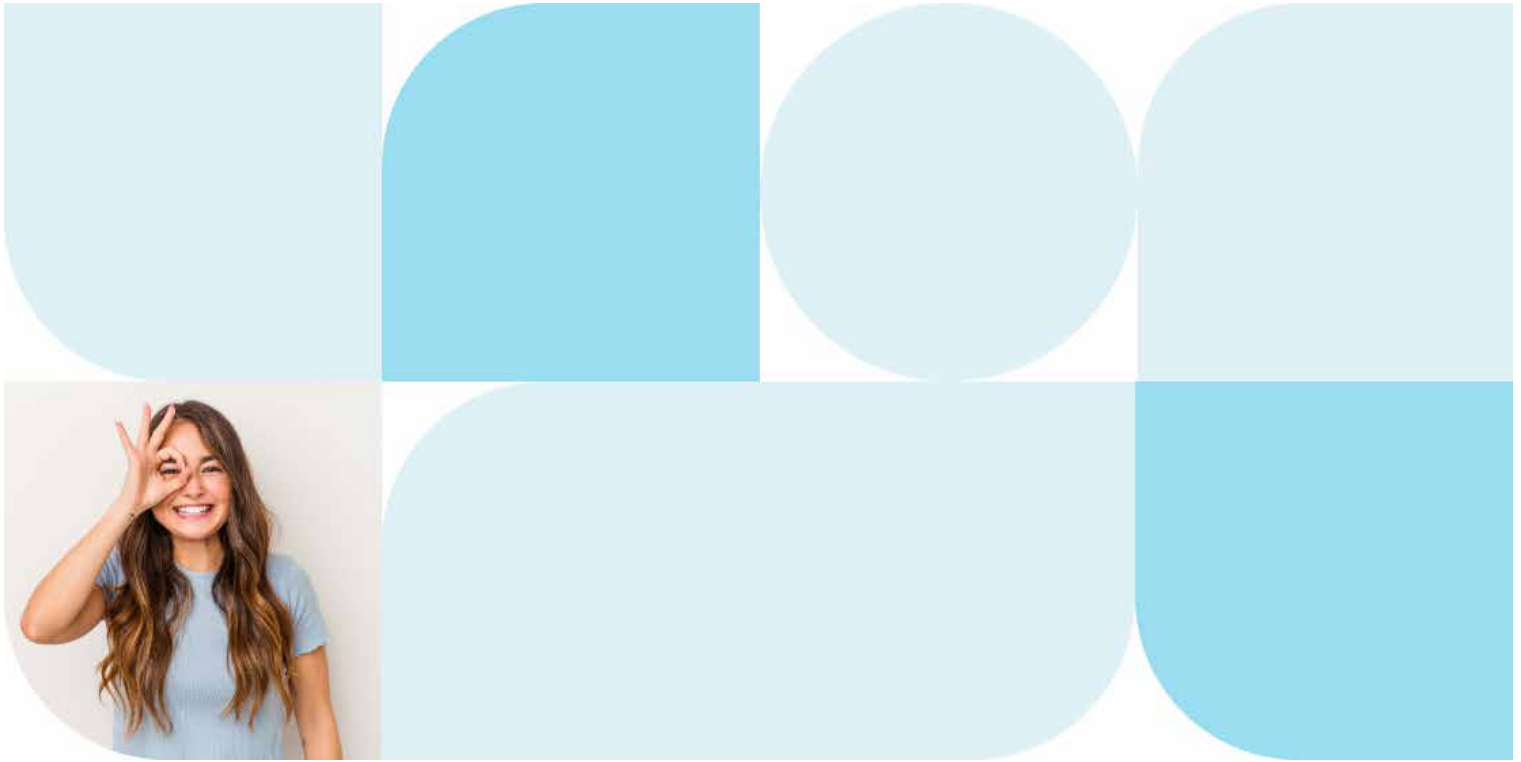
Name	Your value	Unit	Reference value	Scale
Candida spp.	 < 1,0 x 10 ³	CFU/g stool	< 1,0 x 10 ³	
Candida albicans	 < 1,0 x 10 ³	CFU/g stool	< 1,0 x 10 ³	
Yeast	negativ	Negative		
Geotrichum candidum	 < 1,0 x 10 ³	CFU/g stool	< 1,0 x 10 ³	

pH value

Name	Your value	Unit	Reference value	Scale
pH value	 6.00		5,8 - 6,5	

Mucosal support / Butyrate production

Name	Your value	Unit	Reference value	Scale
Akkermansia muciniphila	 7800000.00	CFU/g stool	> 1,5 x 10 ¹⁰	
Faecalibacterium prausnitzii	 16999999000.00	CFU/g stool	> 5,0 x 10 ¹⁰	



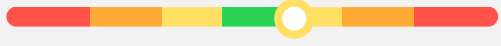
Extended Information

Explanation of your test results

The **microbiome** includes the bacteria and other microorganisms that are naturally present in the intestine. Our **microbiome** has a broad influence on human health and disease. It modulates the immune system, provides the organism with vitamins, participates in the digestion of food components, supplies intestinal epithelium with energy by producing short-chain fatty acids and stimulates intestinal peristalsis.

Determination of aerobic bacteria

Escherichia coli

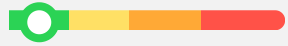
Name	Your value	Unit	Reference value	Scale
Escherichia coli	 2,0 x 10 ⁸	CFU/g stool	10 ⁶ - 10 ⁷	

Escherichia coli belongs to the **putrefactive bacteria**. Putrefactive bacteria are bacteria that thrive in an alkaline environment and produce ammonia. At high pH, they grow and can compete with other good bacteria.

Putrefactive bacteria primarily metabolize protein and fat, which produces toxic metabolites such as ammonia, indole, skatole and hydrogen sulfide. This can damage the intestinal mucosa and may lead to an increase in the pH of the stool (> 8.5) in the long term.

Floral lesions are often caused by increased **immune** activity in the mucosal immune system. If the **microbiome** is characterized by an increased amount of putrefactive bacteria, the body tries to reduce the pH value in the intestine/lumen by supplementing with pre- or probiotics. This promotes the repopulation of the **microbiome** and inhibits the growth of putrefactive bacteria. Less toxic metabolites are produced, which alleviates the damage on the intestine and other vital organs such as the liver and kidneys.

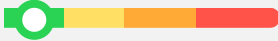
Escherichia coli Biovare

Name	Your value	Unit	Reference value	Scale
Escherichia coli Biovare	 < 1,0 x 10 ⁴	CFU/g stool	< 1,0 x 10 ⁴	

Escherichia coli Biovare are subtypes of *Escherichia coli* that does not normally occur in the intestine. There are several types such as hemolytic, mucoid and **serotype negative E. coli**. It is not uncommon to find hemolytic or mucoid *E. coli* while finding a favorable *E. coli* and alkaline pH.

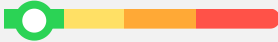
Floral lesions are also caused by **immune** activity. This is mostly due to too low production of secretory IgA.

Proteus spp.

Name	Your value	Unit	Reference value	Scale
Proteus spp.	 < 1,0 x 10 ⁴	CFU/g stool	< 1,0 x 10 ⁴	

Elevated levels of *Proteus* species often occur in Crohn's disease and primary biliary cholangitis.

Klebsiella spp.

Name	Your value	Unit	Reference value	Scale
Klebsiella spp.	 < 1,0 x 10 ⁴	CFU/g stool	< 1,0 x 10 ⁴	

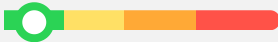
High levels indicate an increased inflammatory activity in the intestine. *Klebsiella* can release histamine and may cause abdominal pain, bloating, gas and diarrhea. Elevated levels of *Klebsiella* is common after prolonged use of antibiotics.

Pseudomonas spp.

Name	Your value	Unit	Reference value	Scale
Pseudomonas spp.	 < 1,0 x 10 ⁴	CFU/g stool	< 1,0 x 10 ⁴	

Elevated levels of *Pseudomonas* species may occur in inflammation of the intestine. Elevated levels can lead to diarrhea and loose stool.

Enterobacter spp.

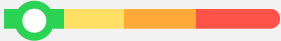
Name	Your value	Unit	Reference value	Scale
Enterobacter spp.	 < 1,0 x 10 ⁴	CFU/g stool	< 1,0 x 10 ⁴	

Enterobacter species belong to the *proteobacteria* bacteria. *Proteobacteria* bacteria are bacteria that thrive in an alkaline and oxygen and proflavescence. At high pH, they grow and can compete with other good bacteria. *Proteobacteria* bacteria primarily metabolize protein and fat, which produce toxic metabolites such as ammonia, indole, skatole and hydrogen sulfide. This can damage the intestinal mucosa and may lead to an increase in height of the colon (c-f) in the long term.

Enterobacter species are common bacteria in soil and water and are often found in the intestinal tract of humans and animals. High levels are often associated with an inflammatory process in the intestinal mucosa. Enterobacter are opportunists that can occur as pathogens in hospitals where they cause infections in people with weakened immune systems.

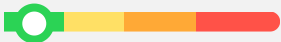
If the intestine is characterized by an increased amount of putrefactive bacteria, one can try to reduce the pH value in the intestinal lumen by supplementing with pre- or probiotics. This promotes the repopulation of the intestine with *Lactobacillus* and inhibits the growth of putrefactive bacteria. Lactic acid metabolites help reduce the pH value, which alleviates the damage on the intestine and other vital organs such as the liver and kidneys.

Serratia spp.

Name	Your value	Unit	Reference value	Scale
Serratia spp.	 $< 1,0 \times 10^4$	CFU/g stool	$< 1,0 \times 10^4$	

Serratia species occur in a variety of infections. Elevated levels also often occur in people with diarrhea.

Hafnia spp.

Name	Your value	Unit	Reference value	Scale
Hafnia spp.	 $< 1,0 \times 10^4$	CFU/g stool	$< 1,0 \times 10^4$	

Elevated levels of *Hafnia* species can occur in people with diarrhea and can cause illness in people with weakened immune systems.

Enterococcus spp.

Name	Your value	Unit	Reference value	Scale
Enterococcus spp.	 $2,0 \times 10^7$	CFU/g stool	$10^6 - 10^7$	

Enterococcus produce with metabolic products and antibiotics substances that prevent foreign bacteria colonization in the small intestine (translocate to small intestine colonization).

Low levels promote the occurrence of endogenous infections by disrupting intestinal barrier function.

Determination of anaerobic bacteria

Bifidobacterium spp.

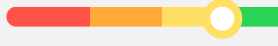
Name	Your value	Unit	Reference value	Scale
Bifidobacterium spp.	 $2,0 \times 10^9$	CFU/g stool	$10^9 - 10^{11}$	

Bifidobacteria are needed among other things to protect against potentially pathogenic microbes, for the synthesis of short-chain fatty acids and to stimulate BALT (gut-associated lymphoid tissue), as well as to break down complex carbohydrates and indigestible fiber. They are part of the so-called *flora* and mainly use carbohydrates as their fuel.

substance. This produces short-chain fatty acids (acetate and butyrate), which lower the pH values in the intestinal lumen and therefore inhibit the growth and spread of pathogenic bacteria.

High **Bifidobacteria** levels leads to deterioration of colonization resistance in the colon. **Bifidobacteria** develop a microbial barrier against infection by occupying mucosal receptors. These counteract the colonization and spread of pathogenic bacteria, yeast or parasites.
 Low levels can be due to a microbial imbalance, or too low **fiber** intake. Excessive levels are rare. **Bifidobacteria** is a very common bacterial strain used in probiotics. **Bifidobacteria** is also well supported by probiotics.

Bacteroides spp.

Name	Your value	Unit	Reference value	Scale
Bacteroides spp.	 1,0 x 10 ⁹	CFU/g stool	10 ⁹ - 10 ¹¹	

Bacteroides species belong to the genus Bacteroidetes. Their task is to break down indigestible **fiber** and produce butyrate/butyric acid.

As with **Bifidobacteria**, much Bacteroides **fiber** leads to deterioration of colonization resistance in the colon. **Bifidobacteria** develop a microbial barrier against infection by occupying mucosal receptors. These counteract the colonization and spread of pathogenic bacteria, yeast or parasites.

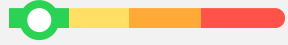
Too low levels of Bacteroides species indicate a disturbance in the microbial ecosystem and can lead to overgrowth of other microbes. Too low levels can also reduce the production of short-chain fatty acids. A diet rich in **fiber** and probiotics is recommended at low levels.

Lactobacillus spp.

Name	Your value	Unit	Reference value	Scale
Lactobacillus spp.	 < 1,0 x 10 ⁴	CFU/g stool	10 ⁵ - 10 ⁷	

Lactobacillus is a bacterial species that occur in the small intestine and ferment lactose (sugars) and metabolize products that prevent foreign bacteria from colonizing in the small intestine. Too low levels can occur in, among other things, poor adherence, food allergies or food intolerances. Excessive levels can occur with impaired digestive capacity.

Clostridium spp.

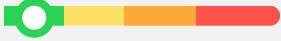
Name	Your value	Unit	Reference value	Scale
Clostridium spp.	 < 1,0 x 10 ⁵	CFU/g stool	< 1,0 x 10 ⁵	

Clostridium species come in over one hundred different subspecies. Many species are not virulent and can have positive effects on gastrointestinal health. Elevated levels may occur in people with autism, as well as in IBS. Even low levels can occur in people with IBS.

Mycological stool examination

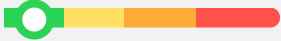
The mycological stool examination is used to detect any overgrowth of yeast and fungi. A possible fungal overgrowth is a result of unfavorable conditions in the intestine, which in turn is often due to a weakening of the immune system.

Candida spp.

Name	Your value	Unit	Reference value	Scale
Candida spp.	 < 1,0 x 10 ³	CFU/g stool	< 1,0 x 10 ³	

Candida species are typically part of the commensal fungal flora, but can become pathogens in people with weakened immune systems and may cause vaginal fungal infections.

Candida albicans

Name	Your value	Unit	Reference value	Scale
Candida albicans	 < 1,0 x 10 ³	CFU/g stool	< 1,0 x 10 ³	

Candida albicans belongs to the group of facultative pathogenic yeast which - under certain circumstances - intensively multiply and can cause mycotic mycoses. Candida albicans accounts for 95-99% of all Candida mycoses.

Organisms that come in contact with human mucous membrane are often contaminated with yeast. To prevent recurrence of infections, toothbrushes, artificial dentures or breast should be disinfected regularly.

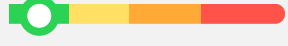
If the intestine flora is characterized by an increased amount of putrefactive bacteria, one can try to reduce the pH value in the intestine/lumen by supplementing with pre- or probiotics. This promotes the germination of the intestinal acid bacteria flora and inhibits the growth of putrefactive bacteria. Low toxic metabolic byproducts are produced, which alleviate the damage on the intestine and other challenges such as the liver and kidneys.

Yeast

Name	Your value	Reference value
Yeast	negativ	negative

Yeast is a type of fungus that naturally occurs in the digestive system, but can cause disease if they overgrow. Negative = no overgrowth. Positive = overgrowth. Your result should be negative.

Geotrichum candidum

Name	Your value	Unit	Reference value	Scale
Geotrichum candidum	 < 1,0 x 10 ³	CFU/g stool	< 1,0 x 10 ³	

Geotrichum candidum is a saprophyte that can be isolated from soil, waste, unwashed vegetables, fruits and dairy products. This fungus is less often detected in water and stool.

Geotrichum can cause disease in the case of a weakened immune system, long-term antibiotic treatment or immunosuppressive treatment. This affects the oral cavity, nose and throat in addition to the effect on the immune

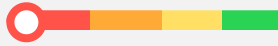
The properties of the stool

Name	Your value	Unit	Reference value	Scale
pH value	 6.00		5,8 - 6,5	

The pH value of the stool can indicate if there are any conditions of excess acidity or fermentation in the intestine. A too low pH value often occurs in combination with a dysbiotic stool intake. Here, no complex sugars are metabolized to fatty acids, which can contribute to an acidified stool. A too high pH value can be due to excessive intake of protein, which can stimulate various intestinal bacteria to produce ammonia and other metabolic products, thus raising the pH value of the stool.

An acidogen diet that is too acidic (decreased pH) can be stabilized by the addition of probiotics, in combination with a diet rich in fiber and low/medium in fat and protein.

Mucosal support / Butyrate production

Name	Your value	Unit	Reference value	Scale
Akkermansia muciniphila	 7800000.00	CFU/g stool	> 1,5 x 10 ¹⁰	

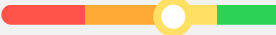
Akkermansia muciniphila is a strictly anaerobic, gram-negative bacterium that breaks down mucus (mucous membrane), but on the contrary stimulates the mucous membrane to produce more mucus and a structurally active molecule. High levels of *Akkermansia* indicate a thick layer of mucus. Low levels often occur together with a reduced mucus production that allows pathogenic pollutants and bacteria to penetrate the mucous membrane and can thus cause inflammation.

By breaking down mucus, *Akkermansia muciniphila* provides important nutrients for Faecalibacterium prausnitzii, the most important producer of butyrate/butyric acid. Butyrate plays an important role as an energy source for intestinal epithelial cells and protects the mucous membrane. Studies have shown some probiotics and especially polysaccharides increase the levels of *Akkermansia muciniphila*.

Features of Akkermansia

- enhances colonization of the mucosal barrier
- an anti-inflammatory effect by supporting butyrate production (BtuA to B)

Mucosal support / Butyrate production

Name	Your value	Unit	Reference value	Scale
Faecalibacterium prausnitzii	 16999999000.00	CFU/g stool	> 5,0 x 10 ¹⁰	

Inflammation of the intestinal mucosa is often characterized by an increase in acute phase proteins in the stool (especially alpha 1-acid glycoprotein and calprotectin). Another indicator of inflammation in the intestinal mucosa can be the absence of Faecalibacterium prausnitzii. Faecalibacterium prausnitzii only appears to appear in humans and is found in the intestinal mucosa membrane.

Faecalibacterium prausnitzii produces butyrate/butyrate and has an anti-inflammatory effect by blocking NF- κ B activation and IL-8 production.

Butyrate can protect against various other things, bowel cancer. Low levels of Faecalibacterium prausnitzii appear in Crohn's disease, in bowel cancer and in diseases that accompany inflammatory mucosal changes, such as celiac disease, IBS and obesity.

How can you use the results

IB is a treatment protocol developed by the Institute for Functional Medicine in the United States to restore gastrointestinal health and other problems that originate therefrom. If you have any imbalances, we recommend that you follow the program as described below. The program usually takes between 2-6 months to complete.

1. Remove

Find and exclude any microbes, foods or toxins that may interfere with optimal intestinal function and exclude them. Examples of antimicrobial herbs are *Adonis*, *garlic*, *oats*, *herbs*, *oats*, *oats* and *grape seed extract*, *olive leaf extract* and *oil of oregano*. If you suspect food intolerances or a toxin load, we offer food intolerance tests and heavy metal tests.

2. Replace

Support the digestive system with suitable digestive support. For example, balance pH with papain, digestive enzymes or herbs such as *cardamom*, *cinamon*, *fennel*, *garlic*, *ginger* and *turmeric*.

3. Reinoculate

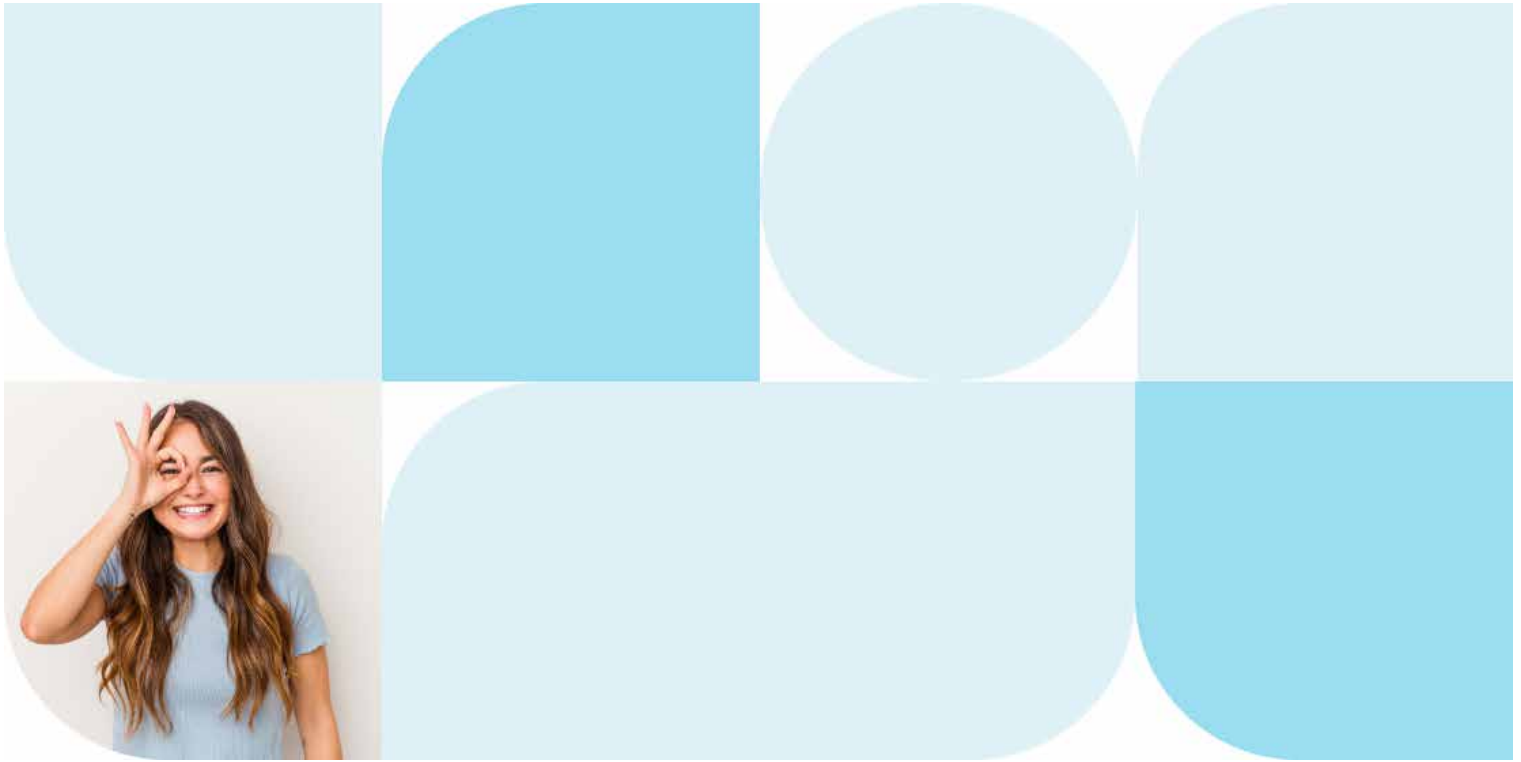
Balance the intestinal flora with dietary fiber, probiotic foods and probiotic supplements. Choose probiotics according to the intestinal bacteria you are looking for according to the test results.

4. Repair

Support the intestinal mucosa. Examples of substances to support the intestinal mucosa are *olive oil*, *B-vitamins*, *omega-3 fatty acids*, *L-glutamine*, *melatonin*, *low-dose aspirin* and *vitamin A*.

5. Rebalance

Balance your lifestyle diet, exercise, sleep and stress.



Other information

Milder intestinal inflammation

Mild intestinal inflammation can be a consequence of different diseases, stress and can occur in different parts of the intestine. Most often, the lower part of the small intestine or the upper part of the large intestine is affected, which leads to nutrient uptake. Undigested food has a tendency to remain in the intestine, which can cause irritation.

In case of irritation in the stomach/intestine, it is good to take into account and exclude foods that you are intolerant to. A well-balanced diet should be developed to reduce the strain on the gut. This can be accomplished by eating several smaller meals a day instead of large, heavy meals, as well as avoiding certain foods that can sometimes interfere with proper gastrointestinal function:

- Gas-producing vegetables: Cabbage, beans, onions, peppers, mushrooms, legumes
- Hot spices: Chili pepper, paprika powder
- Foods high in fat: Fried food, fatty fish, hard cheeses, mayonnaise
- Foods high in sugar: Sweets, products containing natural and artificial sweeteners
- Beverages: Alcohol, coffee, carbonated beverages, and drinks that are too hot or cold

It can be beneficial to eat leaner food, moderate and exclude foods that may further irritate. Different cooking methods can also facilitate or make the food on the intestine more difficult.

During symptomatic periods a diet rich in fiber is recommended to reduce inflammation. If you change your diet, remember to do it gradually.

Foods that are usually well tolerated:

- Aromatized buckwheat, brown rice, millet and quinoa
- Eggs, fish, lean meat and poultry
- Cooked vegetables
- Potatoes and other tubers
- Porridge
- Yogurts

Nutritional deficiencies

Imbalances in the intestine can lead to impaired nutrient uptake. If you have any digestive issues, it can be a good idea to test yourself for any deficiency of vitamins B12, iron, magnesium and zinc.

MCT oil

MCT oil is composed of medium-chain triglycerides, which are used in the body for energy and can be used as a readily available energy source. They can be more easily absorbed and digested independently of bile acids and digestive enzymes. Adding these fats should be done gradually to allow the intestine to adapt.

Fiber-rich food

Dietary fiber is a substance that the body can only use as a nutrient. Normally, fiber is not absorbed and digested, but can also be processed by the intestinal flora and provide beneficial metabolic products such as butyrate that are very valuable for the body.

- Fiber has a structure that requires them to be chewed more and longer. Chewing leads to the release of saliva, which in turn counteracts caries and tooth decay. Chewing a lot also leads to a faster feeling of satiety.
- Dietary fiber swells and binds water. This prolongs the feeling of satiety. It also increases the weight of the stool and stretches the intestinal walls, which triggers the muscles in the intestine to work and stimulates intestinal peristalsis. Improved bowel movements make it easier for toxic substances to be excreted from the body and reduce the risk of diseases linked to excessive toxin exposure.
- Fiber also not just bind water in the intestine. Bile acids produced from cholesterol are also bound up and excreted in the stool. The body is thus forced to form new bile acids from cholesterol and the cholesterol level is lowered.
- Dietary fiber is important for people with diabetes, as it has a positive effect on blood sugar.
- Dietary fiber stimulates the growth of beneficial bacteria and strengthens our natural intestinal flora, while reducing the growth of unfavorable bacteria and harmful metabolic substances.

The general dietary recommendation for fiber intake is 25-35 grams of fiber per day for adults. In the table below you can see how much fiber different foods contain.

Type of food	Foods	Fiber in g/100 g
Legumes (uncooked)	Broad beans	16,4
	Brown beans	16,4
	Mung beans	16,0
	Soybeans	15,3
	White beans	15,8
Fruits	Pomegranate	10,0
	Passion fruit	15,9
	Raisins	9,7
	Dried apricots	12,0
	Dried figs	18,5
Vegetables	Avocado	4,8
	Brussels sprouts	4,5
	Artichoke	5,0
	Sun-dried tomatoes	12,7
	Wheat sprouts	14,0
Grains	Oatmeal	15,0
	Oat bran	18,0
	Hard bread (whole grain)	24,0
	Wheat bran	37,5
	Wheat germ	30,5

Support your intestinal flora through the right diet and beverage

We have a large number of bacteria in our gut. They support our immune system and intestinal mucosa by producing important metabolic products and other nutrients. Which substrate the bacteria produce depends on the substrate in the intestine, i.e. food components that can not be broken down by the body. Based on their metabolic products, they support either the acidification or the putrefaction process in the intestine. If the relationship between these two groups is in balance, the intestinal acid content is slightly acidic. Lactic acid bacteria thrive best in acidic environments, while putrefactive bacteria prefer an alkaline environment.

Undigested food residues after consuming high protein and fatty foods are used by the putrefactive bacteria in the intestine. The metabolic products produced by a dominant putrefactive intestine can stress the host, cause bloating and gas and in part have carcinogenic effects in the long term. Fiber-rich diets, on the other hand, support an acidic intestine, which supports peristalsis and protects against pathogenesis, as well as carcinogenesis.

A well-balanced diet can largely balance the relationship between acid and putrefaction. The intake of fat and protein should therefore be kept at a low and moderate level.

Some ways to reduce fat and protein intake

- Eat lots of fruits and vegetables
- Avoid excessive intake of high-fat foods
- Eat lean fish, red meat and poultry
- Replace white flour products with whole grains
- Prepare the food carefully by, for example, steaming or baking in the oven rather than broiling, grilling or frying
- Make sure the fats you eat are good fats

This test does not replace medical consultation. Always seek medical attention if you experience severe symptoms.

