FOODTEST.HU
food intolerance centre

NUTRITION COUNSELLING NOTES

Food intolerance – nutrition counselling notes

A guide to interpreting your FOODTEST 200+ results and planning your elimination diet.

This guide helps you interpret the results of the FOODTEST 200+ IgG food antibody test and plan the dietary changes you need.

Our notes help you decide which foods to leave out, eat less of or replace. They give ideas for introducing alternative, substitute foods, and show how to gradually return to your original foods once your symptoms have eased, so that your diet stays varied and balanced.

A balanced diet is essential for maintaining good health. The ideas in this guide help you plan a diet that is achievable, sustainable and enjoyable.

> **These notes do not replace personalised advice**, which the FOODTEST.hu Food Intolerance Centre also provides for you.

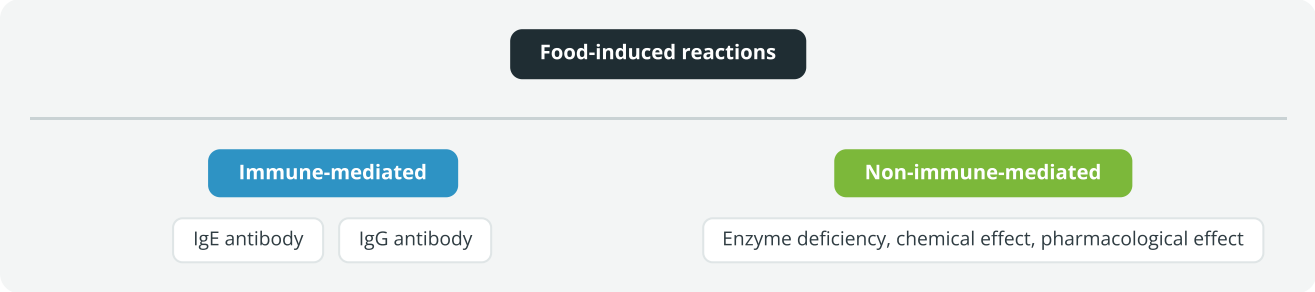
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What does food intolerance mean?

Terms

The terms “food allergy”, “food intolerance” and “food sensitivity / hypersensitivity” are often used interchangeably and are frequently misunderstood. All of them, however, mean that the body responds abnormally to certain foods, and this can show up as various symptoms. Behind this there may be a mechanism involving activation of the immune system and, as a result, the production of antibodies; symptoms can also arise from non-immune-mediated reactions.



Immune-mediated reactions

When the immune system overreacts to a food that causes no complaints in most people, this is usually called an “allergy”. This overreaction prompts the immune system to produce antibodies against “foreign” food proteins that the body identifies as a threat.

Allergic reactions are divided into four groups (types I, II, III and IV). The classification is based on which part of the immune system is activated and how much time passes before the reaction appears. The two types of allergy most often linked to adverse reactions to food are:

TYPE I ALLERGY

Also called IgE-mediated allergy / type I hypersensitivity reaction / true allergy.

These reactions are characterised by the production of IgE antibodies and the release of histamine and other chemical mediators after contact with the allergen (for example peanuts or shellfish). They are responsible for symptoms that can appear within minutes of eating the food. The most common symptoms of a classic allergic reaction are rash, sneezing, difficulty breathing and anaphylactic shock. It is usually obvious which food is responsible for triggering the food allergy; these foods must be avoided for life.

TYPE III ALLERGY

Also called IgG-mediated allergy / food intolerance / food hypersensitivity.

These reactions are characterised by the production of IgG antibodies and the formation of antigen–antibody complexes, which are deposited in the tissues and lead to chronic inflammation. They are responsible for delayed symptoms that appear hours or days after eating. Symptoms: restlessness, low mood, IBS, headache / migraine, weakness, high blood pressure, eczema, asthma, joint pain, chronic rhinitis, arthritis, weight problems, etc. The foods that trigger the symptoms should be left out of the diet for at least six months and can then be gradually reintroduced once the gut flora has recovered.

Non-immune-mediated reactions

Reactions that do not involve an immune response are also often called food intolerance. They can be caused by a sensitivity reaction to certain chemical substances found in food, or by an enzyme deficiency.

ENZYME DEFICIENCY

Lactose intolerance

Caused by insufficient lactase – the enzyme that breaks down lactose (milk sugar). Lactose is found in dairy products: milk, cheese, yoghurt, etc.

Typical symptoms: feeling of fullness, diarrhoea and bloating.

ENZYME DEFICIENCY

Histamine intolerance

The cause may be a lack of the enzyme diamine oxidase (DAO) or inhibition of its activity. DAO plays a role in breaking down histamine. Without the enzyme, histamine levels rise and trigger inflammatory reactions and unpleasant symptoms.

Symptoms may include: migraine, dizziness, intestinal and stomach complaints, runny nose, depression, irritation and skin flushing.

Foods high in histamine

These make symptoms worse, for example: red wine, cheese, tuna, preserved foods, food that is not fresh.

Histamine-releasing foods

Their histamine content is low, but they can trigger the release of histamine in the body, for example: citrus fruits, bananas, tomatoes and chocolate.

What does FOODTEST 200+ test?

In this chapter we have discussed various adverse reactions to food – immune-mediated and non-immune-mediated reactions. The FOODTEST 200+ IgG antibody test is used to detect immune-mediated sensitivities mediated by IgG antibodies. To distinguish them from IgE-mediated allergic reactions, we call these reactions food intolerance, and we use this term in the rest of this guide.

Common symptoms of food intolerance

Fewer than 2–3% of the population have a food allergy, but the proportion affected by some form of food intolerance is estimated at 30–40%. Symptoms often appear only some time after the food has been eaten, which makes it hard to identify which food or foods are responsible.

Food intolerance is the body's inappropriate response to a food or foods. Although its causes are not fully understood, poor digestion, an imbalance of the microbes living in the gut (microbiome, gut flora), parasites, intestinal infections, poor diet, alcohol consumption and the effects of medicines may all play a part in its development. In a significant proportion of cases the immune response (IgG production) plays a role in the development of the symptoms.

Under normal circumstances the immune system can clear antibody–food protein complexes. If, however, for some reason the complexes build up in the body's tissues, they start processes that trigger food intolerance symptoms.

Digestive disorders
Stomach pain, bloating, cramps, nausea, vomiting, diarrhoea or constipation, obesity.

Skin problems
Eczema (atopic dermatitis), itchy skin and other skin rashes.

Central nervous system disorders
Headache, migraine, poor concentration, changes in mood and behaviour, depression, anxiety, fatigue; in children hyperactivity and learning difficulties.

Respiratory conditions
Runny nose, inflammation of the nasal lining, sinusitis, asthma.

Musculoskeletal problems
Joint pain, joint inflammation, muscle pain and weakness.

Symptoms can appear several days after eating the reactive food and can last for weeks.

Because the symptoms are delayed, it is very hard to tell which food is responsible for them. Measuring the blood levels of antibodies produced against the proteins in foods helps to identify the foods that may be linked to the complaints.

A diet based on leaving out the problem food is often enough to make the symptoms go away. Identifying these foods is not easy – taking the FOODTEST 200+ test is the first step in this process. **A POSITIVE food antibody level does not on its own prove that the food is responsible for the symptoms, but it helps to identify the foods causing the problem.**

Interpreting the test results

Your FOODTEST 200+ result

The FOODTEST 200+ report lists the foods your blood sample was tested against; it lets you rank the foods by the strength of the antibody response they trigger.

Antibody levels

Each food has a number next to it. These numbers are the IgG concentrations detected for each food (in U/ml): the higher the value, the stronger your body's immune response to that food. Depending on the antibody level detected, foods are grouped into the POSITIVE, BORDERLINE and NORMAL ranges.

If you have complaints and the FOODTEST 200+ test shows a POSITIVE or BORDERLINE IgG antibody level, you may be intolerant to that food. Leaving these foods out of your diet usually leads to an improvement in symptoms. You will find more detailed information on leaving out and replacing foods in the chapter "Planning your diet".

POSITIVE	BORDERLINE	NORMAL
A high antibody level was detected for the food.	**A moderate antibody level was detected for the food.**	**No significant reaction was detected for the food.**
These are the primary problem foods; leaving them out of the diet for at least six months is recommended. They can be replaced with NORMAL foods from the same group. See the chapter "Test report: Food groups".	These are moderately problematic foods; eating them less often (every 3–5 days) and in smaller amounts is recommended to prevent the intolerance from getting worse. They can be replaced with NORMAL foods from the same group.	These foods can be eaten without restriction, unless they have caused unwanted reactions in the past.

Immediate allergic symptoms

If any food gives you immediate allergic symptoms (type I allergy), avoid that food regardless of your FOODTEST 200+ result!

Important advice

If the FOODTEST 200+ IgG antibody test did not find any food with a POSITIVE antibody level, but you still have symptoms that may be linked to food intolerance, it is advisable to eliminate the foods in the BORDERLINE range for 3 months.

Leaving out several POSITIVE foods from your diet at the same time can be difficult. It may be easier if you proceed as follows:

a) Leave out completely the 8–10 foods that triggered the highest antibody response (showing the highest antibody concentration).

b) Eat less of the remaining foods that triggered a moderate antibody concentration, or rotate them in a rotation diet.

It is normal to feel worse for a few days after leaving out a food and changing your diet. Your body needs time to adjust and to overcome withdrawal symptoms; keep going! The improvement may only become obvious a few weeks later.

Rotation diet – an example of eating wheat in rotation EVERY 3–5 DAYS

In a rotation diet, do not eat any one borderline food more often than every 3–5 days or in large amounts.

DAY 1	DAY 2	DAY 3	DAY 4	DAY 5	DAY 6
wheat bread	oat biscuits	bread made only from maize flour	rye rusks	buckwheat pasta	wheat bread

If you need to eliminate a POSITIVE food (for example milk) from your diet, it is essential to cover the nutrients of that food group (for example calcium) from other food sources.

It is not advisable to replace a food you have left out with foods from the same group only, as this is very likely to lead to further intolerance. For example, if you need to eliminate wheat and you regularly ate it for breakfast (e.g. as toast), do not replace it with porridge every morning. Instead, rotate foods from the same group and different food groups, as varied as possible.

Many people see the greatest improvement when they leave out the problem foods completely. But don't worry if you cannot eliminate them completely, or if you sometimes have to break the diet: start again as soon as you can.

If you have not eaten a food in the past 3 months, the FOODTEST 200+ test will most likely show a NORMAL reaction because of the low IgG antibody level.

If your symptoms do not improve 2–3 months after excluding the foods that are POSITIVE according to FOODTEST 200+, your symptoms may not be caused by IgG-mediated food intolerance. **Ask a doctor or health professional for help!**

Gliadin

Gliadin is part of the gluten proteins found in wheat, barley, rye, oats, durum wheat and spelt grains and in the dishes and foods that contain them. The FOODTEST 200+ IgG antibody test is designed to test gliadin sensitivity separately from the other proteins of these grains. If your gliadin test is positive, it is advisable to leave out all foods containing wheat, barley, rye, oats, durum wheat or spelt, even if these grains show a NORMAL rating in your test result.

Planning your diet

Before you make any changes

Nutrient supply and health are closely linked, so it is essential to review a few simple rules before changing your diet.

- If you have an illness, are expecting a baby or take medicines, **discuss the planned change of diet with a doctor or dietitian!**
- If you have a diagnosed IgE-type food allergy but the test did not show a positive reaction to those foods, **continue to avoid those foods!**
- A diet previously prescribed by a doctor (diabetes, coeliac disease, reflux, etc.) **must be continued alongside the dietary changes for food intolerance!**

- Get to know the list of foods you can eat. Even if some foods were identified as positive, you can freely eat many other foods from the same group without complaints.
- Plan your diet from the wide range of tasty foods in the NORMAL range, taking cross-reactions into account. Use ingredients that replace the reactive foods and aim for as varied a diet as possible; this helps you avoid developing new food intolerances.

- Watch out for products that may contain a food you react to. Many ready-made dishes and sauces contain ingredients that are not obviously needed to make them. You can also find information on allergen-free foods on the website of the Hungarian Food Allergy and Food Intolerance Databank.
- Always read the labels of products before you buy them.

Ask a dietitian, nutrition counsellor or gastroenterologist for advice on putting together your elimination diet. **A diet that is not put together and followed properly can seriously damage your health!**

Plan ahead

Before switching to the new diet, it is a good idea to give yourself a day or two to prepare. This guide contains a lot of useful information you may need to get the most out of your FOODTEST 200+ results. We recommend planning your daily menu well in advance so that it contains foods with NORMAL values. Collecting recipes, rethinking your cooking habits and planning your shopping ahead will help you have fewer problems when you introduce your new diet.

Leaving out / rotating foods

Any food on the POSITIVE or BORDERLINE list should be excluded from your diet for at least six months. Most foods are relatively easy to leave out and can be replaced with foods with NORMAL values. Some foods, however – such as wheat, gluten, dairy products, egg, soy and yeast – are much harder to eliminate completely, because they are widely present in everyday dishes. You will find more information on putting together an effective diet in later chapters of these notes.

Monitoring your symptoms

Food / symptom calendar

You can track your improvement by keeping the FOODTEST.HU 100-day food diary. Write down in the diary what you ate. Note how you feel, and record any change you notice in your symptoms. The food diary can help you identify connections.

Reintroducing foods into your diet

After a period of at least six months (and only if your symptoms have eased), POSITIVE foods can be reintroduced into your diet. It is important, however, that this is always done gradually. Reintroduce only one food at a time, then watch your symptoms for 5 days. If the complaints come back, the food is probably still causing a problem and should be avoided for another one or two months. If the symptoms do not return, the food can be brought back into your diet, eaten less often.

Ideas and tips

- Don't overdo it! You have no doubt missed your favourite foods, but eat them in moderation so that the intolerance does not return!
- Keeping a food diary is also useful during reintroduction.

Steps of reintroduction

1. First reintroduce the foods with lower antibody levels.
2. At first eat only a small portion of the food you are reintroducing (100–200 ml, 20–30 g), first cooked / baked, then raw.
3. If you have no complaints, gradually increase the amount of the food until you reach a normal portion.
4. Before introducing the next food, wait 5 days and watch whether your symptoms return.
5. Continue by introducing the more reactive foods: always add only one at a time to your diet, leaving 5 days before introducing the next food.

Reintroducing eliminated foods takes patience. Watch how your symptoms develop while you gradually build up your diet! The measure of improvement in food intolerance is a favourable change in your symptoms.

How to avoid developing intolerance to new foods

When you start the diet, new foods may come into your diet, and you can develop an intolerance to these as well. This usually happens when the problem food is suddenly replaced by almost only one other food and the substitute foods become monotonous. For example, if you need to leave out wheat, instead of toast eat porridge, fruit salad, a vegetable and yoghurt smoothie, a sandwich made with gluten-free bread or a soft-boiled egg with rye bread. In the tables on foods that often cause food intolerance, we help you choose suitable substitute foods.

Nutrition basics

A healthy diet contains proteins that build the body, fats and carbohydrates that provide energy, vitamins and minerals involved in regulating metabolism, trace elements and fibre in amounts and proportions that best support maintaining health and preventing disease.

Energy and energy turnover

Energy requirement means the amount of energy at which the energy taken in and the energy used are in balance, that is, the person's body weight, body composition and level of physical activity are in line with their state of health. The body obtains the energy it needs for its functions by burning nutrients (fats, carbohydrates, proteins) in metabolic processes.

Breakdown of daily energy requirement

PROTEIN	CARBOHYDRATE	FAT INTAKE	FIBRE INTAKE
15–20%	**55–60%**	**20–35%**	**30–35 g**

These values are only a guide; ask a professional for advice on putting together a personalised diet.

Proteins

Every cell in the body needs amino acids to build it, and these are supplied by the proteins in food. Every tissue and organ – from muscles to bones, nails and hair – needs protein to replace dead cells and for growth. Tissue proteins are constantly broken down and rebuilt. The proteins we take in with food provide the building blocks of the enzymes that drive the biochemical reactions needed for life, the antibodies involved in fighting infections, and many hormones.

If fat and carbohydrate intake does not meet the energy requirement, for example during prolonged fasting, the body breaks down and burns its own proteins. The energy value of 1 g of protein is 4.1 kcal.

Proteins are macromolecules built from twenty different amino acids. Nine of these (histidine, isoleucine, leucine, lysine, methionine, phenylalanine, threonine, tryptophan, valine) are indispensable for humans and are called essential amino acids. The body can produce the non-essential amino acids itself.

The biological value of proteins is determined by their essential amino acid content. First-class or complete proteins contain all the essential amino acids in adequate amounts, so they are sufficient even as the only source of protein. These include most proteins of animal origin (egg, milk, dairy products, meat, fish). Second-class proteins are lacking in essential amino acids, so on their own they are insufficient sources of protein, but they can be made complete by combining them with complete protein. Incomplete protein sources are mostly of plant origin (pulses, cereals, nuts, oilseeds, green peas, rice).

On a mixed diet, a daily protein intake of 0.8–1.0 g per kg of body weight is recommended for healthy adults. Protein requirements differ considerably with age. Eating more protein than needed (above 1.5–2 g per kg of body weight) makes the urine acidic, increases calcium loss from the bones and raises the risk of osteoporosis.

Most important complete protein sources

- Meat and meat products, offal
- Fish
- Seafood and shellfish
- Milk and dairy products
- Egg

Aim for a complete protein intake during the elimination diet as well!

Carbohydrates

For our bodies, carbohydrates are the most easily mobilised source of energy. At least 100–130 grams of carbohydrate a day is needed to maintain metabolic balance. It is advisable to cover about 30% of adults' energy requirement with carbohydrate. It is worth keeping sugar intake to a minimum. Excess carbohydrate is stored partly as glycogen and partly as fat. The energy value of 1 g of carbohydrate is 4.1 kcal.

Different types of carbohydrate

Simple carbohydrates (mono- and disaccharides)

For example glucose, fructose, galactose, xylose, sucrose, lactose. Simple sugars are found in fruit, honey, sugar beet, sugar cane, milk and dairy products, vegetables and carrots.

Simple carbohydrates taste sweet, dissolve in water, and can cause blood sugar to rise quickly and then fall. The rate of absorption is affected by the fibre, protein and fat content of the food eaten at the same time.

Complex carbohydrates (polysaccharides)

For example starch, glycogen, inulin, cellulose, hemicellulose, pectin. Complex carbohydrates are found in cereal grains, vegetables, fruit, legumes, algae and seaweed. They are broken down slowly in the body, provide energy evenly and raise blood sugar less. Thanks to their high nutrient and fibre content, they are good for healthy digestion. They lower blood cholesterol and reduce the risk of cancer.

Sugar alcohols

Sugar alcohols are special forms of simple carbohydrates. In everyday life we come across them in diet foods and as sweeteners in food. Sorbitol is the alcohol derivative of glucose and fructose, dulcitol of galactose and xylitol of xylose.

Fibre

Indigestible carbohydrates in food that resist the action of digestive enzymes. Among other things, fibre reduces hunger, supports good bowel function, clears harmful substances from the gut, has a favourable effect on carbohydrate and fat metabolism, and reduces the risk of certain cancers. A diet that is low in fibre and one that is too rich in fibre are both unfavourable.

A daily fibre intake of **30–35 grams** is advisable. Eating vegetables, fruit, wholegrain cereals, legumes, nuts and oilseeds more often is recommended. To achieve the beneficial effect, you also need to drink plenty of fluids (400 ml per 10 kg of body weight a day).

Most common sources of carbohydrate

Bread, baked goods · Pasta · Fruit, vegetables · Dairy products · Alcohol · Sugars, soft drinks, sweets

Fats

Fats are primarily energy-providing nutrients; among other things, they also play a role in building cell membranes, as precursors of hormones and as an energy store.

A fat-free diet is not possible because of the essential fatty acids and fat-soluble vitamins. With a diet containing less fat than needed, various skin diseases and vision problems (vitamin A deficiency), rickets (vitamin D deficiency) and bleeding disorders (vitamin K deficiency) can develop.

Burning fat releases more energy in our body (9.3 kcal) than burning carbohydrate (4.1 kcal). Fats give our food a good taste, improve its texture, and their components give it an appetising aroma.

Different types of fat

Polyunsaturated fats

Found in sunflower, soy and corn oil (omega-6 fatty acids), in rapeseed, linseed, walnut and almond oil, and in sea fish (omega-3 fatty acids).

Monounsaturated fats

Found in olive, soy, rapeseed and corn oil, in nuts and in avocado.

Saturated fats

Found in red meat, sausages, processed meat products, butter, cheese, sour cream, and palm and coconut oil.

Trans fats

Found in chocolate coatings, cakes, biscuits and fast food. They are formed during food processing. Eating them is a significant risk factor for developing cardiovascular disease. Trans fats can also form when frying in overheated oil and when grilling outdoors.

The human body cannot synthesise certain polyunsaturated fatty acids: these are the essential (omega-6 and omega-3) fatty acids.

It helps prevent disease if, instead of products containing saturated fatty acids and trans fats, we eat more plant oils rich in essential fatty acids, offal, egg yolk and sea fish. Polyunsaturated fatty acids reduce the tendency to inflammation and blood clotting, as well as the risk of heart attack.

Vitamins and minerals

Vitamins are biologically active organic compounds that are indispensable for the body; they are absolutely necessary for our body to function properly, for growth, and for the regeneration of cells and tissues. Vitamins are important for maintaining resistance to disease. The human body generally cannot synthesise vitamins, so they (or their precursors) must be taken in with food.

Poor eating habits, extreme diets, badly planned weight-loss diets, inadequate nutrition due to social circumstances, digestive problems and poor absorption from the gut all lead to insufficient vitamin intake.

Vitamins are needed in small amounts, and a balanced diet provides an adequate intake. Eat a wide variety of fresh foods every day. The vitamin and mineral content of food is affected by how fresh it is, where it was grown, how it was stored and how it was prepared.

Classification of vitamins

Based on their solubility, vitamins fall into two large groups:

Fat-soluble vitamins

Vitamins A, D, E and K.

Water-soluble vitamins

B vitamins, niacin, folic acid, biotin, pantothenic acid, vitamin C.

Fat-soluble vitamins are stored in the body, water-soluble ones are not, so the latter must be taken in with food every day.

Overview of the vitamins and minerals most important for food intolerance

Fat-soluble vitamins

Vitamin A (retinol)

Vitamin A is needed for undisturbed growth, bone development, immune processes, vision and keeping epithelial tissue healthy. Excessive vitamin A intake leads to serious symptoms of poisoning.

Sources: offal (liver, kidney, heart), egg yolk, sea fish, milk and dairy products. Green, yellow and red vegetables and fruit are rich in its provitamin (root vegetables, spinach, kale, pumpkin, carrots, apricots, melon, tomatoes, peppers, etc.).

REQUIREMENT 0.8–1.0 mg a day

Vitamin D (calciferol)

Vitamin D promotes the absorption of calcium and phosphorus from the gut and directly influences bone formation. It is involved in immune processes and, with adequate intake, reduces inflammatory processes and oxidative stress. Vitamin D needs cannot be covered by diet alone: spending time outdoors in sunlight is needed for a good supply. Vitamin D supplementation is mandatory for children up to the age of 3, but it may also be needed later in life. Vitamin D status can be determined by a laboratory test or by bone density measurement.

Sources: fish liver oil, liver, eggs, milk and dairy products. Some foods are fortified with vitamin D, e.g. margarines.

REQUIREMENT **1500–2000 IU a day for healthy adults**

Vitamin E (tocopherol)

A vitamin with an antioxidant effect that protects against free radicals formed in the body. It protects against ageing processes and speeds up wound healing. It inhibits blood clotting and protects against thrombosis, heart attack and stroke.

Sources: oilseeds (walnut, hazelnut, almond, pumpkin seed), vegetable oils (sunflower, pumpkin seed, olive, corn oil), wheat germ and other cereal germs, sweet potato and muesli. Among foods of animal origin, the vitamin E content of meat, liver and eggs depends on how the animals were fed.

REQUIREMENT 12 mg a day

Water-soluble vitamins

Vitamin B1 (thiamine)

Vitamin B1 plays a role in carbohydrate metabolism and in breaking down amino acids and alcohol. An adequate supply is also needed for the nervous system, muscles and heart to function properly. A diet high in carbohydrates and excessive alcohol consumption increase the need for thiamine. Deficiency causes loss of appetite and slowed bowel movement. Severe deficiency leads to beriberi, a disease of the heart and nervous system.

Sources: yeast, wheat germ, wholemeal flour, cereal grains, sunflower seeds and other oilseeds, brown rice, legumes, soybeans, Brussels sprouts, green beans, oranges, bananas.

REQUIREMENT 1.3–1.4 mg a day

Vitamin B2 (riboflavin)

It plays a role in breaking down amino acids and fatty acids, in tissue respiration, in oxidative processes and in detoxification. The human gut flora also produces riboflavin, so deficiency is rare. Long-term broad-spectrum antibiotic treatment can kill gut bacteria, which can lead to riboflavin deficiency.

Sources: liver, meat, cheese, eggs, fermented dairy products, milk, soybeans, dried legumes, cereals.

REQUIREMENT 1.3–1.8 mg a day

Vitamin B6 (pyridoxine)

Vitamin B6 is important for the functioning of the immune and nervous systems and for the formation of red blood cells, and it helps release energy from proteins.

Sources: lean meat, poultry, fish, eggs, unrefined cereals, wholemeal bread, yeast extract, soy, nuts, bananas.

REQUIREMENT 1.2–1.4 mg a day

Vitamin B12 (cobalamin)

Vitamin B12 is involved in carbohydrate and protein metabolism. It affects red blood cells and the nervous system. Plants do not contain cobalamin; it can only be obtained from food of animal origin, so vegetarians are particularly at risk.

Sources: liver, kidney, oilseeds, meat.

REQUIREMENT 2–2.5 µg a day

Minerals

Calcium

A healthy average adult man has 1000–1200 g of calcium in his body and a woman 900–1000 g; about 99% of this is found in the bones and teeth as calcium phosphate. The remaining calcium plays an important role in triggering muscle contraction, in blood clotting, in keeping cell membranes intact and in the functioning of certain enzymes. About 20–40% of the calcium taken in is absorbed. How well calcium is used depends, among other things, on:

- vitamin D status;
- protein status: protein intake in line with requirements promotes calcium absorption, but excessive intake increases calcium excretion;
- the composition of the food: oxalic acid in sorrel and phytic acid in cereals form insoluble complexes with calcium (and other elements), reducing absorption, while other components, such as lactose, promote it.

A high sodium intake, i.e. regularly eating salty food, increases calcium excretion by the kidneys. Excessive calcium intake (>2 g/day) can cause constipation and impair the absorption of zinc and iron; with high serum vitamin D levels, soft tissue calcification occurs.

Calcium deficiency can cause muscle cramps, muscle pain and sensory disturbances. In the long term, inadequate calcium intake leads to osteoporosis. With a more severe deficiency, calcium supplements can also be used.

Sources: the foods richest in calcium are hard cheeses and poppy seeds. Milk and other dairy products, nuts, oilseeds, sesame seeds, amaranth, soy, bananas, rose hips, quince, oranges, broccoli, pumpkin, oat flakes and eggs also have a significant calcium content.

REQUIREMENT 800–1000 mg a day

Manganese

It is involved in carbohydrate and lipid metabolism and in the synthesis of DNA and RNA. It plays a role in bone formation and blood sugar regulation. Deficiency is rare on a mixed diet, but excessive intake of certain metals (iron, cobalt, calcium) inhibits the absorption of manganese.

Sources: oilseeds (hazelnut, almond, cashew, walnut), wholegrain cereals, wheat bran, millet, wheat germ, cheese, milk and other dairy products.

Chromium

Chromium plays a role in carbohydrate metabolism and supports the action of insulin. Its deficiency may play a role in the development of type 1 (juvenile) diabetes and in coronary artery changes.

Sources: wholegrain cereals, wheat bran, millet, amaranth, legumes, meat, liver, cheese.

Iron

An adult man's body contains 3.5–5 g of iron and that of a woman of reproductive age (13–50 years) 2.5–3 g. 60–70% of the iron store is in active form (haemoglobin, myoglobin, enzymes). The main function of iron is to transport oxygen, carbon dioxide and electrons. Iron deficiency can occur because of intake below requirements, impaired absorption or various kinds of bleeding. Anaemia due to iron deficiency is preceded by the depletion of iron stores.

About 40% of the iron in foods of animal origin is haem iron; the iron in plant foods is non-haem iron. With a good iron status, about 15% of haem iron is absorbed and 3–8% of non-haem iron, so an average absorption of 10% can be assumed. Iron absorption is reduced by, among other things, coffee, tea and the phytates in cereal bran.

Sources: meat (beef, pork, poultry, fish), liver and other offal stand out as sources of iron; absorption is significantly increased by a good vitamin C supply.

Zinc

An adult's body contains about 2.5 g of zinc. Zinc is a component of many enzymes and of insulin. It is involved in the metabolism of carbohydrates, fats, proteins and nucleic acids. Zinc is better absorbed from foods of animal origin than from plant foods.

Sources: the best sources of zinc include meat, liver, eggs and the seeds of legumes.

Magnesium

An adult's body contains 20–28 g of magnesium, about half of which is found in the skeleton. It plays a role in nerve and muscle function and, through the action of many enzymes, in protein, carbohydrate and fat metabolism.

Sources: vegetables, legumes, cereals, fruit, dairy products and fish are rich in magnesium.

Dietary recommendations

The recommendations are based on the Healthy Eating Pyramid (Harvard School of Public Health).

- Build **regular physical activity** into your lifestyle. Gradually increasing the intensity and duration of exercise helps you introduce an active lifestyle without problems. 30 minutes of physical activity or sport a day is recommended for adults and 60 minutes for children. Regular exercise that you enjoy and that does not overload the body helps prevent, or even overcome, many lifestyle diseases.

- Part of staying healthy is **adequate hydration**: 400 ml per 10 kg of body weight a day is recommended. Frequently eating fast food is less favourable for meeting fluid needs than a diet containing more vegetables and fruit. Older people feel less thirsty, so our older relatives need special attention during heatwaves. Aim for variety in what you drink, too: besides tap water you can drink, for example, mineral water, freshly squeezed fruit juice, vegetable juice and fruit smoothies.
- Aim for **energy balance** to control your body weight. Check your weight regularly. Both obesity and undernutrition can lead to disease. Varied, nutrient-rich, home-made meals from seasonal ingredients are a joy for the whole family.
- At the base of the food pyramid are fruit, vegetables and **wholegrain cereals**; these should form the basis of your diet. Regularly eating wholegrain cereals provides your body with a significant amount of protein as well as adequate energy. It is advisable to limit refined cereals. Besides vegetables and fruit, wholegrain cereals also contribute significantly to the necessary intake of dietary fibre. Cereal grains are also valuable for their vitamin E, B1, B2 and B6, niacin, calcium, magnesium and zinc content.
- Eat **vegetables, vegetable dishes and fruit** several times a day. The antioxidants they contain (vitamins E and C, carotenoids, zinc, selenium, flavonoids) and their dietary fibre inhibit the development of cardiovascular disease and tumours. Eating them raw is recommended, because some of the vitamins are lost with strong and prolonged heat. Their low calorie content helps you reach and maintain a healthy body weight.
- Not only for salads but also for traditional Hungarian dishes, prefer **vegetable oils** (sunflower, olive, rapeseed, soy, corn, pumpkin seed, walnut oil). Compared with animal fats, they lower blood cholesterol and their antioxidant effect is also beneficial. The fat used in cooking represents a significant calorie intake. Avoid making roux and eat deep-fried food less often. Salads and steamed vegetable side dishes are quicker to make and healthier. Eating less from hidden sources of fat (meat products, dairy products, cheese, baked goods and cakes, chocolate, wafers) also reduces risk. Lean cheeses with less than 10% fat are healthier.
- Eat **lean meat** several times every day: poultry, fish, good-quality cold cuts. Meat contains complete protein. Regularly eating meat, as well as offal, eggs and fish, covers the body's need for vitamin B12, which plant foods do not contain.
- **Omega-3 fatty acids** are found in sea and cold-water fish (cod, hake, tuna, mackerel, herring, salmon, pike-perch, zander). Their beneficial effects come with regular consumption (at least 3 times a week): they lower triglyceride levels, inhibit blood clotting, reduce inflammation and strengthen the immune system. 3–4 egg yolks a week can be recommended.
- Eating small amounts (a handful) of **oilseeds** regularly is recommended. Their unsaturated fatty acid content helps prevent vascular disease. They are a popular source of protein in vegetarian diets. They are also recommended for their dietary fibre content. Their high calcium content makes them important for people on a dairy-free diet.
- **Milk and dairy products** also contain the vitamin D needed to use calcium. 3–4 portions a day are needed, meaning 200 ml of milk or fermented milk product, or 50 g of cottage cheese, 30–50 g of cheese, or 2 portions of processed cheese. Eating fermented dairy products helps maintain a healthy gut flora. With lactose sensitivity, lactose-free products are needed.

- At the top of the pyramid, i.e. recommended in the smallest amounts, are **butter, animal fats, red meat, white rice, refined cereals, potatoes, pasta, sweets, chocolate and salt**. Because of their high saturated fat, added sugar and calorie content and low fibre content, these foods are best avoided. After eating a delicious cake, remember to build more physical activity into your day as well. Eat sweets and cakes only as the last course of a meal, at most once or twice a week – never between meals, and especially not instead of them.
- Do not add **sugar** to your food at all, or only very little. Instead of sugar, use honey or natural, calorie-free sweeteners: erythritol, stevia. Drink water or natural fruit and vegetable juices rather than soft drinks and cordials.
- Season your food with little **salt**, avoid adding salt at the table, and do not salt raw vegetables. Avoid foods high in salt (tinned foods, meat products, soup powders, crisps). Create the flavour of your dishes with herbs and spices (fresh and dried).
- Moderation applies especially to **alcoholic drinks**. For women, one portion (200 ml beer, 100 ml wine or 20 ml spirits) and for men 2 portions count as moderate. In a weight-loss diet, the energy value of alcoholic drinks must also be counted.
- Take particular care of our children's diet and their physical and mental health.
- In long-term illness, on a weight-loss diet, or on a food allergy or food intolerance diet, **vitamin and mineral supplements** may become necessary.

Remember: there is no "good" or "bad" food. Let variety, balance and moderation guide how you put your diet together.

How to avoid milk and dairy products

If the FOODTEST 200+ test shows a POSITIVE reaction to milk, it is recommended to leave milk and all dairy products out of your diet.

Milk is an important source of protein, calcium and vitamins, including vitamins A and D and members of the vitamin B complex. It is important that you get these nutrients through a balanced diet by including suitable substitute foods.

The range of foods containing hidden milk protein is rather wide: from meat products through baked goods and confectionery to convenience foods, milk can be found in practically any food group as a base, an additive or a contaminant introduced during production and distribution.

Among plant-based products, calcium-fortified ones are recommended. Almond, hazelnut and soy drinks are only recommended if you have no allergic reaction to these ingredients.

If you are casein-positive, only plant-based milk-substitute drinks and dairy-free products are recommended.

To ensure an adequate intake of protein, calcium and vitamins (e.g. vitamins A, D and the B complex), eat a varied diet. For protein intake, complete protein sources (meat, offal, meat products, fish, seafood, shellfish, eggs) are recommended.

The daily calcium requirement of a healthy adult is 800–1000 mg. Our foods richest in calcium are milk and dairy products, soy, poppy seeds and bananas. On a milk-protein-free diet, eat these more often:

oily fish · salmon · sardines · meat · offal · cod liver oil · cod liver · oilseeds · poppy seeds · sesame seeds · rose hips · small-seeded fruits · bananas · dried legumes · soy products · green leafy plants (spinach, sorrel) · parsley leaves · dried or fresh mushrooms

Calcium from plant foods is absorbed less efficiently. Calcium is water-soluble, so it is better to steam vegetables or eat them raw.

Allergen labelling on foods is required by law. Milk is an allergen that must be labelled.

Find out about the composition of foods. Ask a dietitian, nutrition counsellor or gastroenterologist for advice on putting together your elimination diet. **A diet that is not put together and followed properly can seriously damage your health!**

FOODS TO AVOID

Milk, milkshakes · Cream, sour cream · Yoghurt · Butter, sandwich spreads · Cheese, cream cheese · Ice cream · Custards, puddings · Sauces, cream soups · Cakes, doughnuts, savoury scones · Wafers, pancakes, biscuits · Sweets, chocolates · Bread, pizza · Instant mashed potato · Meat products, salamis · Liver pâtés, tinned foods · Meat gravy · Packaged snacks · Frozen, semi-prepared and ready meals

INGREDIENTS TO AVOID

Milk and its derivatives can be present in many foods without it being obvious. So it is important to always read the food label before you buy!

Butter, butter oil · Casein · Cream, reduced-fat cream · Demineralised whey · Low-fat milk · Milk powder, low-fat milk powder, skimmed milk powder · Dried milk products · Low-fat dried milk products · Whey, sweet whey powder · Whey protein concentrate · Preserved whey

ALTERNATIVE FOODS

Milk, milkshakes	oat drink · rice drink · coconut drink · almond drink · coconut-almond drink · almond rice drink · coconut rice drink · multigrain drink · soy drink (plain or flavoured) · coconut milk
Cream, sour cream	soy, oat, coconut and rice cream · coconut cream · almond cream · soy dessert (chocolate, vanilla) · coconut and rice cooking cream · soy-based cream · soy-based sour cream substitute
Yoghurts	soy yoghurt (plain, fruit) · coconut yoghurt (plain, fruit)

ALTERNATIVE FOODS (CONTINUED)

Butter	dairy-free and plant-based sandwich spread, tahini (sesame paste), cold-pressed olive oil and coconut oil, walnut butter, almond butter, pumpkin seed butter, cashew butter, vegetarian vegetable fat, plant-based margarine
Cheese	tofu (plain, chive, paprika, smoked), tempeh
Ice cream	oat or rice ice cream, dairy-free ice cream powder, coconut-based ice cream, dairy-free artisan ice cream
Cream cheese, quark	tofu, tempeh, quark substitute made from egg white, millet quark
Chocolate	dark chocolate

How to avoid egg

If the FOODTEST 200+ test shows a POSITIVE value for egg white and/or egg yolk, leave these foods out of your diet, including foods containing egg protein.

> If you are sensitive to egg white only, you can continue to eat egg yolk.

Egg is an excellent source of protein and contains significant amounts of calcium, iron, zinc and B vitamins. On an egg-free diet, alternative foods work very well. Meat, fish and offal are suitable for replacing the nutrients in eggs.

You can find out about the ingredients of fresh baked goods on the manufacturer's website and at the point of sale. Gluten-free products are usually egg-free as well.

Tips for replacing egg

- Egg is generally used as a binder, for glazing, for making doughs and to add volume. Various **egg replacer powders** are suitable for replacing egg.
- Before using egg replacer powder, read the food label: it may contain milk powder, soy or corn starch. Mixed with water in the right proportion, it can be used for baking, cooking and breading. With a little practice you can even make scrambled "egg" from it. It can be coloured with saffron, grated carrot or turmeric.
- In mixed cakes, egg can also be replaced with **starch and fruit purée**. In sweets, 1 egg can be replaced with 80 g of apple or banana purée.
- Linzer dough and savoury biscuits are easy to make without egg.
- Some flour mixes make it possible to make, for example, pancakes, cakes, bejgli (rolled walnut or poppy-seed cake) and kalács (sweet braided bread) without adding egg.
- For savoury dishes, **potatoes** boiled in their skins and mashed while warm, and **tomato purée** can be used as binders. Soaking, boiling and blending flaxseed gives a jelly-like **flaxseed gel**. **Psyllium husk** also works as an excellent binder.

- When making breaded foods, egg can also be replaced with potato, corn or tapioca starch: mix 3–4 spoonfuls of starch with about 150 ml of mineral water. When breading, the flour coating is followed by the starch mixture and then the breadcrumbs. You can add oilseeds, e.g. sesame seeds, to the breadcrumbs. Sesame seeds contain a lot of iron and calcium and also have a significant protein content.
- Traditional pasta and cakes are most often made with egg. To replace them, use flour mixes that let you make cakes and pasta without adding egg – so you can make sponge, cakes, bejgli, kalács, pancakes, nokedli (dumplings), etc. egg-free. You can also make dumplings without egg using a gluten-free or "free-from-everything" nokedli flour mix.

Allergen labelling on foods is required by law. Egg is an allergen that must be labelled.

Find out about the composition of foods. Ask a dietitian or nutrition counsellor for help with putting together your elimination diet. **A diet that is not put together and followed properly can seriously damage your health!**

FOODS TO AVOID

Omelettes, pies | Pasta, noodles, dumpling side dishes | Cakes, biscuits | Sweets, meringues | Ice cream, custards | Puddings, pancakes | Crêpes, cheesecakes | Pavlovas, crème caramel | Foods fried in batter, breaded foods | Baked goods | Mayonnaise, tartare sauce | Horseradish sauce | Salad dressings | Semi-prepared and ready meals | Frozen and tinned products | Meatloaves, Stefánia meatloaf (with egg filling) | Rösti, some potato products

INGREDIENTS TO AVOID

Egg can be present in many dishes, so it is important to always read the food label before you buy.

Albumin | Egg white (fresh, frozen, powdered) | Egg yolk (fresh, frozen, powdered) | Pasteurised egg | Dried egg | Whole egg | Egg powder | Egg proteins | Globulin | Ovalbumin | Ovovitellin | Ovoglobulin | Ovomucin | Livetin | Vitellin

ALTERNATIVE FOODS

Egg replacer powders	egg replacer powders | rice, potato, corn and tapioca starch | flaxseed gel | psyllium husk | chia seeds
Pasta	pasta made from corn, rice, glass noodle, quinoa or buckwheat flour | durum pasta | gluten-free pasta | chickpea pasta | konjac pasta
Cakes	home-made cakes (with egg substitute, jam, fruit purée) | Linzer biscuits | fresh fruit | compotes | crumble cakes | sponge, cakes, bejgli, kalács, baked goods, waffles and pancakes made with egg-free flour mix

ALTERNATIVE FOODS (CONTINUED)

Ice cream	sorbet · egg-free ice cream powder
Breakfast	egg-free bread and baked goods · oat pudding · quinoa porridge · extruded corn flakes · millet balls · chocolate-flavoured breakfast cereal · gluten-free quinoa and rice porridge · puffed rice balls · buckwheat bites with dates and chocolate · vegetables, fruit, pâtés
Snacks	egg-free snacks (e.g. rice cakes, corn cakes, rye rusks) · egg-free savoury scones and savoury nibbles
Mayonnaise	egg-free mayonnaise
Other	boiled or fried rice (e.g. brown basmati rice) · boiled, mashed potatoes · tomato purée · tofu · oil · sparkling water

How to avoid foods containing wheat

If the FOODTEST 200+ test shows a POSITIVE value for wheat, leave all foods containing wheat out of your diet for at least six months.

Wheat is a good source of energy, fibre, vitamins and minerals. It contains significant amounts of the vitamin B complex, chromium and zinc. If wheat is excluded from the diet, it is very important to replace these nutrients from other sources.

Pseudocereals with a similar nutrient composition are suitable for replacing wheat. Introducing new flavours can be difficult at first, especially for children. With a little practice, your diet can remain tasty and healthy after the elimination too.

ALTERNATIVE FOODS

Flours	Rice, brown rice, rye, buckwheat, millet, corn, coconut, almond, amaranth, pumpkin seed, yellow pea and chickpea flour, potato starch; wheat-free flour mixes can also be used for baking and cooking. Prefer flours that are high in fibre and provide complex carbohydrates, such as buckwheat flour, millet flour, sorghum flour and flour mixes made from them.

ALTERNATIVE FOODS (CONTINUED)

Bread	Wheat-free bread is widely available; it is usually made from rice flour, soy flour, rye flour or a mix of potato and corn flour. These breads contain the essential B vitamins, iron and folic acid found in wheat bread. You can choose 100% rye bread, black bread made from coarsely ground rye flour, or rye/barley-based yeast-free "soda bread". Some ready-made gluten-free breads are also wheat-free. You can find out about the ingredients of breads and baked goods on bakeries' websites or in person in smaller shops. Extruded corn, oat, gluten-free, millet or rye bread and puffed rice cakes can be eaten with meals instead of bread. You can also make bread at home from special wheat-free flour mixes developed specifically for bread baking – with these you can make bread that is high in fibre and rich in minerals and vitamins.
Pasta	Choose pasta made from rice, quinoa, millet, corn or buckwheat, which also contain B vitamins. You can also eat glass noodles (from mung beans) and pasta made from konjac glucomannan flour. For home-made pasta you can also find wheat-free flour mixes (e.g. gluten-free dumpling and pasta flour, gluten-free flour mix for pancakes); with wheat-free flour mixes it is very easy to make wheat-free pasta at home.
Biscuits	A wide variety of biscuits made from corn or oats is available; they can be sweet or savoury.
Breakfast cereals	Wheat-free muesli, oat flakes, puffed millet, puffed amaranth, puffed brown rice, puffed buckwheat, oat cereal bites, quinoa flakes. These foods are excellent for replacing B vitamins and iron. Millet balls in various flavours or rice and corn rings are a healthy snack for children.
Breading	For coating, use wheat-free breadcrumbs or flakes, e.g. gluten-free breadcrumbs. You can also make breadcrumbs at home from pure rye bread. You can also use sesame seeds for breading.
Cooked meats, semi-prepared foods, tinned foods	Read the ingredients when shopping.
Japanese, Chinese and Thai dishes	To make them, use tamari soy sauce or coconut aminos, which do not contain wheat.
Gravy	Use vegetable, meat or wheat-free stock cubes and thicken with gluten-free flour. If you are making brown gravy, add gravy browning. Wheat- / gluten-free instant gravy powders are also available.

ALTERNATIVE FOODS (CONTINUED)

Sauces

When making a white sauce, use cornflour or another wheat-free flour (e.g. rice, potato or chickpea flour) for thickening. To prevent lumps, first mix the cornflour with a little cold milk. On a wheat-free diet, ready-made wheat-free sauce bases (e.g. Bolognese, lasagne, Indian, game sauce) can also be used.

Baked dishes

Pseudocereals are good substitutes for wheat. Ingredients that can be used instead of wheat flour:

tapioca, arrowroot and amaranth flour · potato starch · barley (flakes or flour) · quinoa · buckwheat (flakes or flour) · rice (flakes or flour) · corn (cornflour, cornmeal) · rye · ground oilseeds (e.g. almond, hazelnut, poppy seed) · sago · lentils · peas · beans · chickpea flour · soy (flakes or flour) · millet (flakes or flour) · oat flour · coconut flour · pumpkin seed flour · psyllium husk · carob seed flour

Wheat-free flours, breads, biscuits, cakes and sauce bases are widely available in supermarkets and food allergy shops, or can be ordered online. Some cafés and restaurants also offer gluten-free sweets – ask whether they are also wheat-free. When making wheat-free products, the lack of gluten makes it harder to make, for example, shortcrust pastry or a fluffy kalács. When it matters that the dough can be rolled out, use potato fibre, pectin, carob seed flour, xanthan gum, guar gum, chia seeds, flaxseed or psyllium husk to improve the quality of the finished product.

Caution!

Foods labelled gluten-free are not necessarily wheat-free, because some products are made with gluten-free wheat starch, so they do not fit into a wheat-free diet. Gluten-free wheat starch may contain the alpha-amylase inhibitor and the trypsin inhibitor, which cause wheat protein sensitivity.

Allergen labelling on foods is required by law. Wheat is an allergen that must be labelled. Find out about the composition of foods.

FOODS TO AVOID

Many dishes are made with wheat:

Breads, rolls, tea biscuits, lángos (fried flatbread), pancakes, wafers, cakes and biscuits · Breakfast cereals · Pizza, pasta, baked pasta and puddings · Ice cream, drink powders, malted drinks, chocolate bars, liquorice and puddings · Beer, stout, lager and most alcoholic drinks

FOODS TO AVOID (CONTINUED)

Wheat is also found in many ready-made products:

soups | sauces | spices | meat products | ready meals (e.g. burgers) | oven chips | salamis, sausages | breaded meat or fish | minced meat | pâtés and sandwich spreads | potato crisps | ready-made sauces | salad dressings | ham | gravies | stock cubes | herb mixes | baking powder | tinned foods (e.g. tinned beans) | noodle soups | Japanese, Chinese and Thai dishes containing soy sauce

INGREDIENTS TO AVOID

Wheat can be present in many foods without it being obvious, so it is important to always read the ingredients list on the label before you buy. Some of these ingredients to avoid:

Binder or brown flour | Breadcrumbs, rusks | Triticale, kamut, spelt, durum wheat, cracked wheat (bulgur), coarsely ground wheat | Couscous, wheat bran, durum or wheat semolina | Hydrolysed wheat protein or wheat gluten | Starch, modified starch, wheat flakes or edible starch | Whole wheat or puffed wheat | Wheat germ flour or unbleached flour | Wholemeal flour

Find out about the composition of foods. Ask a dietitian, nutrition counsellor or gastroenterologist for advice on putting together your elimination diet. **A diet that is not put together and followed properly can seriously damage your health!**

How to avoid foods containing gluten

If the FOODTEST 200+ test shows a POSITIVE value for gliadin (the protein fraction of gluten), it is important to stop eating foods containing gluten-containing cereals. Elimination is necessary even if your test result shows a NEGATIVE rating for the individual cereals (wheat, barley, rye, oats, spelt, durum wheat).

The following cereals contain gluten: wheat and wheat-based products, rye and rye-based products, barley and barley-based products, oats and oat-based products, spelt and its meals, kamut wheat and its meals, any grain produced by crossing the above cereals and products made from it, flaked forms of the above grains, and gluten flour.

The test results for the gliadin fraction and for the gluten-containing cereals must be interpreted together.

Oats do not cause complaints for some people with gluten intolerance, but oat products are often contaminated with wheat, rye and/or barley, so it is recommended to avoid foods containing oats as well. Only oats guaranteed not to be contaminated with gliadin can be eaten.

The term gluten-free means that none of the listed substances were put into the product during its manufacture, and that contamination of the product with these substances during production and packaging can also be ruled out. Such products must not contain soy sauce made with wheat or spelt either. If modified starch was added to the product as a texture improver and the origin of the starch is unclear, the product cannot safely be considered gluten-free.

On the packaging of foods guaranteed to be gluten-free, the absence of gluten is indicated in text (gluten-free, suitable for people with coeliac disease) or graphically (crossed-out ear of wheat).

Tips for gluten-free eating

- The hardest part of gluten-free eating is replacing bread, baked goods and cakes. At the start of the diet it is easier to buy from the wide range of free-from ready-made products. Later it is worth making cereal products at home using various gluten-free bread mixes and cake mixes.
- To make gluten-free bread and cakes, you need to use bicarbonate of soda or gluten-free baking powder.
- Bake bread and pastry at a lower temperature but for longer; this makes them tastier.
- The texture, cut surface and taste of gluten-free breads and cakes differ from what you are used to. Gluten-free cereal products stay enjoyable after being stored frozen.

The ingredients that can be used in a wheat-free and gluten-free diet (e.g. amaranth, buckwheat, millet, flaxseed, quinoa) are suitable for replacing wheat and other gluten-containing cereals because of their fibre, vitamin B and E, calcium, magnesium and iron content.

For multiple sensitivities (gliadin, corn, rice, soy, oilseeds), product ranges that are free from gluten, milk, egg, soy, yeast, seed flour and corn, rich in dietary fibre and containing slowly absorbed carbohydrates can be recommended.

For more useful information, read the chapter “How to avoid foods containing wheat”.

In the diet of people with gluten sensitivity, special care must be taken not to replace gluten-containing cereals only with alternatives that are high in starch but low in fibre (cornflour, rice flour, potato flour). It is worth choosing ingredients rich in dietary fibre and complex carbohydrates, such as buckwheat, millet, sorghum and quinoa, and flours and flour mixes made from them. This helps avoid excessive intake of rapidly absorbed carbohydrates and fluctuations in blood sugar, which in the long term can lead to excess weight, insulin resistance or even diabetes.

Allergen labelling on foods is required by law. Gluten is an allergen that must be labelled.

Find out about the composition of foods. Ask a dietitian, nutrition counsellor or gastroenterologist for advice on putting together your elimination diet. **A diet that is not put together and followed properly can seriously damage your health!**

FOODS TO AVOID

Foods containing wheat	See the chapter on eliminating wheat.
Foods containing rye	Rusks, savoury biscuits, black bread made from coarsely ground rye flour, rye bread, some whiskies, beer.
Foods containing barley	Barley grits, hulled barley, pearl barley, some soups and stews, coffee substitutes, some whiskies, certain types of beer.

FOODS TO AVOID (CONTINUED)

Dried fruit, frozen chips, ready-made sauces, stock cubes, multi-ingredient spice mixes, seasoning mixes · Béchamel sauce · Baking powder · Chocolate coating · Glazes, gelatine · Dairy products (pudding, yoghurt, quark cream, cheese spread) · Dutch cheeses · Processed meat products, cold cuts · Tinned foods · Ketchup · Instant cocoa and drink powders, coffee substitute

INGREDIENTS TO AVOID

Gluten can also be hidden in many foods. Read the food label before you buy!

Wheat flour, wheat bran, cracked wheat, wheat semolina, wheat germ, wheat starch, modified wheat starch, hydrolysed wheat protein, wheat-protein-based baking volume improver

Spelt · Durum wheat · Couscous · Kamut · Malt · Wheat bran · Triticale · Oats · Rye · Barley

ALTERNATIVE FOODS

Wheat-substitute foods can also be used, except those containing rye. (gf = gluten-free)

Gluten-free substitute ingredients	amaranth flour · potato flour · quinoa flour · buckwheat flour · rice flour, brown rice flour · cornflour, corn starch, cornmeal · almond flour · sago flour · grape seed flour · lentil flour · chickpea flour · soy flour · millet flour · tapioca · coconut flour · chestnut flour · sorghum flour · gluten-free flour mix
Snacks	rice snacks (tomato, pesto, vegetable) · gluten-free potato snacks · quinoa chips (plain, sour cream, chilli, tomato)
Gluten-free flours and baked goods	gf bread flour, sponge flour, pancake flour · gf breadcrumbs · gf flour mix · gf wheat starch · gf flour mix for fluffy kalács · gf pasta flour · gf bread flour with lupin fibre · gf muffins · gf flour mix for cakes · gf French bread (baguette) · gf part-baked rolls · gf cocoa swirls · gf bread · gf hamburger buns
For multiple sensitivities	product ranges free from gluten, milk, egg, soy, yeast and corn · reduced-carbohydrate, high-fibre flour mixes free from gluten, milk, soy and yeast

How to avoid foods containing yeast

If the FOODTEST 200+ test shows a POSITIVE value for baker's yeast or brewer's yeast, leave foods containing yeast out of your diet for at least six months. It is recommended that you also avoid all forms of fungi – for example moulds, mushrooms and mould-ripened cheeses – as well as contact with other fungi found in food or in the environment.

Baker's yeast and brewer's yeast are two strains of the same organism: if you react to one, you are very likely to be sensitive to the other as well. Of all food intolerances, avoiding foods containing yeast is the hardest, because a great many processed foods contain yeast. Think carefully about what you need to do before starting a yeast-free diet.

Live yeasts are used in cooking and food production; they break down sugar, producing carbon dioxide and alcohol. Yeast is an excellent source of B vitamins, but B vitamins can be replaced by eating meat, fish, whole grains, oilseeds and dark green leafy vegetables. On a yeast-free diet, remember that both foods that naturally contain yeast and yeast added during cooking must be avoided.

Eating low-carbohydrate foods and cutting down on sugar and honey is recommended. This inhibits the growth of yeast cells in the digestive system.

Using suitable flour mixes, you can make tasty gluten-free, dairy-free, soy-free, high-fibre baked goods and bread without yeast.

Find out about the composition of foods. Ask a dietitian or nutrition counsellor for help with putting together your elimination diet. **A diet that is not put together and followed properly can seriously damage your health!**

FOODS TO AVOID

- Baker's yeast and brewer's yeast.
- Some flatbreads (e.g. pitta bread and naan bread) contain a small amount of yeast, which allows the dough to rise and a "pocket" to form in it.
- Yeast extracts (e.g. spreads based on yeast extract), stock cubes and gravies.
- Tempeh, miso and tamari (Japanese / Indonesian seasonings made from fermented soybeans).
- Marinated, smoked and dried fish, meat and poultry.
- Peanuts and products containing peanuts, pistachios.
- Breads, pizza bases, baked goods and other bread-type cakes raised with yeast.
- Some sourdough breads and black breads made from coarsely ground rye flour are made using a starter culture that contains yeast and lactobacillus cultures.
- Fermented foods and drinks, such as beer, wine, cider, ginger beer, vinegar, soy sauce and dressings.
- Foods containing vinegar, such as pickles, appetisers, salad dressings, tomato ketchup, mayonnaise, Worcestershire sauce, horseradish and chilli sauce.
- Cured gammon.
- Matured foods, especially ripened cheeses such as brie and camembert.

FOODS TO AVOID (CONTINUED)

- Malted milk, malted drinks and home-made ginger beer.
- Dried fruit (figs, dates, raisins, apricots, etc.).
- Fruit juices – only freshly squeezed juices are yeast-free.
- Citric acid and monosodium glutamate (MSG) – they may be derived from yeast.
- Textured vegetable proteins, mycoprotein and tofu.
- Overripe fruit and unpeeled fruit.
- Hydrolysed protein, hydrolysed vegetable protein – read the product label before you buy!
- Some food additives – read the product label before you buy.

ALTERNATIVE FOODS

- Pasta, brown rice, brown flours, corn, wild rice, buckwheat, couscous, barley and millet.
- Extruded bread, matzo.
- Yeast-free wholemeal oat bread.
- Yeast-free flatbreads (e.g. matzo and flour tortillas).
- Fresh, frozen or preserved vegetables and vegetable juices. Especially good are onions, garlic, green leafy vegetables (e.g. cabbage, broccoli and curly kale), Brussels sprouts, savoy cabbage, mangetout, etc.
- Peas, beans and lentils.
- Non-citrus fruit: apples, nectarines, blackcurrants, strawberries and tropical fruit (e.g. pineapple, papaya, mango, kiwi and banana).
- Rice cakes, oatcakes, corn tortillas, tacos and rye rusks.
- Puffed rice and wheat cakes, rice snacks.
- Home-made breads (with baking powder / sodium bicarbonate), as well as muffins, biscuits, chapati and Irish soda bread.
- Pancakes and crêpes made with sodium bicarbonate or baking powder instead of yeast.
- Salad vegetables such as lettuce, herbs, cress, spinach, pepper, avocado, etc.
- Free-range eggs, soy milk, cream cheese and plain live yoghurt (the lactobacillus content helps restore the balance of the gut flora).
- Yeast-free flour mixes that do not require yeast.

How to avoid foods containing soy

If the FOODTEST 200+ test shows a POSITIVE value for soy protein, leave all foods containing soy out of your diet for at least six months.

Soy is a complete, plant-based source of protein. It is a popular food among vegetarians. It also fits into reduced-fat, low-cholesterol diets. It is rich in B vitamins and unsaturated fatty acids, and its calcium, folic acid and selenium content is also significant. At the same time, the phytate content of soy inhibits the absorption of minerals. Many foods contain it as an additive. Opinions in the literature differ on the effects of soy on health.

Flour mixes and breads on the market (especially reduced-carbohydrate and gluten-free versions) are often made with added soy. However, there are also products that contain neither gluten, milk nor soy, so they can be a solution for multiple intolerances and allergies too; some product ranges are also free from oilseeds, egg and yeast.

FOODS TO AVOID

Soybeans, soy flakes, soy chunks, soy drinks | Tofu, tempeh, yofu, soy puddings
Soy sauce, tamari, miso, soy oil, soy flour, soy sprouts | Vegetarian products | Flavoured dairy products
Meat products, cold cuts | Semi-prepared and ready frozen products | Instant soup powders, ready-meal powders
Tinned foods, liver pâtés | Packaged long-life breads, baked goods, cakes | Biscuits, desserts, chocolate

INGREDIENTS TO AVOID

Glycinin, conglycinin | Soy concentrate | Soy lecithin (E322) | Soluprat | Soy protein isolate

ALTERNATIVE FOODS

Soybeans, soy flakes, soy chunks	animal products: meat, offal, liver, fish, seafood
Soy drinks	milk, cheese, butter, yoghurt, kefir, cream | plant-based milk substitutes
Tofu, tempeh	quark, cheese, cheese spread, egg
Yofu, soy puddings	fruit yoghurt, milk puddings
Soy sauce, tamari, miso	fish sauce
Soy oil	almond, pumpkin seed, grape seed and olive oil
Soy flour	wheat, rye, corn, flaxseed, coconut, millet, buckwheat, quinoa and almond flour soy-free flour mixes
Soy sprouts	sprouts of cereals, legumes, oilseeds, vegetables and grasses
Other	dried beans, peas, lentils | oilseeds | soy-free products

Allergen labelling on foods is required by law. Soy is an allergen that must be labelled.

Find out about the composition of foods. Ask a dietitian, nutrition counsellor or gastroenterologist for advice on putting together your elimination diet. **A diet that is not put together and followed properly can seriously damage your health!**

Frequently asked questions

Can a food that FOODTEST 200+ does not test cause complaints?

Some foods can trigger classic allergic reactions involving the production of IgE antibodies (type I). FOODTEST 200+ does not show these, because the test is based on detecting IgG antibodies. There are many foods that trigger reactions in the body without involving the immune system, yet can cause symptoms similar to an IgG reaction: for example, amines found in chocolate, cheese and red wine can trigger migraine. Some food additives, such as tartrazine, can cause hives, rashes and asthma. Monosodium glutamate (MSG), the most commonly used flavour enhancer – found in meat products, cold cuts, crisps, stock cubes and Chinese food – can cause sweating and dizziness in some people. Alkaloids found in the "nightshade family" (Solanaceae) – e.g. potatoes, tomatoes, peppers – can cause joint pain. Food intolerance can also be caused by an enzyme deficiency, for example lactose intolerance. Avoid foods that cause you complaints, regardless of a negative FOODTEST 200+ result.

Does it affect my test result if I have not eaten a food for several months / years?

The FOODTEST 200+ IgG antibody test is based on detecting the immune system's antibody response to certain foods. If you have not eaten a food for more than 3 months, the IgG antibody level is likely to stay below the detection limit, and the test may give a NORMAL result. If you want to test an intolerance to that food, include it in your daily diet at least every other day for 4–6 weeks before the test. However, if the food causes you severe symptoms / complaints, it is better not to eat it.

What does U/ml mean?

U/ml is a unit of concentration. For each food listed on the report, the results are given in U/ml; they represent the IgG antibody concentration against that food detected in the blood serum.

Do I need to see a nutrition professional / dietitian to get help evaluating my test results?

Once you have your FOODTEST 200+ results, it is worth consulting a qualified nutrition professional or dietitian, who can help you plan the dietary changes and introduce a programme that properly replaces the missing nutrients. They can also check your improvement regularly and provide psychological support and motivation, as you will need a lot of determination to stick to the new diet.

Does a POSITIVE value for cow's milk mean lactose intolerance?

No. Lactose intolerance means that a person cannot break down lactose, the sugar found in the largest amounts in milk; it is caused by a lack or insufficient production of the enzyme lactase. FOODTEST 200+ shows an IgG-mediated food intolerance produced against specific proteins in milk; it is not able to detect a lack of the lactase enzyme, so it is not suitable for diagnosing lactose intolerance.

Is FOODTEST 200+ suitable for testing children?

Yes, but we only recommend the test for children over 2 years of age.

Do gluten-free and wheat-free mean the same?

No. A product can be wheat-free but not gluten-free, and vice versa. Products that are both gluten-free and wheat-free are also available, but it is very important to make sure of this and to check the product's ingredients on the label. The FOODTEST 200+ IgG antibody test includes wheat, spelt, durum wheat, barley and rye food extracts that do not contain gluten, and it tests gliadin (the protein found in gluten-containing cereals) separately from gluten. If your report shows a POSITIVE value for gliadin, you must in any case remove gluten-containing cereals from your diet and, of course, replace them with gluten-free foods, e.g. quinoa, buckwheat, corn, oats and rice. If the test shows a POSITIVE value for wheat, rye or barley but NOT for gliadin, the reactivity may be caused by some other protein found in the cereal grains.

Why does gliadin need to be tested separately from gluten?

FOODTEST 200+ uses water-soluble food extracts to detect food-specific IgG antibodies. The cereal extracts, however, do not contain gliadin (gluten), because gliadin is only soluble in alcohol and cannot be extracted together with the other components of the cereal. That is why gliadin is tested separately.

Do I need to be careful if I have to leave a food group out of my diet?

Yes, you need to be careful when introducing a new diet. Once you have your FOODTEST 200+ report, we recommend discussing what to do with a qualified dietitian or nutrition professional.

Is it worth repeating the test after a few months?

Most people do not need to repeat the test. If you still feel you would like another test, we advise waiting at least 6 months.

How can the test give a positive reaction to a food I have never eaten?

It has occasionally been observed that patients react to a food that they are convinced they have never eaten. This is not unusual, however, and cannot be attributed to a false positive result: it may be explained by a cross-reaction with another food. Some foods contain similar antigens (food proteins) even though they are not related to each other and do not belong to the same food group. These similar food proteins are recognised by the same antibody, so in the test, foods containing such proteins give a positive result. If you need more information about possible cross-reactions, please contact our specialists.

What should I do if I don't notice any improvement?

If you notice no noticeable improvement six months after introducing a new diet adjusted on the basis of the test results, your complaints are probably not caused by food intolerance, and further tests are needed.

The results of the FOODTEST 200+ test serve only as guidance for changing your diet and do not replace the advice of a healthcare professional.

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