Sample ID

CTL & Ortholabor GmbH
Anemonenweg 3a
26160 Bad Zwischenahn
Germany

Your personal ImuPro Vegetarian documents

Sample ID: 000000

Dear,

With this letter, you will receive your personal ImuPro test result as well as general information about food allergies type III and the links with chronic inflammation. This laboratory report contains your results for all the tested foods at a glance.

ImuPro is an extensive IgG food allergy laboratory test. Your blood has been analysed for the presence of specific IgG antibodies to particular foodstuffs. If high levels of these antibodies are present, this might indicate that you have a chronic inflammation caused by a delayed food allergy type III. Your individual ImuPro documents will help you to find out which foods are good for you and to pinpoint your individual “trigger foods”. By avoiding the foods that might cause you problems, inflammatory processes can be reduced or even stopped and your body can recover.

The ImuPro concept consists of three phases:

1. Elimination phase
2. Provocation phase
3. Stabilisation phase

Within the framework of the ImuPro concept, you will find recommendations for a possible form and duration of the dietary change in your diagnostic documents. Please follow the instructions of your therapist first and foremost.

ImuPro shows you the way to a personalised, well-tolerated diet.

Important: ImuPro is only testing for elevated IgG antibodies towards foods. If you have an existing type I food allergy (IgE mediated) previously diagnosed either by a positive IgE test or by a skin prick test or if you have any other known food related issues, please do not start eating this particular food even if your ImuPro result does not show a reaction to it. IgE-mediated food allergies can cause severe reactions such as anaphylactic shock, rashes, vomiting, itching etc. **ImuPro identifies raised levels of IgG antibodies to foods and provides advice based on these findings. Based on the ImuPro result, we do not make any statements on IgE related allergies.**

If you have any questions about your ImuPro result or about food allergies type III, please contact us.

We wish you every success on the path to well-being and the restoration of your health.

With kind regards,

Your ImuPro Team

Individual laboratory result

ImuPro Vegetarian

	Rating	Number of foodstuffs
Specific IgG antibodies	**Not elevated**	**67**
	Elevated	**3**
	Highly elevated	**20**
Total	23 out of 90 tested allergens	

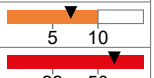
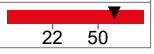
Important:
ImuPro is only testing for elevated IgG antibodies towards foods. If you have an existing type I food allergy (IgE mediated) previously diagnosed either by a positive IgE test or by a skin prick test or if you have any other known food related issues, please do not start eating this particular food even if your ImuPro result does not show a reaction to it. IgE-mediated food allergies can cause severe reactions such as anaphylactic shock, rashes, vomiting, itching etc. **ImuPro identifies raised levels of IgG antibodies to foods and provides advice based on these findings. Based on the ImuPro result, we do not make any statements on IgE related allergies.**

	serum
sample id	405852
examination method	Enzyme-linked immunosorbent assay (ELISA)
date of report	04.04.2025
report authorized by	Siegfried Scholz, specialist for general medicine

How to read your report

Notes on the individual laboratory results

List 1 shows the measurement results of the tested foods. The value in the µg/ml column shows the measured concentration of IgG antibodies. The bar graph reports your concentration of IgG in three classes. Your personal measured value is represented by the black indicator above the coloured bar.

	µg/ml IgG	Rating
Food 1	5	
Food 2	7	
Food 3	77	

The two numbers below the bar graph are the threshold values between the three reaction classes. The first number describes the analytical cut-off, i.e. the concentration above which we speak of "elevated" IgG antibodies. The second number is the threshold value above which the reaction class is referred as "strongly elevated".

The green area: There are no elevated IgG antibodies.
The orange area: IgG antibodies were measured in the "elevated" reaction class.
The red area: IgG antibodies were measured in the "strongly elevated" reaction class.

List 1 - Individual laboratory result

ImuPro Vegetarian	µg/ml IgG	Rating	Additional exclusions
Grains containing gluten			
Barley	141,1	9,6 19,2	
Gluten	51,8	17,6 33,7	
Rye	81,5	17,9 27,3	
Spelt	36,5	7,9 17,5	
Wheat	34,0	10,8 21,9	
Grains w/o gluten and alternatives			
Amaranth	3,5	7 14,1	
Buckwheat	177,7	14,9 22	
Maca	< 2,5	6,7 13,4	
Maize, sweet corn	5,0	19,3 27,2	
Millet	< 2,5	10,8 21,6	
Oats (gluten-free)	> 200	17,6 26,8	
Quinoa	20,3	22,4 33,1	
Rice	< 2,5	8,4 16,7	
Sweet potato	< 2,5	6,4 12,8	
Milk products			
Goat: milk / cheese	105,4	21,7 41,4	
Milk (cow)	> 200	13,9 42,7	
Rennet cheese (cow)	75,3	13,1 24,3	
Sheep: milk / cheese	158,9	17,7 42,2	
Sour-milk prod. (cow)	> 200	21,4 55,9	
Eggs			
Chicken egg	< 2,5	13,2 30,6	
Yeast			
Yeast	< 2,5	5,4 10,8	
Mushrooms			
Meadow mushrooms	< 2,5	12,8 25,5	

	µg/ml IgG	Rating	Additional exclusions
Vegetables			
Aubergine	< 2,5	5,3 10,7	
Beetroot	< 2,5	6,4 12,8	
Broccoli	2,5	15,4 30,9	
Carrots	4,5	14,3 28,6	
Cauliflower	< 2,5	3,4 6,9	
Celeriac, knob celery	< 2,5	7,8 15,5	
Chickpeas	30,0	23,2 33,5	
Chili Cayenne	< 2,5	7,7 15,4	
Courgette	< 2,5	8,8 17,6	
Cucumber	< 2,5	4 8	
Fennel	3,8	7,8 15,6	
Green bean	< 2,5	7,7 13,4	
Green pea	15,0	11,1 22,3	
Leek	< 2,5	6,4 12,8	
Lentil	22,8	15,2 22,2	
Olive	< 2,5	4 8	
Onion	5,6	12,4 17,9	
Potato	3,3	10,4 20,7	
Soybean	24,4	10,5 20,9	
Spinach	< 2,5	5,8 11,6	
Sweet pepper	3,6	16,2 26,5	
Tomato	< 2,5	9,9 19,8	
White cabbage	< 2,5	6 12	
Salads			
Butterhead lettuce	< 2,5	5 10,1	
Algae			
Red algae (Nori)	< 2,5	23,1 42,5	

List 1 - Individual laboratory result

ImuPro Vegetarian

	µg/ml IgG	Rating	Additional exclusions
Fruits			
Acai	< 2,5	8,4 16,7	
Acerola	< 2,5	8,9 17,8	
Apple	< 2,5	4,1 8,1	
Avocado	< 2,5	4,1 8,2	
Banana	< 2,5	5,1 10,2	
Blueberry	< 2,5	4 8	
Cherry	5,0	13,7 19,3	
Cranberry	3,7	8,7 17,4	
Date	< 2,5	5 10	
Goji	< 2,5	20 29,2	
Grape / Raisin	< 2,5	6,4 12,8	
Kiwi	35,5	15,2 21,4	
Lemon	< 2,5	4 8	
Orange	4,0	10 20	
Peach	< 2,5	6,3 12,7	
Pear	< 2,5	4 8	
Pineapple	< 2,5	23,5 37,3	
Pomegranate	13,3	35,4 70,7	
Raspberry	< 2,5	16,8 33,5	
Strawberry	< 2,5	9,2 18,5	
Watermelon	4,7	19,9 39,8	
Spices and herbs			
Cumin	< 2,5	6,2 12,5	
Garlic	< 2,5	18,7 28,2	
Ginger	2,5	26,2 37,9	
Mustard seed	3,1	8,8 17,7	
Oregano	< 2,5	5,6 11,2	
Parsley	2,8	16,5 32,9	
Pepper, black	< 2,5	13,2 26,3	
Vanilla	< 2,5	39,6 77,9	

	µg/ml IgG	Rating	Additional exclusions
Seeds and nuts			
Almond	> 200	42 80,9	
Cashew kernels	106,9	25,5 50,2	
Chia seeds	< 2,5	8,3 16,5	
Cocoa bean	< 2,5	9,8 19,6	
Coconut	84,4	5 10	
Hazelnut	109,4	22,3 39,8	
Hempseed	< 2,5	6,7 11	
Linseeds	26,1	18,7 30,5	
Peanut	5,3	19,2 28,1	
Pumpkin seeds	10,4	16,8 30,7	
Sesame	148,1	18,6 29,6	
Sunflower seeds	15,7	22,1 36,3	
Walnut	3,7	10,9 21,8	
Food additives			
Curcumin (E 100)	< 2,5	9,9 19,8	

List 2 - Foods allowed and foods to avoid

Allowed in 4-day rotation					
Acai	Cauliflower	Date	Meadow mushrooms	Pineapple	Sweet potato
Acerola	Celeriac, knob celery	Fennel	Millet	Pomegranate	Tomato
Amaranth	Cherry	Garlic	Mustard seed	Potato	Vanilla
Apple	Chia seeds	Ginger	Olive	Pumpkin seeds	Walnut
Aubergine	Chicken egg	Goji	Onion	Quinoa	Watermelon
Avocado	Chili Cayenne	Grape / Raisin	Orange	Raspberry	White cabbage
Banana	Cocoa bean	Green bean	Oregano	Red algae (Nori)	Yeast
Beetroot	Courgette	Hempseed	Parsley	Rice	
Blueberry	Cranberry	Leek	Peach	Spinach	
Broccoli	Cucumber	Lemon	Peanut	Strawberry	
Butterhead lettuce	Cumin	Maca	Pear	Sunflower seeds	
Carrots	Curcumin (E 100)	Maize, sweet corn	Pepper, black	Sweet pepper	

Foods with reaction strength 1: Avoid for at least 5 weeks		
Chickpeas	Green pea	Linseeds

Foods with reaction strength 2: Avoid for at least 5 weeks				
Almond	Coconut	Kiwi	Rennet cheese (cow)	Sour-milk prod. (cow)
Barley	Gluten	Lentil	Rye	Soybean
Buckwheat	Goat: milk / cheese	Milk (cow)	Sesame	Spelt
Cashew kernels	Hazelnut	Oats (gluten-free)	Sheep: milk / cheese	Wheat

Foods that have been additionally excluded from your diet plan
No foods in this category

List 3 - Rotation schedule

Tip: Build your individual rotation schedule

The rotation diet plan shown here is an example of how the rotation diet can be designed. You may like to choose your own selection of allowed foods for that day. What is most important is that each allowed food only appears once in the 4 day rotation plan.

	Day 1	Day 2	Day 3	Day 4
Grains and starch				
	Amaranth	Maca	Maize, sweet corn	Millet
	Quinoa	Rice	Sweet potato	
Yeast				
	Yeast			
Mushrooms				
	Meadow mushrooms			
Vegetables				
	Aubergine	Beetroot	Broccoli	Carrots
	Cauliflower	Celeriac, knob celery	Chili Cayenne	Courgette
	Cucumber	Fennel	Green bean	Leek
	Olive	Onion	Potato	Spinach
	Sweet pepper	Tomato	White cabbage	
Salads				
	Butterhead lettuce			
Algae				
	Red algae (Nori)			
Fruits				
	Acai	Acerola	Apple	Avocado
	Banana	Blueberry	Cherry	Cranberry
	Date	Goji	Grape / Raisin	Lemon
	Orange	Peach	Pear	Pineapple
	Pomegranate	Raspberry	Strawberry	Watermelon
Spices and herbs				
	Cumin	Garlic	Ginger	Mustard seed
	Oregano	Parsley	Pepper, black	Vanilla
Seeds and nuts				
	Chia seeds	Cocoa bean	Hempseed	Peanut
	Pumpkin seeds	Sunflower seeds	Walnut	

General recommendations

Your results: The test results show that you have raised IgG antibody titres to food(s). A monotonous diet, together with an increased permeability of the intestine, is assumed to be the reason for an IgG food allergy (type III).The amount of IgG-positive foods indicates that your gut permeability might be increased and that your immune system responds with an adverse reaction to foods which normally should not be recognised by your immune system. Every time the IgG positive foods are consumed, an inflammatory reaction occurs. This might weaken your entire body. Experience shows that the simple avoidance of the positively tested foods is not enough and a diet modification in accordance with the rotation principle is required.

The amount of IgG positive foods indicates that you suffer from an intestinal permeability (leakiness). Furthermore a disorder of the intestinal flora and / or the intestinal barrier may be present. It may be helpful to analyse the composition of your intestinal flora and the functionality of your intestinal barrier by means of a specialised stool analysis.

Diagnostics of the intestinal flora: IgG-mediated food allergy is commonly triggered or aggravated by disorders of the intestinal barrier. Therefore, intestinal diagnostics with subsequent recovery of the intestinal flora (colon cleansing) is essential. It may be helpful to analyse the composition of your intestinal flora and the functionality of your intestinal barrier by means of a specialised stool analysis. Please ask your physician or therapist.

Gluten: Elevated levels of IgG against gluten were detected.

Raised levels of IgG antibodies to gluten may be an indication of Coeliac disease which should be further investigated by way of the following tests: Anti-gliadin IgG, Anti-gliadin IgA, Anti-transglutaminase IgG, Anti-transglutaminase IgA, Anti-endomysium.

Even if coeliac disease can be ruled out, you may still suffer from a Non Coeliac Gluten Sensitivity (NCGS) in which case you may also have to eliminate gluten from your diet.

Sensitivity to gluten not only leads to intestinal inflammation but is suspected to actively increase gut permeability which can also lead to several deficiencies, like iron, vitamin D and folic acid deficiencies as well as other adverse reactions to food and associated ailments, particularly outside of the gut.

Other causes: In addition to a delayed IgG food allergy, there may be a non-immune related digestive disorder or poor utilisation of nutrients which can have numerous causes. You should discuss this with your attending physician or health professional. Possible causes include a diminished degradation of carbohydrates (e.g. lactose, fructose) due to an enzyme deficiency or an inadequate activity of the pancreas and thus insufficient secretion of digestive enzymes.

Furthermore an intestinal mycosis or parasitosis or an impaired intestinal flora may play a role. If the diet modification in accordance with ImuPro shows no improvement at all, you should take further diagnostic steps.

ImuPro

Right Food. Better Health.

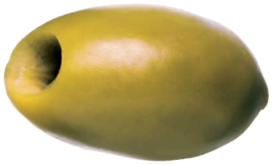
Your Nutritional Guide

imupro.com

Contents

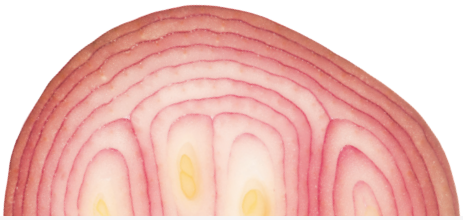
1.

Introduction

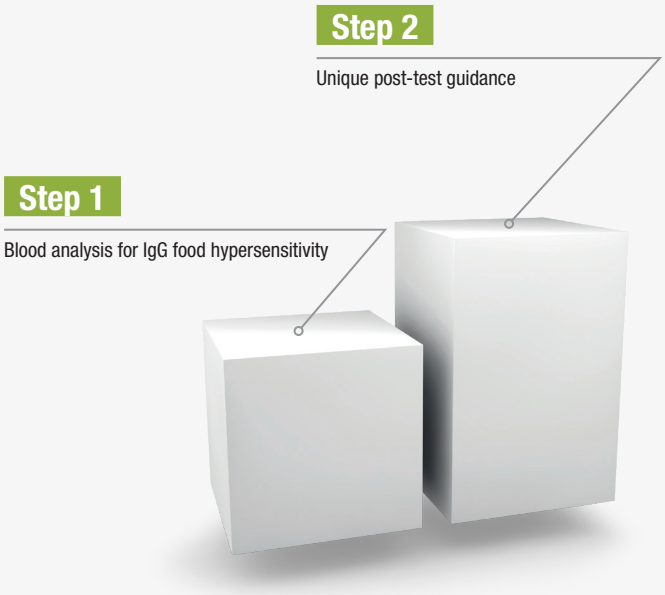


1. Introduction

1.1 ImuPro – Individual Nutritional Analysis and Personalised Guidance



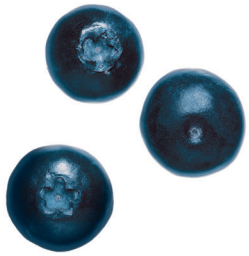
ImuPro is a concept that combines a sophisticated and reliable blood analysis for IgG food hypersensitivity with individualised post-test guidance.



Your blood sample has been analysed by a specialised laboratory which determined the presence of antibodies against a broad variety of foodstuffs. These antibodies are detected by their ability to bind to specific proteins from the analysed foods.

Along with your test results, you have also received your individual nutritional concept. Your test results and personal nutritional guidelines will now help you with an elimination and provocation diet with the aim of reducing inflammatory processes.

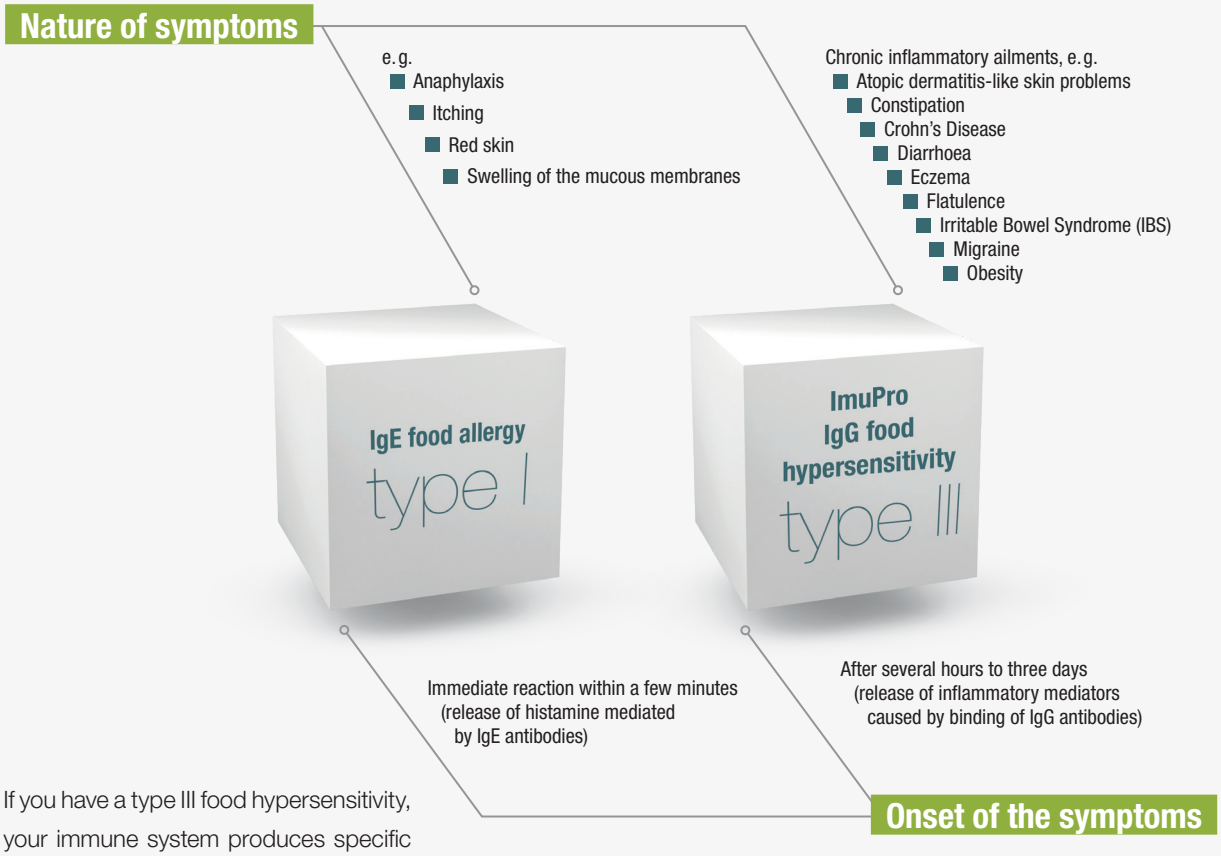
Note: Time plays an important role for the ImuPro process. Your body and intestine need time to heal. You may have to eliminate some foods for more than one year. There may be one or two foods that you will even have to avoid permanently. Therefore, consider ImuPro as your long-term companion and make your change of diet a new habit.



1.2 What is an IgG Food Hypersensitivity?

Type III food hypersensitivities often remain undetected because the symptoms may occur only after a few hours or even days after the consumption of a particular food. This makes them extremely difficult to identify.

The body uses its immune system to fight off invading agents. These invading agents called antigens are usually bacteria, parasites, and viruses. In general, foods are not harmful to us. However, a delayed IgG food hypersensitivity is caused by the body treating a harmless food protein as if it were harmful. If our body deems a food harmful, antibodies are produced to fight against these proteins. (See also chapter 1.3 “The Intestine”).



If you have a type III food hypersensitivity, your immune system produces specific IgG antibodies against the food proteins. These antibodies can cause **inflammatory processes** which can become chronic. Symptoms may vary. Their **appearance can be delayed** by up to three days after the suspected food was eaten.

Note: **A type III food hypersensitivity should not be mistaken for a classic food allergy (type I). If you have a type I allergy, your immune system produces so-called IgE antibodies. These antibodies lead to an immediate allergic reaction. The symptoms appear within seconds or minutes. The ImuPro test does not detect classic food allergies.**

1.3 The Intestine

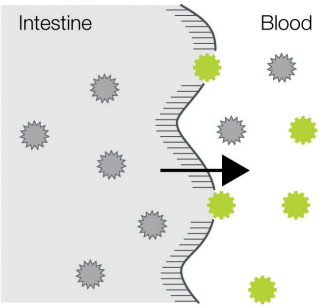
The largest immune system in the entire body is the intestine. Over 80% of the immune system's defensive reactions originate from the intestine. It guarantees an almost invincible barrier from bacteria, viruses and various pathogens as well as a barrier against other foreign proteins from food. Our body has an extraordinary tolerance to foods, on the condition they are correctly digested and pass the intact intestinal barrier in the intended manner, namely through the intestinal cells.

However, due to medicines, infections, mycosis, stress and environmental poisons, the integrity of the intestinal wall can become damaged over and over again thus allowing food components to slip between the intestinal cells. The immune system may then initiate an immune reaction against these food proteins.

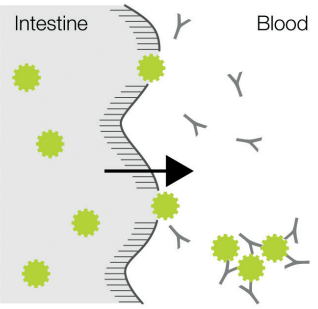
1.4 Cross-reactions

Occasionally a positive reaction is found from a food that the person has never eaten before. This is not a false reading from our test. However, this may be due to "cross-reactions", i.e. the antibody that the body has produced not only recognises the antigen for which it was originally formed but also other antigens which belong to other foodstuffs. Some molecules or parts of molecules which make up a food can be identical, even if the foods are not directly related.

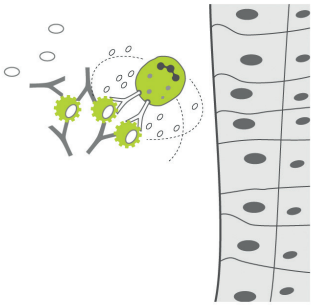
Example: Tropomyosin is the main allergen found in dust mites. This allergen is also found in invertebrates, e.g. mussels, oysters, scampi, squid, shrimps and lobsters. If you have sensitivity to the tropomyosin in dust mites or in one of these foods, then you may have high levels of IgG antibodies against any of them even if you have never eaten one before.



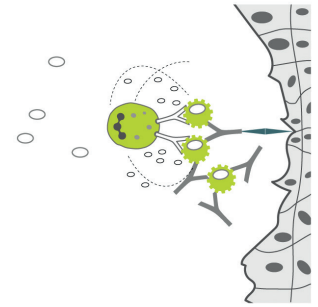
When the intestinal barrier is damaged, food particles can get through the cells into the bloodstream.



The immune system's response is formation of immune complexes



Inflammatory reaction due to destruction of the immune complexes in cases when surrounding tissue would not be damaged, this leads to systemic symptoms (for example: high blood pressure)



Inflammatory reaction due to destruction of the immune complexes: in case surrounding tissue will be damaged, this may cause specific symptoms (for example: irritable bowel syndrome, migraine headaches)

Legend

- Food protein considered as harmful has been detected (not fully digested)
- Food protein, which is NOT considered as harmful has been detected (completely digested)
- Antibodies
- Intestinal wall
- Immune complex
- Immune complex with complement proteins
- Receptor (cellular attachment molecule)
- Immune cell (neutrophils)
- Complement protein
- Tissue

2.

Nutritional Guidelines

2. Nutritional Guidelines

Your nutritional guidelines are based on three important building blocks.

Each tested food runs through the three phases.

1 Elimination Phase

This phase consists of two parts. As the name suggests, one part of the elimination phase is the strict elimination of all the foodstuffs you have elevated IgG antibodies levels for. This elimination will help you to recover from your health problems. The second central aspect of the elimination phase is the rotation of the foods you are allowed to eat. You will also use this rotation diet later to reintroduce foodstuffs that you were initially no longer allowed to eat.

2 Provocation Phase

Once your symptoms are significantly reduced, you are welcome to gradually reintroduce foodstuffs which you avoided in the elimination phase. This step will help you to identify the food which really caused your problems and eventually enables you to start eating the foods you enjoy again.

3 Stabilisation Phase

Good job, you are nearly done! You have successfully identified your personal “trigger foods” and have learned how to ensure a varied diet without promoting new type III food hypersensitivities. To stabilise your body, you now need to avoid your trigger foods for at least one year, so that the IgG antibodies can degrade. After one year you may start another provocation phase and reintroduce the foods you are still avoiding one by one.

On the following pages you will find detailed information on every phase.

2.1. Elimination Phase

As we briefly explained to you already, the elimination phase consists of two parts: **rotation** and **elimination**.

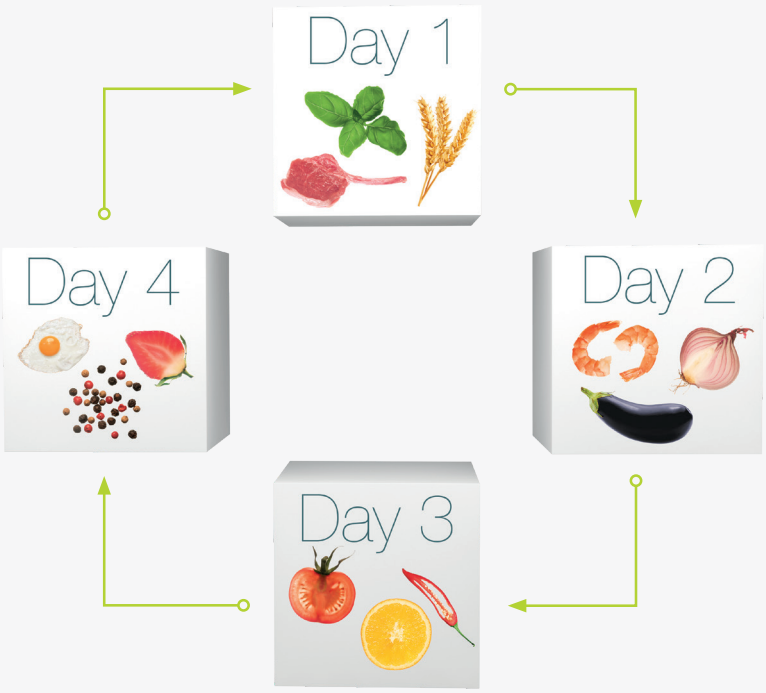
The goal of the elimination phase is to prepare your body for the following provocation phase by helping it to recover from IgG mediated inflammations in your body.

Part 1: Rotation

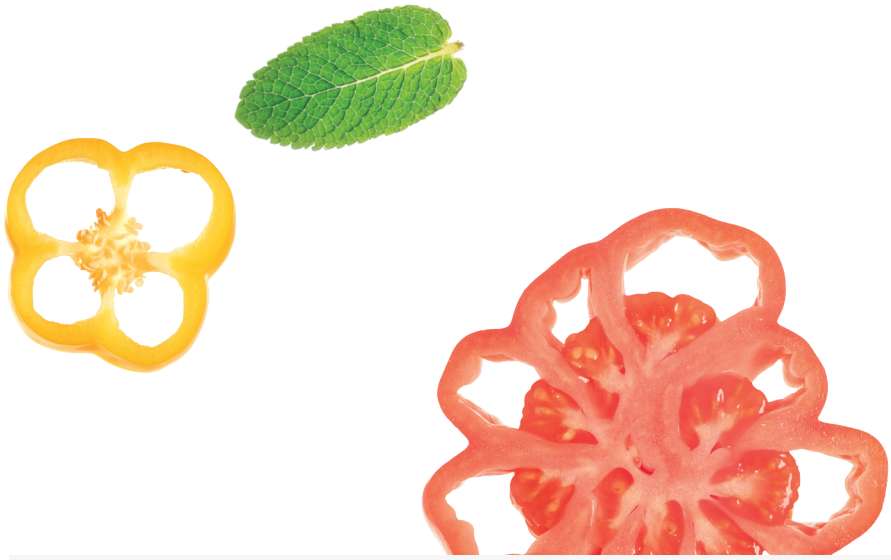
All the foods you are allowed to eat can be used to create your individual diet in a four-day cycle.

When you eat a certain selection of foods on the first day, you should avoid eating these for the next three days. This helps your body to recover from current IgG food hypersensitivities while reducing the possibility of forming new ones. It also ensures that you get all the vitamins and minerals you would expect from a varied diet.

Make up your individual "menu" of the allowed foods according to the 4-day rotation. It is up to you whether you plan your menu as you go or for the whole week. Just try it and you will soon find the most suitable approach for you.



"List 2 Permitted foods and foods to avoid" shows you your personal selection of foods without elevated levels of IgG antibodies that can be eaten in rotation.



Practical tips:

- Rotating these new groups of foods means that the selection you eat today should be avoided for the next three days. This means you may have less variety on one day but more variety over the week. Similar foods could be included for lunch and supper over a day, either raw or cooked.
- Use the rotation plan provided to help plan your meals in advance. Write down all ingredients that make up your snacks, drinks and meals. Note how you feel each day and monitor your weight. The important information recorded here will help you if you have any problems during your change in diet.
- If you make a mistake, don't worry. An isolated incident won't set you back too much. You may feel a bit worse for a couple of days but continue to avoid all suggested foods and you will get back to normal quickly.
- Drink plenty of water. It helps your circulation and to detoxify.

Note: A good way to monitor your new diet in addition to keeping the rotation food diary is to weigh yourself every day at the same time under the same conditions. An increase in body weight of approximately 1 kg or more overnight is a significant indicator of an inflammatory process. In this case you probably unknowingly ate a possible trigger food.

A suggestion for your rotation diet plan can be found in your individual report. Your suggested foods are allocated to four days, so that you can choose from a variety of foods on each day.

Part 2: Elimination

The foods with elevated and highly elevated values of IgG antibodies are strictly avoided during this phase. The initial elimination phase takes five to eight weeks. Please consult your health professional, a qualified dietician or nutritional expert to define the timeframe in your individual case.

Important: The level of IgG reflects the amount of IgG antibodies in your blood. Whether the IgG antibodies detected is relevant for a symptom or not does not depend on the amount of IgG antibodies. Even low levels of IgG antibodies to a food might cause severe symptoms, while high levels of IgG might not be responsible for a symptom. This means that elevated levels of IgG are as important as highly elevated levels.

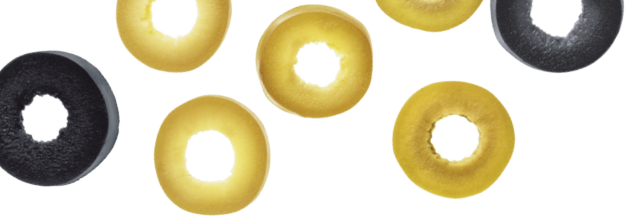
By strictly avoiding the IgG positive foods, inflammation processes could be reduced or even stopped. This is an important preparation for the following provocation phase.

Practical tips:

- Read all labels on foods to make sure that you know what you are eating. Some foods can hide behind alternative names or can be contained in processed foods. Eggs, for instance, are used in many processed foods, such as cakes, meringues, ice cream or mayonnaise. They can be found under ingredient names like albumin, lysozyme, ovalbumin or ovoglobulin. In addition, remember to check medications, beauty products, household products and your environment as well.
- Try to choose unprocessed foods whenever possible. There are a lot of additives in processed foods.
- Avoid products derived from IgG reactive foods. For example, if you have a reaction to cereals and yeast, also avoid beer. If you have a problem with grapes, then avoid wine, grape juice and raisins. The same applies to oils.
- Avoid the problem foods as strictly as possible. Your wellbeing will depend on your compliance during the elimination phase.

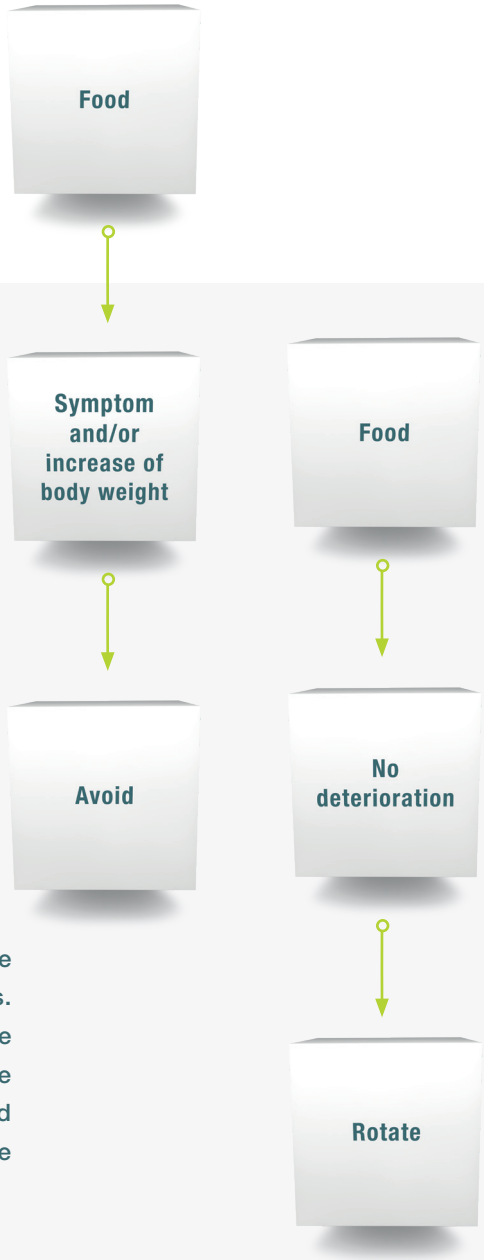
Note: At the beginning of the change in diet you might feel worse than before. This deterioration in how you feel can actually be a good sign. It could be due to your body detoxing. Drink plenty of water to help the process and keep to your new plan. Once the body has rid itself of any harmful substances, you will feel much better for it. The longest amount of time that this should last is for ten days. If the deterioration in your condition is extreme or lasts longer than ten days, please consult your health professional, a qualified dietician or nutritional expert.

"List 2 Permitted foods and foods to avoid" indicates which foods you need to eliminate.



2.2 Provocation Phase

Important: If you have an existing classic IgE allergy (type I) or any other known food intolerances, please do not start eating that particular food again. These foods must be excluded from the provocation phase.



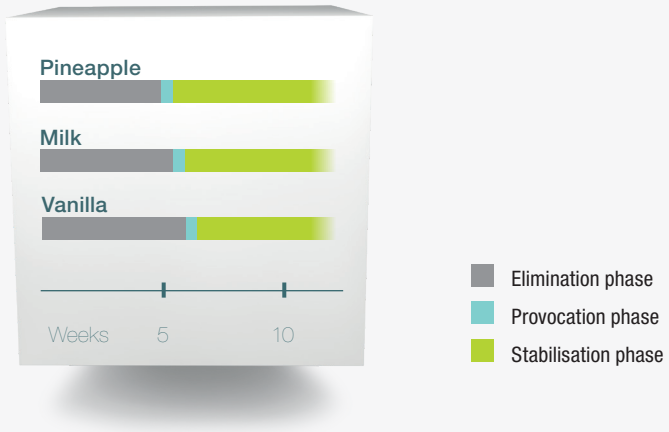
Not all of the identified IgG reactive foods indicate the cause of certain symptoms. The provocation phase helps you to identify your personal trigger foods.

You can now start your provocation diet and gradually reintroduce the previously eliminated foods one by one, back into your diet (see example on the following page) allowing three days in between. Start with the foods which are in the group “elevated” (orange) in your test results. After completing the orange category, move on to the foods which are in the group “highly elevated” (red).

Note: You might find it easier to start the provocation phase with your favourite foods that tested positive for IgG antibodies. This way, you will learn right away if your favourites cause your symptoms to return or not. Please keep in mind that if these foods caused a reappearance of your symptoms you have to avoid them for at least one year. Afterwards you can proceed with the foods from the “elevated” category as described above.

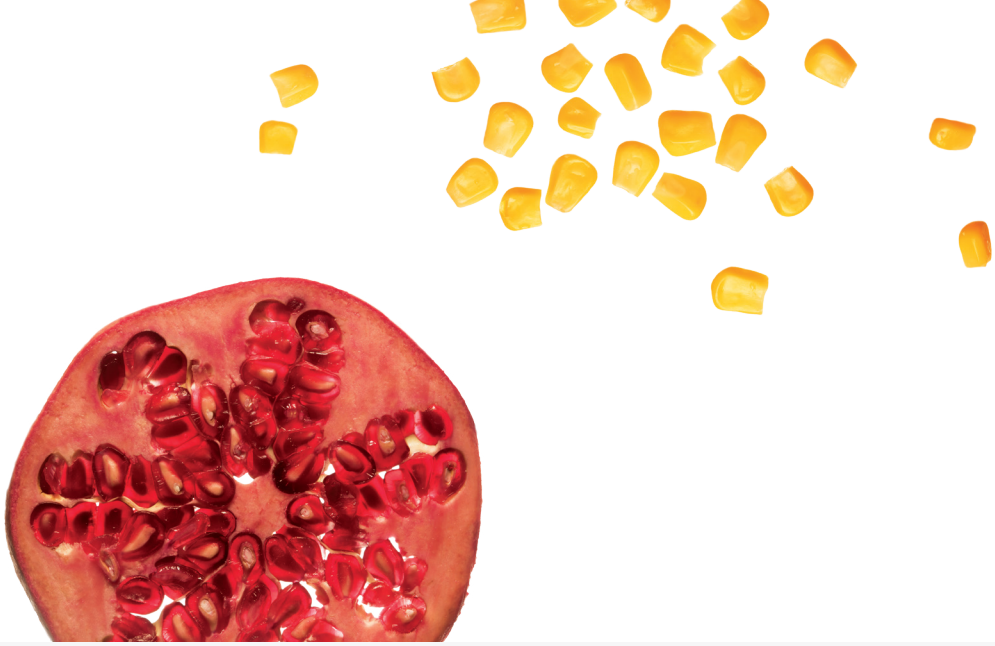
A trigger food may cause a specific symptom or lead to an increase of body weight. The increase of body weight is caused by the retention of water due to the inflammatory response from the consumed food. These foods can lead to potential health risks in the future. Therefore, we recommend the following: if a reintroduced food causes returning symptoms or leads to an increase in body weight of approximately 1 kg or more overnight, then it must be left out of your diet for at least one year. If the tested food does not cause symptoms to return or an increase in body weight, it can be included in your diet again (we will come back to this when we talk about the stabilisation phase).

Example: You have consulted your health practitioner and agreed on an initial elimination phase of five weeks, for instance. After five weeks you introduce the first food from the "elevated" (orange) category, e. g. pineapple. On the first day you consume pineapple several times throughout the day to guarantee that the amount ingested is enough to possibly induce a symptom. Then you avoid it for the following three days and observe your body's reaction to it. If you notice no deterioration, you may include pineapple back into your diet as described in the stabilisation phase. Then you can introduce the next food, e. g. milk. Within the following three days your migraine returns. Consequently, you have to avoid milk for at least one year.



Note: Try to eat as varied a diet as possible during the provocation phase to supply your body with all the needed nutrients. This also helps to prevent the development of new delayed food hypersensitivities. A good way to ensure a varied diet is to keep rotating the foods as described in the elimination phase.

"List 2 Permitted foods and foods to avoid" lists the foods with elevated levels of IgG antibodies sorted by reaction class.



Practical tips:

The table on the following page will help you to keep track of the reintroduced foods as well as the foods you need to avoid for one year. Just make some copies of this page and use it as a diary. Below you will find an example of how to use the table.

- Start with the foods with elevated levels (orange).
- Pick one food from this category to include in a meal. Make sure that you eat a sufficient amount of the food and that it is the pure form of the food rather than a processed form. For example, while reintroducing hazelnuts you would start with the whole nut and not with a hazelnut cake. Note this food and the date of the reintroduction in the table.
- Note your health over the following three days and take your body weight daily. Do not reintroduce any new food yet.
- Have you had any adverse symptoms? Did any symptom that disappeared during the elimination phase reoccur? Did your body weight increase overnight as mentioned? If not, then you may continue to eat this food once a week. Fill in “No” in the columns “Symptom / increase in body weight” and “Avoid 1 year”.
- If any symptoms have reappeared or new ones have developed, then you need to avoid this food for at least one year. Note the symptoms in the column “Symptom / increase in body weight” and fill in “Yes” in the column “Avoid 1 year”. Then note the date one year from now in the column “Date of next provocation”.
- Repeat these steps again for the other foods from this category with three days in between reintroductions. Then start on the foods with “highly elevated” levels (red).

Example “Provocation Diary”

Reintroduced food	Date of first provocation	Symptom / increase of body weight	Avoid 1 year	Date of next provocation
Pineapple	*01/09/2014*	*No*	*No*	-
Milk (cow)	*05/09/2014*	*Migraine* *1.2 kg*	*Yes*	*09/09/2015*
Vanilla	*09/09/2014*	*No*	*No*	-

Note: You can download your individual provocation diary here:
https://imupro.com/provocation-diary

2.3 Stabilisation Phase

The provocation phase helped you to find your personal **trigger foods**. During the stabilisation phase these foods are now avoided for at least one year, so that the IgG antibodies can decompose and your body can recover.

The foods that do not cause any symptoms or gain in body weight overnight during the provocation phase may be reintroduced into your diet. This doesn't mean that it was a false positive result for this food. It means that this food does not induce a symptom yet, but still represents a potential threat to your health. To enable your body to eliminate IgG antibodies against this food we recommend eating it only once a week.

Note: **If old symptoms or new symptoms appear during the stabilisation phase, one or more of the previously IgG positive foods could be the cause. In this case, repeat the elimination phase for five weeks for these foods. If your symptom disappears, one of the avoided foods is responsible for it. To identify the food(s), repeat the provocation phase with these foods, as described above. If your symptom does not disappear, either you have developed a reaction to a new food or food is not responsible for it. In this case we recommend consulting your health professional, a qualified dietician or nutritional expert.**

After one year you can then start another provocation with the foods that you are still avoiding and reintroduce them one by one. You may find that there are one or two foods that you will even have to avoid permanently. If the food doesn't cause a return in symptoms or an increase of body weight after this second provocation, it can be included in your diet.

Practical tips:

- If you make a mistake, don't worry. An isolated incident won't set you back too much. You may feel a bit worse for a couple of days but continue to avoid all problem foods and you will get back to normal quickly.
- Try not to eat a food that was positive to IgG antibodies too often. If you manage to eat these foods only once a week you may tolerate them again.
- Make a varied diet a habit to ensure that you get all the vitamins and minerals you need. By rotating food you may have less variety in one day but more variety over the week.
- Keep a record of your body weight, even if you don't have weight problems. An increase in body weight overnight of approximately 1 kg or more is an indication that you consumed a non-tolerated food the day before.
- If a new symptom which might be related to chronic inflammation occurs within or after 12 months and you are still complying with your diet, then a new trigger food might be present. This could be an indication for a new ImuPro test.

2.4 Additional Tips to help Your Change in Diet

- You may find that some of your favourite breakfast foods are now off the list. Don't panic! Use a little imagination and look at all the other foods which can make very tasty alternatives. All you have to do is find four different breakfasts. People are putting more and more recipes online. Why not spend a few minutes searching for some ideas?

- Alcoholic beverages should be avoided initially to allow your immune system to stabilise. This will also help you to detox.

- Even if you have had a negative result for coffee (if tested), caffeine can irritate the intestinal lining. This increases the permeability of the intestine to foodstuffs allowing more partially undigested food particles to cross this barrier into the bloodstream setting off more immunological reactions. Rotate coffee as you would any other food.

- Some colas and carbonated beverages also contain caffeine. The high phosphate content of some of these beverages can bind to calcium stopping the body from being able to use it. In addition, the high sugar content, artificial colouring and additives also make it best to avoid these drinks.

- Fruit and vegetable smoothies are liquid foods rather than drinks. The fiber is very important for digestion, however, large quantities of them are required to make one glass of squeezed juice. Therefore, too much of one type of fruit or vegetable protein is being consumed. If you want to consume smoothies, then dilute the juice with some water.

- In a restaurant or canteen, sauces can often hide ingredients you may need to avoid. Grilled meat or fish with a side dish of potatoes, rice, vegetables or salad are normally unproblematic. You could order the salad without dressing and then use a dressing you brought along with you.

2.5 Summary

1 Elimination Phase

Foods to avoid
- strict 5-8 week elimination

Allowed foods
- 4-day rotation

2 Provocation Phase

Avoided foods
- 1-day reintroduction
- 3-day observation

Allowed foods
- rotation

3 Stabilisation Phase

Trigger foods
- 1-year avoidance

Allowed foods
- rotation

3.

Additional Information on Selected ImuPro Foods

3. Additional Information on Selected ImuPro Foods

Below we have put together some information on gluten, yeast, milk and chicken eggs. In our experience, these are foods that many people react to in the ImuPro test - maybe because they are eaten very frequently by many. This is exactly why it is sometimes difficult at first when you are supposed to stop eating these foods for a certain period of time according to your ImuPro result.

In order to make the ImuPro diet easier for you, we specifically look at where gluten, yeast, milk and chicken eggs may be present. In particular, they can be “hidden” in processed foods and ready made meals.

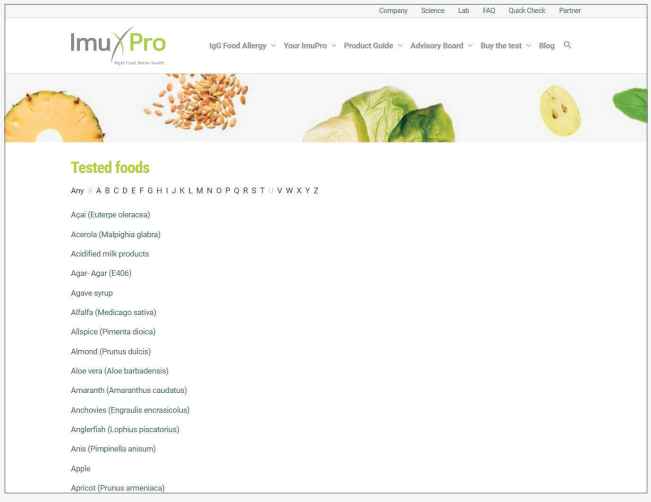
> **Our tip:** Pay close attention to the list of ingredients. The following texts only contain a selection of possible sources. Therefore, it is best to pay attention to every food label.

We also suggest possible alternatives that you can use to replace gluten, yeast, milk or chicken egg if you react to them in your ImuPro test and therefore are not supposed to eat them for a period of time.

> **Note:** Please consider that the foods mentioned here and the respective alternatives are generic and are not related to your personal ImuPro test. The ImuPro test result always takes precedence over general information. Foods to which you have a positive ImuPro test reaction or where there is another known intolerance should be avoided accordingly, even if they are listed here in these general texts as a possible alternative.

Information on all other foods tested in the ImuPro can be found online at:
https://imupro.com/tested-foods/

Please scan here:



3.1. Gluten and Products containing Gluten / Alternatives

Gluten, which is also known as wheat gum, is a protein that is found in grain. It has an effect on the baking properties of flour. It can bind with up to three times its weight in water. When it is moistened, it acquires elastic properties similar to that of rubber, producing a pliable, workable dough.

Health considerations: In recent years, the number of people who suffer from gluten intolerance has increased sharply. There are many reasons for this. Firstly, there is a greater awareness that gluten is not only involved in the causation of the autoimmune disorder celiac disease. Secondly, gluten is being linked to an increasing number of complaints in the absence of celiac disease.

Different allergies and intolerance reactions to gluten:

1. In a **gluten allergy**, the body produces IgE antibodies against gluten. If there is an immediate reaction, itching or swelling of the mucous membranes may occur or even in severe cases anaphylactic shock.

2. In recent years there have been an increasing number of cases, in which people have reacted to products containing gluten (bread, pizza, pasta dishes, cake, baked goods, etc.) with irritable bowel symptoms or with symptoms similar to celiac disease without suffering from celiac disease. This is called **gluten sensitivity** or also **wheat sensitivity**. The exact mechanisms are still unknown. It is assumed that it is essentially a problem of quantities, i.e. when too much gluten is consumed over the course of the day. If the amount of gluten-containing foods is reduced, then, as a rule, the symptoms improve.

3. **Celiac disease** is regarded as a mixture of an allergy and an autoimmune disease that is triggered by gluten. Roughly 1% of the population is affected, and the rates are increasing. A positive result in the IgG test for gluten can be due to celiac disease, but this is not necessarily the case. From the historical standpoint, a diagnosis of celiac disease has only been given in about 1% of all patients. If a positive reaction to gluten is detected, we recommend that your treating practitioners make a differential diagnosis of “celiac disease” before you modify your diet.

Naturally gluten-free foods:

All breads, noodles and etc., are normally not gluten-free. There are special gluten-free products to substitute for these. There is a great array of gluten-free grains or pseudocereals that do not contain gluten. Today these are available in the supermarket.

- Fruit: fresh fruit, deep-frozen fruit, fruit juice/fruit nectar without additives, fruit preserves made from water and sugar
- Eggs
- Vegetables: all types of fresh vegetables, all garden salads, deep-frozen vegetables without additives, preserves with only water and salt, as well as the type of vegetable, in their lists of ingredients
- Vegetable juices without additional ingredients
- Legumes (fresh and dried): peas, beans, lentils, chickpeas, kidney beans, soy, peanuts, snow peas, etc.
- Nuts and seeds: unprocessed almonds and varieties of nuts, as well as sunflower seeds, pumpkin seeds, linseed, sesame seeds, chia seeds and pine nuts
- Potatoes: e.g. potatoes boiled in their skin
- Fish: fresh or deep-frozen fish without breading or spices, fish preserves in their own juice and in oil
- Meat: fresh or deep-frozen without breading or spices, cuts of meat from pork, beef, veal, poultry, lamb, sheep, goat, ostrich, venison, feathered game, rabbit and offal
- Milk and milk products: all unprocessed milk products (e.g. milk, yogurt, buttermilk, sour milk, whey, curdled milk, kefir, cream, spray cream, condensed milk, coffee creamers, milk foam, crème fraîche, sour cream, heavy sour cream), milk substitutes (e.g. almond drink, cashew drink, soy drink)
- Fats and oils (except wheat germ oil): pure vegetable fats, margarine, clarified butter, butter, concentrated butter/ghee and lard
- Gluten-free grains/pseudocereals: non-contaminated oats, buckwheat, amaranth, millet (teff and fonio), quinoa, corn/maize, rice, tempura batter made from rice, chestnut flour, legume flours, mung beans, tapioca, hemp flour, lupine flour and nut flour (almond, coconut)
- Gluten-free beverages: water, tea, wine and freshly squeezed fruit juices

Note: For technical reasons, the IgG antibodies for grain, in and of itself, and those for the gluten contained in grain must each be measured separately. If a positive reaction to gluten is detected with ImuPro testing, then all grains containing gluten must be avoided depending on the reaction to gluten. This is important in order to prevent the persistence of symptoms triggered by gluten. If the value measured for this grain is under the cut-off, then consumption of the grain is allowed as long as it is commercially labeled as "gluten-free."

Important: Even if celiac disease is not diagnosed, you must avoid gluten for at least one year if it triggers symptoms during the ImuPro Diet Provocation Phase.

These types of grain, as well as all products made of them, contain gluten:

- Wheat, rye and barley, tritordeum (a cross between durum and barley), commercially available oats, durum, green spelt, spelt (Rotkorn brand spelt), Einkorn wheat, Urkorn brand wheat, emmer wheat Kamut® (Khorasan wheat), triticale and other wheat derivatives, tempura batter (made from/with wheat flour), sago made from barley or wheat, udon and somen noodles made from wheat, taboule (made from bulgur or couscous), kritharaki (Greek noodles shaped like rice made from wheat), panko (Japanese breading), pot barley (made from barley), couscous, bulgur

Gluten in processed food products:

The situation is even more serious for ready-made products, especially those for vegetarians. In these, gluten is used in its free form and can constitute up to 80 % of the content of the processed food.

These products may contain gluten:

- Vegetables: deep-frozen vegetables with flour (e.g. creamed spinach), vegetable preserves, ready-made potato products (e.g. mashed potatoes, croquettes, potato salad, French fries, potato pancakes) and vegetable stock
- Fruit: fruit preparations and dehydrated preserved fruit
- Dairy products: yogurt, quark (especially types with the added fruit or cereals), cream cheese preparation, low-fat milk products (e.g. cheese, cream cheese), melted cheese, whipped cream, ice cream powder, ice cream ingredients (e.g. cereal flakes) and herb butter
- Beverages: malted barley, coffee, beer and grain alcohol/ spirits
- Sweets: chocolate, chocolate snacks, malt candies, desserts, marzipan and salty snacks
- Meat, sausage and fish products: all types of sausages that do not provide a complete list of ingredients, low-fat sausage, meat preparations (i.e. meatballs, meat fillings, breaded meat, ready-made foods with sauce), fried herring and rolled pickled herring
- Others: ready-made soups, ready-made sauces, salad dressings, ketchup, mustard, ready-made foods, spices and fried onions
- Grain products: soy bread, millet bread, linseed bread, soy noodles, wheat bran products, rice cakes, rice crispy cereal, cornflakes cereal, baking powder, baking additives and glazes, cornflakes, polenta, puffed rice

Note: Examine the list of ingredients of these foods very carefully! This list is only a selection; as a rule you should pay attention to all food labels.

3.2. Yeast and Products containing Yeast / Alternatives

Yeast is used in baked goods to refine the dough. Using oxygen, yeasts turn the substances in flour that contain sugar into water and carbohydrates. This makes dough rise. Many alcoholic beverages are made with yeast, especially wheat beer (“Hefeweizen”). Even for crystal-clear varieties, care must be taken that they do not contain any yeast residues. Check with the manufacturer. Yeast is commercially available either in powder form as dry yeast or as fresh/active yeast (“Pressehefe”).

Yeast naturally contains glutamate. For this reason, yeast, in the form of yeast extract, is also used as a flavor enhancer. Yeast, (e.g., as yeast extract), is contained in almost any ready-made food, (e.g. soup packets or deep-frozen pizza).

Vegetarian spreads also contain yeast. In addition, yeast is processed in many types of bread, baked goods, snacks, soups, sauces and broths, etc.

These foods may contain yeast due to their production process or in their natural state:

- Bread and baked goods: bread, crispbreads, cake, raised bake goods, pretzels, baking mixes, cookies and “Zwieback”
- Specialty foods: mayonnaise, chocolate, commercial salad dressings, ready-made foods, especially for vegetarians (e.g. spreads, soups, etc.)
- Dairy products: buttermilk, kefir and cheese
- Others: mushrooms, horseradish, vinegar, preserves, pepperoni, spices, aromas, pickled cucumbers & tomato sauces
- Beverages: fruit juices, fermented fruit, wine, beer, malt beer and sparkling wine

Alternatives: Sourdough, baking powder or yeast culture for baking (health food shops)

Note: We suggest examining the list of ingredients of these foods very carefully! This list is only a selection; as a rule you should pay attention to all food labels.

Our tip: Bread is often made using yeast. Nevertheless, if you have a type III food hypersensitivity, you do not have to give up eating bread completely (this depends however on your reaction to different types of grain and to gluten). Many bakeries, especially specialised bakeries, as well as health food shops, sell yeast-free bread.

3.3. Cow's Milk and Products containing Milk / Milk Substitutions

Milk and milk products serve as the body's fundamental supply of high-quality proteins, carbohydrates (lactose), fats and important vitamins and minerals.

Some people do not have a good tolerance to milk. In this respect, we must note that there are different ways in which people with sensitivities can react to milk products. There is a significant difference between a milk allergy and lactose intolerance. **Please note that ImuPro indicates only a possible type III food hypersensitivity (also called food intolerance) due to elevated IgG antibody levels. ImuPro is not suited to diagnose lactose intolerance or an IgE-mediated type I allergy to milk.**

Lactose intolerance is due to an enzyme deficiency. In order to digest lactose, the body requires the enzyme lactase. If there is not enough lactase in the body, this can lead to symptoms such as diarrhea, flatulence and stomach pain. Symptoms appear at the earliest 30 minutes after consumption of lactose-containing products. Since milk from other animals also contains lactose, sheep milk, goat milk or mare's milk are also usually poorly tolerated by affected people.

Different allergies and intolerance reactions to milk:

In cases of an **allergy** to milk protein (IgE and IgG), the immune system reacts to the proteins in milk, milk protein. In cases of an allergy to milk protein, all milk products that contain this protein are tolerated poorly. Affected people also tolerate lactose-free products poorly, since they still contain the milk protein. Milk substitutes from other animals (e.g. sheep, goat, etc.) can be tolerated in some cases.

Type I milk allergy (IgE) is the classic and acute form of milk allergy. An immediate reaction when milk is consumed is typical. If symptoms appear within 30 minutes after consumption of milk products, then they are probably triggered by a type I allergy to milk. If symptoms appear later, in most cases they will be due to another cause.

The elevated IgG antibodies, measured by the **ImuPro test**, are the cause of a **type III allergy to milk**. The delayed appearance of symptoms is typical, i.e. symptoms can appear in a period from two hours to up to three days after consumption. Symptoms often occur in the gastrointestinal tract, but they can also be found in completely different areas of the body. In many cases, the symptoms are chronic, because milk products are consumed frequently. Please note that ImuPro is not capable of detecting a lactose intolerance.

These proteins in milk can be classified into three groups: caseins, lactoglobulins and lacalbumins. Depending on how a milk product is processed, its protein composition sometimes differs significantly.

When milk is processed, the caseins are often “thickened,” which means that they are removed in solid form from the milk. This is done, for example, when rennet cheese is made (e.g. Edamer and Gouda). Rennet cheese, and also various soft cheeses, contain a much smaller amount of these caseins.

When these “thickened” caseins are removed, the so-called whey of the milk remains. This contains fewer caseins, but it is rich in lactoglobulins and lacalbumins. The whey that is produced can be consumed directly (e.g. as a whey drink), or it can be processed further, for example, to produce whey cheese (Ricotta).

Some processed milk products, such as sour-milk products (cow) and quark, contain both caseins and whey, since in these cases the caseins are not removed after thickening.

> **Note:** **Hence it might be the case that you react differently to cow's milk and to different cow’s milk products, which depends on the processing of these milk products.**

Besides the main components of milk mentioned above, milk also contains, most importantly, vitamin B2 (riboflavin) and the mineral calcium. Many patients who must avoid milk and milk products are afraid that giving them up can lead to a nutrient deficiency. This fear is normally not justified. A careful, balanced selection of allowed alternative nutrients with a varied diet can successfully prevent nutrient deficiencies.

Foods rich in protein:

- Foods of plant origin: legumes, soybeans and soy products, grains and cereal products, nuts and seeds
- Foods of animal origin: sheep and goat’s milk including products made with these milks, fish and meat

When consuming proteins, it is important to note that quality is more important than quantity. Proteins of animal origin are, in principle, of higher quality than those of plant origin, since they can be absorbed better by the human body.

Foods rich in vitamin B2:

- Foods of plant origin: whole-grain products (bread, rice and noodles), beans, spinach, broccoli, tomatoes, brussels sprouts, mushrooms, sprouts (soy sprouts, cereal sprouts, bean sprouts & lentil sprouts)
- Foods of animal origin: meat and fish

Foods rich in calcium:

- Foods of plant origin: legumes (soybeans, lentils, beans), kale, broccoli, spinach, fennel, herbs, whole-grain products, seeds (sesame) and nettle

Calcium is water-soluble. Therefore, relevant dishes should be cooked in little water with the lid on the pot. If possible, the water can be reused as vegetable broth or as a basis for soups and sauces. If you tolerate them well, you should consume raw vegetables as often as possible.

Note: Please note that the alternatives to foods containing milk that are listed in this text are mentioned for generic cases, i.e. they do not necessarily apply to your individual ImuPro test. Hence you must not consume foods to which you have a positive ImuPro test reaction or where you have another known intolerance even if they are listed here.

Substitutes for cow's milk (these should also be avoided in the event of detection of an intolerance or if they have not been tested):

Goat milk and goat cheese, oat milk, sheep milk and sheep cheese, pine seed milk, soy milk, almond milk, rice milk and coconut milk

Note: Examine the list of ingredients of foods very carefully! Since this list is only a selection, as a rule you should pay attention to all food labels.

The following foods may contain milk or its components:

White bread, scrambled eggs, ready-made dough, bread rolls, chocolate, pudding, baked goods, custards, many liqueurs, cake, yogurt, buttermilk, ready-made salad dressings, ice cream, hamburgers, soups, cheese, meatballs, crispbreads, sausage, margarine, mayonnaise, cocoa, ovaltine, soufflés and mashed potatoes

Terms that might be concealing cow's milk proteins:

Lactoglobulin, lactalbumin, whole milk, whole milk powder, condensed milk, buttermilk, cream, sour cream, casein, milk proteins, butter, yogurt, dry milk, non-fat dry milk, crème fraîche and whey protein

3.4. Chicken Egg: White and Yolk / Substitutions

An egg consists of two parts: the egg white and the egg yolk. The egg white surrounds the egg yolk, also known as the yellow of the egg. When an egg is opened, the egg white is runny, while the yolk is held together by a thin skin. This property is of practical values when it comes to separating the components in order to use them individually.

Both components, the egg white and the yolk, have certain properties that makes them useful for cooking. The lecithin found in egg yolk is useful for making emulsions, such as mayonnaise. The egg yolk is also used to make certain sauces (e.g. hollandaise sauce), desserts and creams. Whipped egg whites are also used especially for thickening and refining many desserts.

Note: **Do you have to modify your diet due to a type III allergy to chicken egg-white? Then please be sure to read the list of ingredients of industrially made products very carefully. Eggs and their components are often used as additives in these, but they are not always listed in the label using the term 'egg'. Some medications and vaccines also include components of eggs. Therefore, you must always check the composition before administration.**

Products that could include eggs:

Gluten-free bread, noodles, pancakes, quiches, gratins, desserts, sauces, sweets, spreads, soups, meat products, pastries, cake, casseroles, fresh pasta, ready-made meals, mayonnaise, ice cream, hamburgers, sausages, mustard and confectionery products

Names that might be concealing eggs:

Yolks, ovalbumin, albumin, globulin, lecithin E322, egg white, livetin, lysozym E1105 and ovomucoid

Egg substitutes:

It is not difficult to meet your need for protein without eating eggs. If you eat protein from different sources, you are sure to consume the necessary amino acids. In addition to various protein sources of animal origin, there are many of plant origin (e.g. soybeans and products made from them, legumes, nuts, seeds, rice, potatoes and grains.) Difficulties arise in the daily practice of cooking when substituting for the properties of the egg. Commercially available egg substitutes can help with this.

To substitute for the thickening effect of an egg, we recommend mixing one spoonful of soybean flour with two spoonfuls of water. In case of soy intolerance, a mixture of rice or corn/maize flour can also be used.

Other choices to substitute for eggs:

- Applesauce: applesauce is often used, when baking cakes or other baked goods, as a substitute for eggs. The flavor of the apples is mostly lost during baking. Approximately three tablespoons of applesauce can be used as a substitute for one egg.

- Aquafaba or water in which chickpeas have been cooked: collect the liquid from the can/jar and then beat with the hand mixer. Aquafaba is a good substitute for beaten egg white.

- Bananas: bananas are well suited to substitute for eggs in baking also. In contrast to applesauce however, bananas do not lose their flavor when used in baking. Roughly one half a ripe banana substitutes for one egg.

Eggs, milk and milk products serve as the body's fundamental supply of high-quality proteins and important vitamins and minerals. Most importantly, they provide vitamin B2 (riboflavin) and the mineral calcium. Many patients who suffer from type III allergies to eggs and/or milk are concerned that giving them up will lead to nutrient deficiencies. As a rule, this fear is not justified. Careful, balanced selection of allowed foods can successfully prevent nutrient deficiencies.

Foods rich in protein:

- Foods of plant origin: legumes, soybeans and soy products, grains and cereal products, nuts and seeds
- Foods of animal origin: sheep and goat milk and products made with these milks, fish and meat

When consuming proteins, it is important to note that quality is more important than quantity. Proteins of animal origin are, in principle, of higher quality than those of plant origin, since they can be absorbed better by the human body. The correct combination and consumption of proteins of both plant and animal origin can ensure that a protein quality equivalent to that of milk is obtained. In order to increase protein intake, we recommend using chopped nuts for salads, dressings, desserts, as well as when baking. Sprinkle sunflower seeds, nuts or almonds on sweet or spicy dishes and for alcohol-free cocktails.

Foods rich in vitamin B2:

- Foods of plant origin: whole-grain products (bread, rice and noodles), beans, spinach, broccoli, tomatoes, brussels sprouts, mushrooms, sprouts (soy sprouts, cereal sprouts, bean sprouts and lentil sprouts)
- Foods of animal origin: meat and fish

Since vitamin B2 is water-soluble, the relevant dishes should be cooked in little water, keeping the lid on the pot. If possible, the water can be reused as broth or as a basis for soups and sauces.

Foods rich in calcium:

- Foods of plant origin: legumes (soybeans, lentils, beans), kale, broccoli, spinach, fennel, herbs, whole-grain products, seeds (sesame) and nettle

Calcium is water-soluble. Therefore, relevant dishes should be cooked in little water with the lid on the pot, if possible, the water can be reused as vegetable broth or as a basis for soups and sauces. If you tolerate them well, you should consume raw vegetables as often as possible. Please note that soybean products, (e.g., soy drink), sometimes contain only a small amount of calcium, since they mainly consist of water.

Your notes:

Your notes: