

CO'MED – Journal for Complementary Medicine

Special reproduction for Evomed MedizinService GmbH

The following article is taken from CO'MED edition 07-03 with friendly permission. Order your free issue! Phone: 0 61 45-933 80, Fax: 0 61 45-933 833 www.comedverlag.com

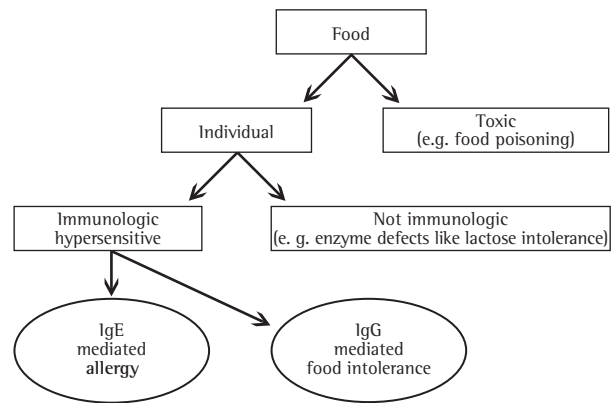
Dr. rer. nat. Michael Tölg

Food Immune Profile - Results of an application study

Dr. rer. nat. Michael Tölg

did his doctorate in biology and visited the USA and China for research purposes. For four years, he worked for a contract research institute in Munich in managing position. Soon later he founded his own institute for the conception and realisation of clinical studies. He can conduct these studies with a program in the Internet developed by himself thus granting them to be simple, safe and economic.

In the Western industrial countries, more and more persons suffer from chronic diseases. A generally established fact is that nutrition has a great influence on chronic complaints. They are often based on immunologic reactions against food, women being twice as often affected by it as men (Schäfer et.al., 2001). The British Allergy Foundation assumes that 45 percent of the population in Europe and the USA suffer from food intolerances.



Difference between food allergy and food intolerance

In case of allergies, the body responds to a foreign substance with an abnormally exaggerated defence reaction. The name allergy is derived from the Greek “allos” for “foreign” and “ergon” for “work”. The reaction is mediated by IgE antibodies. The body reacts very quickly within five to 20 minutes after the contact with the allergen. Food allergies are rather seldom. Approximately three to six per cent of the population are affected by them.

There is a difference between food intolerance and food allergy even if there is an immunologic reaction in both cases. In case of food intolerances, however, the reaction is mediated by IgG antibodies. The reaction takes place with a delay of eight to 72 hours after the consumption of the food. Thus it can happen that the person concerned reacts with gastro-intestinal problems not until Friday to a food that he ate on Wednesday (see chart 1).

Food intolerance through impairment of the intestine

A prerequisite for the development of food intolerances is that foodstuffs get into the blood through the intestine and are then identified as exogenic.

A healthy intestine is lined by a mucous membrane, a strong, especially stable defence system. The first pathogens are already beaten off here. A further function of the intestine is the decomposition of the food into its components to the extent of being able to be taken into the blood. From there they reach the body cells where they perform their numerous tasks.

Infections, stress, drugs like antibiotics, preserving agents and anti-inflammatory drugs as well as a disturbed intestinal flora cause an increased permeability of the small intestine which allows larger undigested or not fully digested food components to get into the blood.

ImuPro300 Press Publication „CO‘MED“

A permanently enhanced intestine permeability results in a constant increase of food intolerances – which can be measured through the increased existence of IgG antibodies against these foodstuffs.

Medical importance of IgG antibodies against food

When IgG antibodies against foodstuffs are detected in the blood, this is a very reliable indication that there is a constant contact between food and the immune system. It could be proven, in fact, that the concentrations of antibodies will decrease and finally disappear if the respective foodstuffs are avoided for a time.

The antibody binds to the food and an immune complex is developed. This immune complex activates the complement system – a part of the immune cascade – and thus attracts phagocytes (“scavenger cells” that “digest” invaders and thereby make them harmless) that destroy the immune complex. During this action, several signal substances of the immune system (interleukins, TNF- α), large amounts of oxygen radicals (O₂) and proteases are released. Proteases are enzymes that decompose non-specific proteins and can thus destroy surrounding body tissue as well. O₂ radicals can also attack and destroy endogenic cells. This happens in the case of an excess of O₂ radicals, when the endogenic cells can no longer protect themselves against an oxidation (decomposition of components of the cell membrane) through the O₂ radicals for lack of anti-oxidants.

Moreover, oxygen radicals can decompose (oxidise) the lipids that normally keep the cell membrane elastic, which results in cell disruption.

If only a small number of immune complexes exist, there will be no damage worth mentioning (diagram 1).

Unfortunately our nutrition often is very unbalanced. We eat the same foodstuffs over and over again, so that the concentration of immune complexes is high in the case of intolerances. These immune complexes bind to particular activated cells of the blood vessels and like this they can leave the bloodstream and settle in the tissue. Immune complexes settle over and over again at these activated cells (diagram 1) and cause chronic local inflammations.

They are responsible for a large number of chronic diseases:

- Chronic diseases of unknown aetiology
- Chronic inflammations - joints, glands, diabetes, thyroid
- Gastro-intestinal troubles of all kinds – Crohn’s disease, coeliac disease, irritable bowel syndrome
- Skin problems – neurodermatitis, acne , psoriasis
- Migraine, chronic headache
- Psychological problems – depressions
- Chronic fatigue (CFS)
- Adiposity
- Hypertension
- Fibromyalgia (see diagram 1)

ImuPro 300 blood test for the detection of food intolerances

An Elisa-method is used for the detection of IgG antibodies. In all 272 individual analyses are carried out in order to detect specific antibodies against the different foodstuffs and their components. An internal standardisation allows to precisely determine the concentration of antibodies in the blood. Subsequently, an individual diet plan is established that shows the patient how he can avoid not tolerated food. The length of the period of avoidance of not tolerated food depends on the degree of reaction measured. In order to facilitate this change in diet, each patient receives a recipe book adjusted to his findings.

ImuPro300 Press Publication „CO‘MED“**Application study**

Not tolerated food can cause chronic inflammations in the body. If the respective foodstuffs are identified by the blood test, positive effects on a large number of chronic complaints can be reached by a change in diet.

Chart 1: Classification of weight at the consultation for inclusion

	Gender				Total	
	female		male			
	Number	[%]	Number	[%]	Number	[%]
Underweight	5	2.4	4	5.3	9	3.2
Normal	51	24.5	14	18.7	65	23.0
Overweight	52	25.0	34	45.3	86	30.4
Adipose	100	48.1	23	30.7	123	43.5
Total	208	100.0	75	100.0	283	100.0

A multi-centre prospective application study was initiated to collect findings regarding the effectiveness of ImuPro 300 with patients who have weight problems and /or other clinical characteristics or symptoms indicating food intolerances like for example neurodermatitis, psoriasis, headache / migraine, exhaustion / fatigue, rheumatic diseases as well as gastroenterological trouble.

In all 300 physicians were asked to document the treatment of 1,500 patients (5 patients per centre).

At three different times the physicians should describe the condition of the patient:

Findings on inclusion, discussion on change in diet and follow-up consultation after about eight weeks.

During the consultation for inclusion, basic data (initials, date of birth, gender, height, weight) as well as risk factors, diagnosis, nutrition and movement habits and the assessment of symptoms should be stated. At the discussion on change in diet taking place about two weeks later the physicians should point out the total number of test reactions as well as the number of strong reactions. At the last consultation finally the weight should be stated once more, as well as questions regarding symptoms, change in diet, tolerability and effectiveness should be answered.

Results

The analysis of the documentation sheets received until the middle of May 2003 which have been completed by 58 physicians having documented 283 patients was the basis for this interim report.

Findings on inclusion and demographic data

26.5 % out of the 283 patients were male and 73.5 % were female, aged between 2 and 82 (average: 45.6). The average body mass index at the beginning of the treatment was 29.8 kg/m². 43.5 % of the patients, thus most of them, were adipose (48.1 % of the female, 30.7 % of the male patients). Just under a third of all patients were overweight (30.4 %), 23 % had average weight and 3.2 % were underweight (Chart 1).

With 74.2 % of all patients further diagnoses in addition to or instead of “overweight / adiposity” were documented. The documented diagnoses were coded according to ICD 10 and united into main groups. Most of the entries were in the group “diseases of the digestive system” (54 entries), followed by “diseases of the musculoskeletal system and the connective tissue” (11.7 %) as well as “diseases of the respiratory system” (10.5 %).

ImuPro300 Press Publication „CO‘MED“

Excellent	31.6	Very easy	10.0
Good	36.8	Easy	29.4
Medium	19.5	Medium	35.1
Bad	9.1	Difficult	16.0
Very bad	3.0	Very difficult	9.5

% of the patients

Fig. 1: consistency in change of diet

% of the patients

Fig. 2: How difficult is it for the patients to stick to the new eating habits after about nine weeks?

Loss of weight (% of body weight)

All patients (N = 231)	4.3
Patients with very good consistency (N = 73)	5.7
Adipose patients (N = 106)	5.5
Adipose patients with very good consistency (N = 28)	6.7

Fig. 3: Loss of weight in percentage of body weight (average and standard deviation)

Mood swings (N = 171)	69.6	All patients	
Fatigue (N = 157)	75.2	Patients with very consistent change in diet	
Exhaustion (N = 187)	77.0		
Arthroses (N = 83)	41.0	Mood swings	83.3
Articular pain (N = 153)	62.7		69.6
Gastro-intestinal complaints (N = 168)	76.8	Fatigue	90.2
Diarrhoea (N = 128)	74.2		75.2
Eructation (N = 137)	71.5	Exhaustion	89.7
Flatulence (N = 187)	82.9		77.0
Bloated feeling (N = 182)	84.1	Arthroses	40.0
Psoriasis (N = 57)	61.4		41.0
Itching (N = 123)	78.0	Articular pain	85.4
Neurodermatitis (N = 42)	71.4		62.7
Acne (N = 46)	63.0	Gastro-intestinal complaints	87.2
Migraine (N = 75)	82.7		76.8
Headache (N = 162)	71.6	Diarrhoea	85.0
			74.2

Improvement rates [%]

Fig. 4: Improvement rates of the symptoms after about 9 weeks

Eructation	82.9
	71.5
Flatulence	88.5
	82.9
Bloated feeling	90.9
	84.1
Psoriasis	75.0
	61.4
Itching	82.9
	78.0
Neurodermatitis	64.7
	71.4
Acne	66.7
	63.0
Migraine	82.1
	82.7
Headache	83.3
	71.6

Improvement rate [%]

Fig. 5: Improvement rates of the symptoms and consistency of change in diet

ImuPro300 Press Publication „CO‘MED“

Number of food intolerances

These are the results of the blood test for the detection of food intolerances: On average, the patients had 42 reactions to food. There is a tendency that the patients over 50 years of age had a bit less reactions than the other patients. On average, 7.5 reactions were very marked (intensity 3 and 4). With regard to the strong reactions, the patients over 50 years of age had six reactions, again less than the other groups of patients.

On average, the discussion on change of diet took place 15 days after the taking of a blood sample.

Duration of therapy and follow-up consultation

The period of observation (date of discussion on change of diet until the follow-up consultation) was on average 71 days (median: 64 days).

283 patients were documented at the consultation for inclusion, at the time of this interim analysis the documentations of the follow-up consultations of 231 patients were available. All percentages mentioned below refer to these 231 patients, unless otherwise specified.

Experience

Most of the patients gave positive answers to questions regarding the implementation of the test results, even if the change in diet was not easy for many patients, especially in the beginning.

Most of the patients described their implementation of the test results as “excellent” (31.6 %) or “good” (36.8 %), 12.1 %, however, described their consistency as “bad” or “very bad” (Fig. 1).

More than 50 % of all patients at first had great difficulties in changing their diet. Only for 18.7 % of all patients the change in diet was “easy” or “very easy”. At the concluding consultation after about nine weeks, it was still “difficult” or “very difficult” to stick to the new eating habits for only a quarter of the patients (Fig. 2).

Change in weight

During the change in diet of about nine weeks, a weight reduction could be documented with 81.4 % of all patients, this was the case with even 90.6 % of the adipose patients.

The results show a striking influence of the patients themselves on the success of the treatment: If you have a look at the relative change in weight compared to the initial weight, it turns out that on average the patients lost 4.3 % of their body weight in the course of the nine-week observation period (Fig. 3).

In contrast, those patients who consistently implemented their test results lost significantly more weight, namely 5.7 % of the initial value. The same is valid, when taking into account only the adipose patients: They lost 5.5 % of their body weight on average, with a very consistent implementation of the test results, however, even 6.7 %. It must be emphasised that this reduction in weight was generally reached without a hypocaloric diet.

Very interesting as well: The six underweight patients gained 3.7 % on average.

Chronic complaints

By means of a five-stage scale (from 0 = not present to 4 = very intense) the intensity of 16 given accompanying symptoms should be documented.

At the follow-up documentation that took place after about nine weeks, the symptoms improved or completely disappeared with most of the patients. The symptoms of “migraine”, “bloating feeling” and “flatulence” for example improved with 80 % of the patients concerned (Fig. 4).

ImuPro300 Press Publication „CO‘MED“

In detail, the following improvement rates were documented:

Gastro-intestinal symptoms: 72 % to 84 %,
neurological / psychological symptoms: 70 % - 83 %,
dermatological symptoms: 61 % to 78 % and
musculoskeletal symptoms: 41 % - 63 %.

Most of the patients who implemented the change in diet very consistently showed even significantly higher improvement rates (Fig. 5).

The share of patients is presented with whom the intensity of the respective symptoms improved during the period of observation. In addition to “all patients”, those patients were shown who assessed their consistency in changing their diet as “excellent”.

Thus an improvement rate of 90.2 % was found for example for the symptom “fatigue” with the consistent patients, the entire population, however, reached an improvement rate of “only” 75.2 %.

The development with the patients whose symptom were “intense” or “very intense” was impressive as well (Fig. 6):

Whereas at the beginning of the treatment for example 45.5 % of the patients suffered from intense or very intense flatulence, the percentage of these patients decreased to reach 7.8 % at the follow-up consultation. The percentage of patients suffering from intense or very intense exhaustion decreased very significantly from 42.9 % at the consultation for inclusion to reach 12.5 % at the follow-up consultation.

General state of health and concluding assessment of effectiveness

With 78 % of all patients the general state of health had improved in the course of the treatment, among those patients who consistently implemented the test results, 96 % noted an improvement (Fig. 7).

With 175 patients (75.5 % of 231 patients with statements at both consultations) other changes were documented in addition to the change in weight. The most frequently made statements were “fitter” (44.2 % of the patients), followed by “more seldom tired” (39.8 %) and “improved skin” (20.8 %).

On the concluding assessment of effectiveness, more than 70 % of all physicians and patients judged the change in diet as “excellent” or “good”.

	Follow-up consultation	Consultation for inclusion
Mood swings		
Fatigue		
Exhaustion		
Arthroses		
Articular pain		
Gastro-intestinal complaints		
Diarrhoea		
Eructation		
Flatulence		
Bloated feeling		
Psoriasis		
Itching		
Neurodermatitis		
Acne		
Migraine		
Headache		

Intense or very intense symptom [%]

Fig. 6: Intense and very intense symptoms at the consultation for inclusion and follow-up consultation

ImuPro300 Press Publication „CO‘MED“

% of patients

78.4	95.9
all patients (N = 231)	Patients with excellent consistency (N = 73)

Fig. 7: Improvement of the general state of health after about 9 weeks

% of recommendations

86.6	93.1	97.3
All patients	All physicians	Patients with excellent consistency (N = 73)

Fig. 8: Recommendation after about nine weeks

For the group of patients who consistently implemented the change in diet, the assessment of effectiveness made by the physicians was even much better with 86.8 % good or excellent judgements.

In all 87 % of all patients, 93 % of all physicians and finally 97 % of the patients consistently changing their diet stated that they would recommend ImuPro 300 (Fig. 8).

Discussion

This interim analysis shows that the consistent implementation of the ImuPro 300 test results yields convincing therapeutic results with most of the patients. During the period of observation of about nine weeks, more than 80 % of the patients had lost weight, namely on average 5.7 % of the initial weight with the group of the very consistent patients (maximum: 24 kg).

When interpreting these results, it must be taken into account that the successes reached in weight decrease were generally not yielded through a hypocaloric diet, but only by avoiding those foodstuffs that were identified as not tolerated. Thus the patients did not have to go hungry or to count calories, and therefore it is to be expected that the yo-yo effect that can be observed with most forms of diets will not occur.

Another interesting observation was the development of weight of the underweight patients: In the course of the period of observation, they gained 3.7 % of their initial weight.

The improvement rates of chronic complaints are still more impressive than the weight decreases reached. Here once again the decisive influence of the consistency in changing the diet was shown: With those patients who implemented the test results very consistently improvement rates of over 80 % and even of about 90 % for the symptoms fatigue, bloated feeling and exhaustion were reached.

At the beginning of the treatment, the patients suffered in particular from very severe gastro-enteric symptoms (e. g. flatulence with 45.5 % of the patients), as well as exhaustion (42.9 %) and fatigue (39.4 %). The percentage of patients suffering from very severe gastro-enteric trouble, decreased to reach a percentage of below 10 % within the period of observation, only 12.5 % still suffered from very severe fatigue and exhaustion, respectively.

An analysis of the results yielded with the migraine patients illustrates the potential of this form of therapy and namely in particular in the context that until now only a few promising therapies for migraine patients are available and the patients often undergo high psychological strain: In all 34 patients stated at the beginning of the treatment that they suffered from severe or even very severe migraine. After eight weeks of change in diet only two of them still suffered from severe or very severe migraine.

ImuPro300 Press Publication „CO‘MED“

These results show that ImuPro 300 can be applied in varied cases:

For patients with weight problems this test offers the opportunity to eat healthier and to not only reduce their weight, but to also have a positive effect on their general condition.

For patients with chronic complaints the chances of success are excellent. If they did not respond to conventional therapies, the possibility of testing for food intolerances should always be offered. Thus not only the symptoms are addressed, but the causes can be treated directly.

With a consistent cooperation of the patients, chronic diseases and complaints in connection with food intolerances can be treated successfully through the blood test. This is, at least, what the success rates in this observation study suggest.

The author's address:
Dr. rer. nat. Michael Tölg
Mediveritas, Institut für Medizinische Studien
Zweibrückenstr. 15
80331 München

For further information:
Evomed MedizinService GmbH
Heidelberger Landstr. 190
64297 Darmstadt
Phone: 06151 / 66 68 00
www.imupro.de