



Your Health is in your Gut

Part 2

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Part I was published in SANUM-Post No. 80, beginning on Pg. 14. The first section described the tasks of the digestive organs and the diet. The article then went on to deal with disorders in the symbiotic balance between the intestinal flora and the host organism, dysbiosis and its treatment. Now, in this part, we look at intolerances and allergies which can upset our intestinal health and with it the health of the whole person.

Intolerances

As well as antibiotics, there are also other factors which put the gut under stress, disease being the final result. Most of the illnesses, which are described as allergies, originate in the gastro-intestinal tract and are simply intolerances.

The one which physiologically affects the most of us is:

Lactose Intolerance

Lactose occupies an exceptional position among the different types of sugar, because it occurs only in the milk of mammals (except for the Californian sea-lion). Certain species of monkey have the highest proportion of lactose in their milk (10.2 g/dl), followed by humans (7.0 g/dl), mares (6.2 g/dl), and the smaller ruminants and cattle (c.4.1 - 4.8 g/dl). Lactose is broken down in the digestive tract by the enzyme lactase into galactose and glucose. Basically, the normal foetus develops some lactase activity as early as the third month of pregnancy, and this continues to develop, peaking at birth. During breastfeeding, the level remains high, declining gradually after weaning.

Clinically, we distinguish between

- Hypolactasia: Deficiency in the enzyme (lactase) to break down the lactose = lactose intolerance; and
- Lactose malabsorption (poor absorption and utilisation, e.g. because of missing sections of the intestine).

Symptoms of Lactose Intolerance

The central leading symptom is diarrhoea: watery, frothy, sour stools (so-called osmotic, fermentative diarrhoea), papescent stools, flatulence, large amounts of wind in the intestines and abdominal distension (meteorism). These patients always think they are too fat because of their inflated abdomen: noises in the abdomen, eructations, nausea after eating; vomiting after a large meal including a lot of lactose, cramping pains in the lower and upper abdomen after consumption of lactose, non-specific symptoms which may indicate intestinal damage. Constipation does not occur immediately after consuming lactose, but may be linked to lactose intolerance.

Furthermore, the patients often complain of feeling exhausted.

In short, nothing but abdominal problems

Making a Diagnosis

The simplest procedure, and the easiest on the wallet, is the elimination diet: for 1-2 weeks, one avoids anything which might contain lactose. After that, up to 1 g of lactose may be consumed daily and, later on, as part of a low-lactose diet, 8 - 10 g daily. What lies behind

these efforts is the fact that it is up to each individual person to find out how much lactose they can tolerate without suffering from intestinal complaints.

The hydrogen-breath test assesses the level of the body's lactose burden, utilising the fact that, in the event of lactose intolerance, the resident bacteria in the large intestine break down undigested lactose. The hydrogen gas released in this process is absorbed via the intestinal wall and exhaled via the lungs.

Since lactose intolerance is not an allergy, it does not trigger any immune reaction. That is why immunological parameters are of no use in tackling it.

Reasons for the Increase in Lactose Intolerance

Around 12 million Germans, c. 15 % of the total population, suffer from lactose intolerance. Compared with the U.S.A., this enzyme deficiency is less well-known here as an aetiology. However, since the Germans' eating habits have changed in the last few decades in a similar way to those of the Americans, here too the same types of illness are on the increase. On the one hand, for some time now, the consumption of dairy products has been much greater even than in the 1980's, and on the other hand, more and more industrially processed foods are being consumed. Pre-cooked dishes, vegetable margarine, cooked meats, baking mixtures, bread and rolls, deep-frozen pizzas, not to mention fast foods; all these and medicines too contain added lactose. Thus, the



typical consumer in modern industrialised societies may be consuming between 25 and 50 grams of lactose a day unawares. However, this results in overloading of the enzymatic systems, and this is in excess of what certain individuals can tolerate. The outcome is the symptoms mentioned above.

And so we may ask why lactose is added in such quantities. The reasons have to do with food technology! The addition of lactose to foods has the following effects:

- it gives the foods a greater viscosity (toughness), and this again provides a pleasant masticatory sensation. Because of the minimal sweetness of this composite sugar, the taste of the end-product is hardly affected;
- lactose has a browning action on bakery goods and on those products that are fried or roasted in fat, e.g. French fries or croquettes;
- another reason for adding lactose to bakery goods is that lactose is not fermented by baker's yeast;
- lactose is used in the production of sweets, because it has an influence on the crystallising properties of sugar solutions;
- in medicines, lactose is used as a carrier; the same is true of homœopathic remedies, for instance, as prepared according to condition §6 of the Homœopathic Pharmacopœia.

- lactose is a carrier for flavourings and sweeteners and is considered to be a flavour-enhancer.

A prominent symptom is diarrhoea, arising from the hygroscopic action of the unprocessed lactose in the small intestine and the formation of gas and acids in the large intestine from the action of bacteria and yeast.

This diarrhoea does not necessarily result in weight-loss from mal-absorption. It may rather be the case that the patient has a healthy appetite for food soon after having eaten, since the disordered intestinal absorption means that the body is deprived of certain nutrients. The extra calories thus consumed are then stored in the form of fat.

Causes of Lactase Deficiency

On a global scale, lactose intolerance is the most widespread genetic predisposition and, at the same time, the most frequent cause of complaints associated with the digestion.

From a developmental-historical point of view, lactose intolerance makes sense following a breast-feeding period of 10-12 months. It encourages the adjustment to a different type of diet. On the one hand, this is an important step in the individual's personality development and, on the other hand, it ensures the continuation of the tribe, since the mother is then freed up for fresh fertilisation and a new pregnancy.

Because of this, some researchers have assumed that, ten thousand

years ago, everybody had a primary lactose intolerance after weaning. Thus, the genetic predisposition to continue to be able to break down lactose is a more „recently“ acquired ability, with a direct connection to the domestication of ruminants, particularly of cattle. Individuals who have been able to survive in extreme situations by consuming milk and dairy products had a selective advantage over those who, in times of famine, were unable to fall back on such high-quality foods or who did not tolerate them.

Another hypothetical view is that lactose tolerance improved as people adapted to this type of food, so that it became possible enzymatically to break down very large quantities of lactose.

Globally we can see a north-south divide and an east-west divide in lactose intolerance. Milk is best tolerated in the north-east. In Scandinavia only about 5% of the population suffers from lactose intolerance. In Germany it is 15%, in Russia 33% and in Greece 75%. In distant parts of Asia and Africa, the degree of intolerance reaches 80%-100%. The regional distribution of tolerance favours the conclusion that developmental-historical factors come into play among different peoples.

Lactose Intolerance in Infants

Lactose intolerance is also found in infants. This can result in critical situations in the care of the neonate, because the lactose, which the breast-milk contains, provides for about half the energy requirement in the infant's first year of life.



There are several reasons for a lactose intolerance in infants:

- the lactase activity in the gut is not yet sufficiently developed; generally however this increases, with a consequent decrease in the health problems;
- gastro-intestinal infections may result in a temporary lactose intolerance;
- from the sixth month, the susceptibility to viral infections increases, following which it is easier for a lactose intolerance to develop. Up to that point, a good protection against such infections existed via the mother.

Lactose intolerance is recognisable from the frequent loose, watery stools passed by the child, and from the resultant developmental disorders. In such cases, milk must be excluded from the diet; nor must other foods contain any lactose.

Foods which always - or almost always - contain lactose:

Milk and dairy products, sausage (and even cooked ham!), manufactured foods of all kinds, and fast foods, so-called sweeteners in ready-prepared foods, sweetener tablets and many kinds of confectionery, chocolate (except some dark and slightly bitter kinds), cocoa powder, food supplements.

Foods which are free of lactose and quite safe for the lactose intolerant:

Unprocessed foods of mineral, vegetable and animal origin, apart from milk. (Fruit, vegetables, potatoes, cereals, honey, oil, meat, fish, etc.)

Fructose Intolerance

Fructose (levulose), together with glucose, forms the disaccharide Saccharose, which is the conventional sugar in domestic use. Fructose occurs in most fruits and vegetables.

In the case of fructose intolerance, we distinguish between:

- hereditary fructose intolerance (HFI) and
- fructose malabsorption.

In the case of fructose malabsorption, it is suspected that the fructose transport system in the small intestine is defective. The GLUT-5-transporter, which sees to the absorption of dietary fructose, may be reduced, and this reduction may be hereditary or acquired. As in the case of lactose intolerance, this results in considerable problems in the gut, on the one hand because of the strong osmotic fluid build-up with consequent diarrhoea and, on the other hand, because of the creation of intestinal gas owing to fermentation, resulting in distention and flatulence. Here too, the hydrogen-breath test and an exclusion diet can clarify the situation rapidly. As already described under lactose intolerance, patients must find out their own limit of tolerance and, in most cases, are able to live well on a low-fructose diet.

Apples, pears, apricots, plums, mango, water melon, kiwi fruits, grapes and raisins are particularly high in fructose. Fructose malabsorption may be boosted by additional sorbitol content in the diet. Since dextrose promotes the processing of fructose, fruits which

are high in dextrose and low in fructose are well tolerated in most cases. Generally, lemonade and fruit juices must be avoided. Diabetic jams and confectionery are high in fructose and sorbitol, and are therefore totally unsuitable. Honey must also be avoided. Pure dextrose can be used for sweetening.

The situation is different in the case of hereditary fructose intolerance. The patient reacts to even the slightest morsel. In most cases, those affected are protected from consequent hypoglycaemia, not to mention liver- and kidney-damage, by an aversion to sweet foods, fruit and vegetables. These patients must keep strictly to an absolutely fructose-free diet. Under no circumstances must a hydrogen-breath test for fructose-overload be administered. It could result in a life-threatening attack of hypoglycaemia and place the liver under severe stress. Diagnosis is based on a gene test.

Histamine Intolerance

Histamine intolerance is an acquired intolerant reaction to the substance histamine, in which the sensitivity steadily increases. According to official estimates, 2%-5% of adults suffer from it, and the number is rising. Three-quarters of those affected are females.

Histamine (2-(4-imidazolyl)-ethylamine) is a naturally occurring substance, a biogenic amine, which is chemically formed from the amino-acid histidine. Histamine has neither smell nor taste. Within the human and animal organism, it acts as a tissue hormone and neurotransmitter. Histamine is consumed



with almost all foodstuffs, since it occurs ubiquitously in the realms of plants and bacteria. In foods, it is formed in the context of fermentatory processes and is therefore, inter alia, an indicator of their freshness. It is stored in cells within the body (mast cells, basophil granulocytes and nerve cells). In allergic reactions particularly, and in defence against foreign substances, histamine is the most important mediator. This means that histamine intolerance is not an allergy, but a pseudo-allergy, an intolerance.

DAO (Diamine oxidase)

DAO is the enzyme which breaks down biogenous amines. It is formed from the cells of the intestinal mucosa. Because the highest concentration of DAO is found in the small intestine, in a healthy person, the greatest proportion of histamine which is either consumed or formed in the gut is already broken down in the lumen of the bowel. The rest is broken down as it passes through the intestinal mucosa. Amines which find their way through the gut wall or are released in the tissues can be detoxified in the liver by N-methyltransferase, small quantities of which are also found in the kidneys and white blood-cells. Men form more DAO than women, which is the reason why the latter have a greater tendency to suffer from histamine intolerance.

Anybody with histamine intolerance will react to moderate-medium doses of histamine with gastric, intestinal, respiratory and skin symptoms. Our average daily consumption of histamine is about 4 mg. However, where there is an

intolerance, 15-30 micrograms are sufficient to trigger health problems. As yet, we have no details as to why certain individuals react to histamine at a given time or in a particular manner. Thus it is suspected that, in about 15 % of asthmatic attacks, histamine intolerance is involved, likewise in the case of low blood-pressure, urticaria, dysrhythmias and menstrual disorders.

Although histamine occurs both in cells of the body and in almost all foodstuffs, life-threatening intoxication can also occur in healthy people, if an excessive amount of histamine is consumed. In such cases, this is referred to as food poisoning, e.g. fish poisoning.

Symptom Pictures of Complaints

The following symptoms occur, particularly, as a result of the mucosal swelling, vascular dilation and contraction of smooth muscle tissue:

- gastro-intestinal upsets with diarrhoea, abdominal pain and cramping, soft stools, nausea, heartburn, vomiting, sensation of fullness, etc.
- slight to moderate headaches or migraines
- runny nose or colds
- frequent coughing and clearing of the throat, asthma
- skin eruptions, urticaria, facial flushing
- low blood-pressure with vertigo, disorientation, nausea, panic attacks, sweats, collapse, feelings of weakness, lack of drive
- cardiac dysrhythmias, tachycardias, missed heart-beats

- in women: pains, cramps and other complaints on the first day of the period
- non-specific complaints, such as: hot flushes, tiredness after meals, states of exhaustion, loss of impetus, internal restlessness, pains in the limbs, subjective feelings of unwellness, mood-swings, nervousness, disturbed sleep, poor concentration, lassitude, bouts of depression.

It is the digestive tract that is most frequently affected by histamine overload.

With regard to the above list, it has to be said that in most cases, histamine triggers very non-specific symptoms in those at risk. In the gastro-intestinal tract, it is only isolated sections that are affected by the effects of histamine intolerance, and thus, there is a time-lag between the consumption of the histamine with food or its release in the gut and the appearance of symptoms. Somebody who, for instance, experiences stomach pain with other appropriate symptoms immediately after a meal, is more likely to think of a connection with the consumption of food than somebody else who does not experience symptoms until what was eaten is passing through the large intestine. For many people headaches and migraines are an everyday occurrence, although the symptoms might be cut off in 64 % of cases by low-histamine food. In one study, in 24 out of 25 migraine patients an attack could be provoked by a histamine injection. Regrettably, medication for headaches often inhibits the action of diaminoxidase or promotes the



release of histamine from the body's cells.

Around 5 % of adults in the industrialised nations are asthmatics. Food assumes considerable aetiological significance here, especially in view of histamine intolerance. One way of testing for asthma is by means of inhalation of histamine. People with histamine intolerance have a permanently elevated histamine level, which of course also makes its presence felt in the lungs - as in the provocation test for asthma. Clearing the throat and slight coughing, like a runny nose and permanent cold, are therefore frequently clear signs of a histamine intolerance.

Menstruation and Pregnancy

One woman out of every two suffers from cramping pains at the onset of her period, and these only respond with difficulty to analgesics. It has been established that the diaminoxidase level is depressed at the onset of menstruation. However, in pregnancy it is exactly the opposite: from the third month of pregnancy the placental content of DAO increases 300-500-fold. Since the womb is particularly sensitive to histamine, nature has obviously built-in this protective mechanism, lest the appearance of sizeable quantities of histamine should result in uterine contractions and the premature expulsion of the foetus. This means that in pregnancy, the occurrence of symptoms of histamine intolerance is rare or non-existent. Thus, the expectant mother feels particularly well, but after the birth, the old intolerances rear their heads again.

Because of this non-specific symptomatology, histamine intolerance is diagnostically quite elusive; the only certain way is a four-week-long exclusion or elimination diet.

Histamine overload of the organism

- a. Consumption of foods high in histamine
- b. Consumption of histamine liberators
- c. Consumption of other biogenous amines
- d. DAO deficient or inhibited
- e. Gastro-intestinal infection
- f. Inherited enzymatic defects result in especially serious symptoms, which must be treated promptly.

When several triggers come together, the result is a cumulative histamine intolerance.

Regarding (a): „Histamine bombs“

These are foods which are subject to rapid breakdown by bacteria, or come into being as a result of it:

- Fish (especially preserved fish such as tuna) and smoked foods (fish, sausage, raw ham) and liver
- Alcoholic drinks, esp. red wine and „Hefeweizen“ (*light, fizzy beer brewed with top-fermentation yeast*)
- Sauerkraut, spinach, tomatoes, aubergines, avocados
- esp. old varieties of cheese and cheese which continues to ripen
- Food and drinks containing yeast, bakery goods (the more porous and light a bakery product is, the more yeast or raising agent - and histamine - it contains), and ready-cooked dishes

- Chocolate
- Pickled foods contain histamine from the vinegar marinade
- Medicines (acetylcystein, codeine, MCP drops)

Regarding (b): Histamine liberators

Histamine is used in the body for many functions, and is therefore stored in an inactive form in the blood cells and cells of the body. If there is an intolerance, this stored histamine may be involuntarily released by so-called liberators.

Typical examples among food-stuffs are:

- protein
- fish
- strawberries, citrus fruits, pineapple, nuts, kiwi fruits
- **alcohol!** which has four deleterious effects with regard to histamine:

1. It inhibits DAO
2. It introduces histamine (produced during fermentation)
3. It is a histamine liberator
4. The effects of alcohol in turn are enhanced by histamine (Caveat: intestinal fermentation!)

All four factors bring about an accumulation of histamine effects and complaints.

Regarding (c): Biogenous amines

There are many other biogenous amines, some of them very toxic, which are consumed with food or are formed in the gut: tyramine, tyrosine, serotonin, putrescine, phenylethylamine, spermidine, spermine, cadaverine, phenylephrine, octopami.



Foods which contain other biogenous amines beside histamine:

Sauerkraut, avocados, potatoes, tomatoes and tomato purée, bananas, raspberries, oranges, walnuts, pineapple, plums, pears, papaya, grapefruit, **chocolate!**

Soya beans and soya products, whilst containing no histamine, do contain many biogenous amines, which is why they are often not tolerated as a milk substitute.

DAO always breaks down other biogenous amines first, and only then does it break down histamine. In the event of a DAO deficiency therefore, foods which contain other biogenous amines can likewise trigger serious complaints, hence they must be excluded from the diet.

Regarding (d): DAO deficient or inhibited

Deficient enzymatic activity may arise owing to the following causes:

- biogenous amines
- various medicines (analgesics and sleeping tablets, antitussives, antirheumatics)
- alcohol

Regarding (e): Gastro-intestinal infection

Parts of the mucosa may be lost, e.g. through inflammatory processes, passed along with diarrhoea, which means that there is nothing to prevent biogenous amines invading the body. As well as this, the damaged mucosa is no longer capable of producing DAO.

Diagnosis

Bearing in mind the classical symptoms, a diagnosis is possible by employing the elimination method. Before going down this route, abuse of alcohol and drugs should first be excluded. There are only a small number of parameters which indicate histamine intolerance:

- The histamine level in the blood may be - but does not have to be - elevated, and even if it is, it need not cause symptoms.
- DAO activity: measurement and evaluation of this have not been standardised;
- Vit. B6 deficiency is frequently present in cases of histamine intolerance.

An elimination diet is the surest diagnostic method, since the avoidance of foods containing histamine provides speedy relief. However, the diet should be adhered to for at least four weeks in order to cover complaints such as menstrual problems or migraines, which occur at longer intervals. Possibly, it might be followed by a provocation test, so as to exclude „harmless“ foods from the avoidance. Using elimination, in about 50 % of cases, the results are so good that medication is rendered unnecessary. As well as this, it lifts a great emotional burden from the patients' shoulders.

As an adjunctive measure, the patient should avoid alcohol and any medicines that have aggravated the intolerance.

Treatment of Histamine Intolerance

The elimination diet is the most im-

portant step not only in diagnosis but also in treatment!

It is possible to give additional medicines in order to improve the situation:

Vitamin B6: initially 3-6 times a week, one ampoule of VITAMIN B complex SANUM to be injected; failing this, 0.5 - 1 mg of Vit. B6 per kg of body-weight should be taken over a period of 2-3 weeks.

Vitamin C: Frequently in cases of histamine intolerance, extremely low levels of Vitamin C are likewise present. According to one American study, it is possible to lower the histamine level considerably within three days, even with just 1 g per day.

In critical cases, high doses of calcium and/or anti-histamine must be given.

In assessing histamine intolerance, one should always have regard for the following:

- the individual's tolerance threshold
- the quantities which give rise to symptoms
- variations in the histamine content of food
- the kitchen resistance of histamine (**heat-resistant!**)

Causes of the Increase in Histamine Intolerance

As in the case of lactose intolerance, the increasing industrialisation of food production is also the main reason for the increased incidence of histamine intolerance. Modern

procedures, because of the requirement for long storage-life and the appropriate packaging and processing, result in a considerable increase in the development of histamine in foodstuffs. This is particularly the case with those foods which, in their natural state, need to be consumed quickly. It was shown in one study that it was possible to produce food industrially which contained only an extremely low level of histamine.

Allergies

Contrary to the intolerances that we have been discussing so far, allergic reactions are processes, in which the immune system plays a major role.

This point has already been touched upon in Part 1 of this article in connection with cases of otitis and with leaky gut syndrome. Particles of foreign proteins may invade the body's interior as a result of immune incompetence, immaturity of the intestinal mucosa in the infant, or increased porosity of the gut owing to ongoing irritation or atrophy of the mucosa. The consequences of this are immunological defence reactions, which in extreme cases may be directed against the body's own protein, taking the form of an auto-immune reaction.

A deficiency of s-IgA, which protects all mucous membranes, is originally responsible for the missing barrier on the intestinal mucosa, as well as all mucous membranes, which were formed from the entoderm. Such defence reactions, allergies, are directed towards „normal“ constituents of the diet, for instance, or against pollen.

Allergic reactions originate on protein particles or on those materials that form links with human protein in the body for purposes of detoxification or dissolution. Among food constituents, it is particularly the proteins casein and beta-lactone (from milk of mammals), the proteins from eggs and certain types of cereal (gluten) which provoke intolerances or allergies. The protein constituents of cereals, particularly wheat, can even act like poisons on the mucosa. In many people, the proteins from cow's milk, and particularly wheat and rye are insufficiently broken down on account of indigestibility, e.g. because of enzymatic deficiency.

The remaining peptides of gluten and casein are therefore so important for the development of health complaints because they react with opium receptors in the brain and can mimic the action of heroin and morphine. Because of this, they belong to the exorphines. For this reason, these peptides are known as gliadinomorphine and caseomorphine.

These opioid peptides, incidentally, are almost identical in structure. They are a key to the restlessness of children with attention deficit syndrome and, according to Dr. Shaw, a rapid improvement was achieved in their condition, if an appropriate exclusion diet was prescribed. In view of this, it is no wonder that violent withdrawal symptoms occur, as is well-known, when the allergens are removed.

Immunological investigations are possible in arriving at a diagnosis in allergic events; here too, however,

it is possible to firm up a suspicion by means of elimination of the allergen.

Symptoms can be quite varied, and also life-threatening to the point of shock, especially in view of the fact that in every case, a histamine fall-out takes place via degranulation of the mast cells and basophil granulocytes. Thus, in the acute stage, orthodox medical immediate measures are called for, depending on the severity of the symptoms. However, holistic methods are indispensable for alleviating and healing the complaints.

At the forefront of treatment is the avoidance of the primary allergens, as found in cow's milk, hens' eggs and cereals, and their products. The meat of the pig should likewise be absolutely avoided; reasons include its high histamine content. Patients should initially be fed on a diet of steamed vegetables; this is easily digestible and alleviates the irritations in the entire entoderm area. Unsaturated vegetable oils, such as linseed and rape seed have an anti-inflammatory and analgesic effect and, at the same time, they enhance one's feeling of satiation. Gentle deacidification and cleansing of the connective tissue may be achieved by means of potentised organic acids (SANUVIS, CITROKEHL, FORMASAN). A course of isopathic treatment is initiated with FORTAKEHL, the main remedy for regenerating the mucosal flora, and treatment continues with the basic regulatory remedies, SAN-KOMBI, or MUCCOKEHL and NIGERSAN. As immune modulators, we should particularly consider UTILIN „H“ 5X and RECARCIN



6X capsules (one of each alternating weekly). For the entire duration of the treatment, care should be taken to ensure that the patient drinks enough; it can be good-quality tap-water. To support the liver and kidneys, suitable remedies are SILVAYSAN, TARAXAN and HEXACYL, whilst PINIKEHL is used to strengthen the pancreas.

The diet should only be relaxed very cautiously; in many cases, it is necessary to avoid cow's milk, cereals and pork - and their products - in the long-term.

Treatment of Allergies

Throughout the whole treatment, mornings and evenings on an empty stomach, take half a measuring-spoonful of ALKALA N in very warm water in sips; or take alkaline baths using ALKALAN (1 dsp. in a full bath).

As well as this, in the mornings, SANUVIS drops, 1-2 tsp. (or 2 tablets); and

in the evenings, 5-10 drops (or 1 tablet) of CITROKEHL; at the same time commence taking FORTAKEHL 5X drops, 2-10 drops twice a day, massaged in and/or orally, also FORTAKEHL 5X tablets, 1 twice a day, for at least a fortnight, and then switch over to: MUCOKEHL 5X drops in the mornings and NIGERSAN 5X drops in the evenings, both massaged in; commencing with 3-4 drops and increasing to 10 drops twice a day, or alternatively the combined preparation SAN-KOMBI 5X drops, with 3-10 drops twice a day. These pre-

parations are used over a 5-day period (Monday-Friday), then switching over for 2 days (Saturday - Sunday) to FORTAKEHL 5X, and then back to SAN-KOMBI or MUCOKEHL + NIGERSAN for a further 5 days, and so on.

From the second week of treatment, we add to this SANUKEHL Prot 6X and/or SANUKEHL Salm 6X on alternating days, beginning by massaging 2 drops into the hollow of the elbow and increasing up to 8 drops, which may be massaged in or taken orally. After a fortnight, there is a break of 2 weeks, after which the SANUKEHLs are repeated for a further fortnight, beginning with a lower dosage.

For modulation of the immune system, the recommended procedure is a three-week cycle of one weekly capsule of UTILIN 6X, RECARCIN 6X and LATENSIN 6X, rotating weekly.

Because the enzymes are inhibited in their action, initially 3 - 6 injections of VITAMIN B Complex SANUM should be given at weekly intervals, along with oral doses of 1 g Vitamin C (Acerola cherry) daily, ZINKOKEHL 3X drops, 10 drops twice a day, LIPISCOR caps. 3 twice a day, and BIOFRID Plus caps., 2 twice a day; 1 - 2 dsp. of linseed, rapeseed or olive oil to be drizzled over prepared food on the plate.

The patient's liver should be supported with SILVAYSAN caps., 1 twice a day, and TARAXAN 3X, 1 ampoule twice a week. Further elimination can be achieved with

HEXACYL drops, 2 - 4 drops once or twice a day in warm water.

If the immune system is very weak, it is recommended to give a capsule of REBAS 6X daily for four weeks.

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