

Vitamin D3

Vitamin D is an allrounder. Its influence on the calcium metabolism strengthens bones and muscles. It has also positive effects on the immune system and the cell metabolism. Therefore we recommend Vitamin D not only in case of osteoporosis but also in case of infections and cancer diseases.

Selenium

Selenium is an essential trace element. Dietary sources of selenium include protein from both animal and plant sources. The actual selenium content of foods depends on the selenium intake of the plants and animals themselves. Most feed is enriched with selenium, but the amount of selenium contained in the soil is relatively low, in Central Europe in particular, where the amount of selenium ingested in therefore also fairly low. Selenium is an integral part of the enzyme glutathione peroxidase that is involved in important metabolic processes and helps detoxify the body by destroying free radicals (peroxide). Selenium is also important for an intact immune system. Here at the Hufeland Klinik, we use selenium in both tablet and intravenous form as part of our prevention programme for existing chronic illnesses and to accompany tumour therapy. Replenishing the store of selenium in the body and strengthening the immune system does more than simply prevent the recurrence of tumours. Selenium can also effectively reduce the side effects of radiation or chemotherapy, and improve the effectiveness of cytostatic drugs.

Vitamin C

Vitamin C is also known as ascorbic acid, or „anti-scurvy“ acid. The vitamin prevents scurvy, a disease that was widespread and feared among sailors in particular from the 15th – 18th centuries.

Plants and animals produce their own vitamin C in large amounts. Humans, however, have lost this ability over the course of evolution and have to ingest vitamin C through their diet. If we apply the amount of vitamin C produced in other mammals to human beings, we can postulate the production of between 2-4 grams of vitamin C at rest. Under stress (including disease), our production of vitamin C would increase to as much as 15 g a day.

Vitamin C is found in different concentrations in the individual organs. Higher concentrations reflect a higher level of need. The highest concentrations are found in the liver,

adrenal glands, lenses of the eyes, brain and immune cells. Vitamin C is involved in a number of metabolic processes in our bodies. It is essential to strengthen and activate the immune system, for the hormonal and nervous systems, the regulation of fat metabolism, detoxification, and for the formation and continued functioning of the bones and connective tissues. It also helps wounds to heal faster. Vitamin C is an important antioxidant in the human body where it plays a decisive role in inflammatory diseases and helps counteract the negative effects of exposure to radiation.

Intravenous high-dose vitamin C therapy

A great deal of research has been done on the effects of vitamin C therapy since the 90s. Medline alone, one of the key medical databanks, shows around 8,000 publications that have focused on vitamin C since 1990. These studies lead to the development of high-dose vitamin C therapy, and increasing numbers of physicians and alternative practitioners have been using it with excellent results. The treatment is based on the fact that the required amount of vitamin C caused by many diseases can be much higher than the body can absorb over the gastrointestinal tract. Added to this is the realisation that many illnesses may reduce the intestinal lining's ability to absorb vitamin C. Sometimes a therapeutically effective level of vitamin C can only be achieved by directly supplementing the blood by injection or infusion.

Since vitamin C is water-soluble, the body cannot store it in large amounts. Excess vitamin C is immediately eliminated. This means the danger of an overdose is much less than with fat-soluble vitamins. High-dose vitamin C therapy has often been shown to be effective in the recovery phase following serious illnesses and operations, where it speeds



up the healing process. Vitamin C infusion therapy is also a tried and tested natural tonic to combat general weakness and drops in performance, and can strengthen persons prone to infection.

Intestinal cleansing

Our intestines have a total surface area of around 200 - 300 m². Approximately 400 different types of bacteria live there in close interdependence with the organism as a whole. These intestinal bacteria (= intestinal flora), whose number is estimated at 10¹⁴ (=100 billion), influence both our metabolism and immune system. It is important to note that the intestine is the cradle of our immune system. It is the largest immune system organ in the human body where around 70% of our white blood cells reside – many more than in the bloodstream itself. The bacteria who colonize our intestines can be our friends, or our foes. It all depends on the type of bacteria, and this in turn depends on food intake, for every type of bacteria – the good and the bad – need a certain milieu to survive.

If we eat the wrong foods, subject our bodies to damaging environmental influences, or take medicines such as antibiotics and laxatives, we change the milieu in the intestine. This can disrupt our intestinal flora by providing damaging bacteria with a good growing media, often resulting in inflammatory changes in the intestinal mucous membrane. An inflamed intestinal mucous membrane is more permeable to toxins, which means that parts of the food we digest can enter the bloodstream when they shouldn't. The body contaminates itself from the inside, and this can cause immune system problems like allergies. This makes the intestine (and intestinal cleansing) a key element of biologically oriented treatment programmes. Intestinal cleansing is more important in medicine than it was a few centuries ago. Today's consumer eats too much, too much meat and fat in particular, and is often „addicted“ to sugar, coffee, alcohol and nicotine. Many meals are consumed rapidly. We may chew sweets and chewing gum, but often gulp down our food, which really should be thoroughly chewed. The intestine can get lethargic, and its intestinal flora worsens and produces all kinds of toxins, such as phenols, cresols, indoles and histamines, that are then absorbed into the bloodstream and weigh down our metabolism. Eating a healthy diet improves the living conditions for our

intestinal flora, which in turn contributes to improving our metabolism and strengthening the immune system.

In addition to a balanced diet rich in roughage, intestinal cleansing (see COHT) and microbial medications are part of intestinal rehabilitation. The latter refers to deadened or living bacteria that have no infectious qualities. They have a positive effect on the intestinal mucous membrane and its immunological qualities, helping it to function better. The activation of different components of the immune system normalises resistance and increases metabolic functions. Intestinal rehabilitation is a form of long-term therapy for chronic illnesses in particular. At the Hufeland Klinik, we think intestinal rehabilitation is very important and round out our treatment programme with vital yeast.

The Yeast Cure - The importance of vital yeast.

The Ebers Papyrus (1555 b. C.), the most important source describing Egyptian medicine, first mentions the healing properties of brewer's yeast, praising it as a good treatment for stomach aches and skin swellings.

We offer fresh, vital brewer's yeast in our clinic to improve your metabolism and intestinal flora. It should be taken in the morning prior to breakfast, and perhaps in the afternoon and evening as well before meals. Many patients also require an enzyme compound, such as Enzynorm forte, to prevent bloating. When switching to a whole-foods diet, many people may experience gas and bloating as initial side effects.

We use brewer's yeast that has already undergone a serious of fermentation processes and is rich in vitamins, minerals and most essential trace elements in a balanced, active ingredient structure. Brewer's yeast grows in an environment that is biologically viable: in the original wort made from germinated barley. Barley is rich in B vitamins, minerals and trace elements, and the germination process further enriches the vitamin content of brewer's yeast. The yeast absorbs B vitamins and other useful compounds from the original wort, binds them into proteins and stores them in the yeast cell. The protein found in yeast is almost completely utilized by the human body and contains all the essential amino acids humans need to consume. Glutathione is another interesting ingredient. It detoxifies the body,

supports the effects of vitamins A and E, and works in close cooperation with selenium. In cancer patients, the metabolic processes in tumours have been altered by the disease. Yeast seems to have a positive effect here, and normalises tumour metabolism, probably thanks to its primal metabolic performance. This is why we recommend the yeast cure for every tumour patient at our clinic.

The metabolic by-products contained in brewer's yeast (vital substances) help change the milieu in the intestine so that damaging bacteria can no longer grow. They also provide excellent nutrients for the liver. Certain ingredients, such as choline, orotic acid, alpha lipoic acid, sulphurous methionine, and glutathione along with vitamin B complexes work to improve liver function, and diseases of the liver, such as chronic hepatitis, may also respond to treatment with brewer's yeast. It can help to purify the skin, heal acne, strengthen brittle nails, restore the appetite, and has a very positive effect on the intestinal flora. Patients suffering from inflammatory changes to the skin, from an infection of the intestine with unfavourable yeasts (such as Candida) or from chronic intestinal inflammation (colitis ulcerosa, Crohn's disease) can also benefit from brewer's yeast.

Brewer's yeast can be ingested (as a liquid) and applied externally (in compresses for example).

COHT - Colon-Hydrotherapy

Enemas have been used for detoxification for centuries. True miracles have been ascribed to this form of treatment, and reports from the era of the Sun King confirm its effectiveness quite vividly. In the United States, enemas with normal coffee are often used to cleanse the intestine. The caffeine in the coffee increases the flow of bile, activating the liver. American scientists have taken this ancient form of treatment and used it as the basis for modern colon hydrotherapy (COHT). This can now be done hygienically, comfortably, and almost completely odor-free. COHT is well tolerated, since patients lie down during treatment.

How is colon hydrotherapy done?

On the day of COHT, the night nurse gives the patient a cleansing enema to pre-cleanse the intestine early in the morning. After the first bowel movement on the toilet, the patient reclines on the table. A short colon specu-

lum is inserted into the rectum and attached to the colon hydro-machine. Water is introduced into the large intestine using gentle pressure and a light massaging of the stomach until the patient indicates it is enough. The soiled water automatically flows into the drain and the process can be repeated with fresh water as needed. We generally irrigate until the water emerges fairly clear, generally after 3-5 rinses (taking about $\frac{3}{4}$ hr.) In contrast to an enema, colon hydrotherapy cleanses the entire large intestine, not just the colon. The amount of water introduced increases from rinse to rinse, reaching every part of the large intestine. The accompanying stomach massage is wonderfully relaxing and helps loosen waste matter.

This procedure is completely painless. Simply relax and breathe in and out, breathing into your stomach so that the diaphragm performs a kind of internal stomach massage. The large intestine will relax as you relax and let go. This improves the cleansing treatment, and you can enjoy the positive benefits more quickly.

Please bear in mind: COHT can only be prescribed by a physician and is not suitable for use on every patient! It cannot replace bowel cleansing accomplished by lasting changes to the diet. Patients who do not stick to a healthy, balanced whole-food diet will not profit very much from COHT.

Ozone therapy

At room temperature, ozone is a colourless gas with a characteristic biting and unpleasant odour (think of a sunlamp). The oxygen contained in the air we breathe consists of 2 oxygen atoms (O₂). Ozone is made up of three such atoms (O₃), making it very reactive. When it is added to the blood in „extensive“, it reacts in just seconds with components of the blood, turning them into energy-rich catalysers, and the ozone is converted into pure oxygen that enriches the blood. Ozone is also used the world over to sterilize and treat drinking water since it is highly oxidative and disinfects.

Ozone is also one of the most important protective gases in our stratosphere (a layer of air 10-50 km over the surface of the Earth). The ozone layer filters UV rays out of the sunlight, thus protecting the biological balance on

the Earth from destruction by those rays. This is why the ozone layer is essential for the planet, and damage to the ozone layer (ozone hole) reduces its ability to filter. Ozone has two faces: it can cause damage, and it can protect. Ozone is dangerous for the lungs when close to the earth's surface, where it forms from oxygen and exhaust fumes, especially in the presence of nitrogen oxides and sulphur oxides, hit by UV rays. It should not be breathed in and can cause coughing.

Isn't ozone therapy dangerous?

In medicine, ozone is only used in applications where it is beneficial and does not cause damage. Medical ozone is always a mixture of pure oxygen and pure ozone, where the percentage of oxygen is higher. The mixing ratio is generally around 99.5% oxygen to only 0.5% ozone, depending on intended use. Since ozone molecules are not stable, they react immediately with components in the blood to which they are added. The enriched blood re-injected into the patient contains no ozone at all. It has been changed into pure oxygen, oxygenating and activating the blood. This effect easy to see as the blood changes from dark to light red (this is why ozone therapy is often referred to a „blood washing“.)

Ozone combines with components in the blood to create reactive compounds. These act as catalysts and have the following positive and scientifically proven effects. They

- activate metabolism in red blood cells and tissue
- improve oxygen release of blood to the tissue
- activate immune cells
- free the cell's cytokines (interferons, interlukins etc.)
- detoxify by activating the body's own antioxidants and scavengers

Why is ozone therapy important?

Our patients benefit from a range of ozone effects. Ozone increases blood circulation, revitalising and improving metabolism. It also has a beneficial effect on our immune system, strengthening powers of resistance. The small amounts of ozone we generally use in our ozone therapy activate the body's own antioxidants and scavengers, which helps detoxify the body. The positive effects of ozone therapy for patients with cancer and chronic inflammations in particular are obvious, since toxins in the tissue and



other harmful substances (inflammatory mediators) need to be eliminated. Medical ozone is ideal for reactivating a weakened immune system in general and in cancer patients, can optimise metabolism, help reverse processes of aging, and be used to treat inflammatory diseases.

Indications for ozone therapy

Ozone therapy has also shown a positive effect on a lack of concentration, forgetfulness, general low performance, problems walking and dizziness and can improve the quality of life. Ozone therapy can positively influence a diverse variety of illnesses and is used in our clinic

- as additional treatment for cancer patients
- for arterial circulatory disorders (extremities and brain)
- to revitalize processes of aging
- to treat general weakness of the immune system
- and for inflammatory processes (e.g. arthritis, arthrosis, angiopathy, hepatitis)

A number of scientific studies published have proven the effectiveness of this form of therapy. But as with all other therapies, there is no guarantee of success.