biovis' DIAGNOSTICS

eBook for the Test Prevent 360

Your guide to well-being and greater balance.
Supplementary information on the Test Prevent 360.

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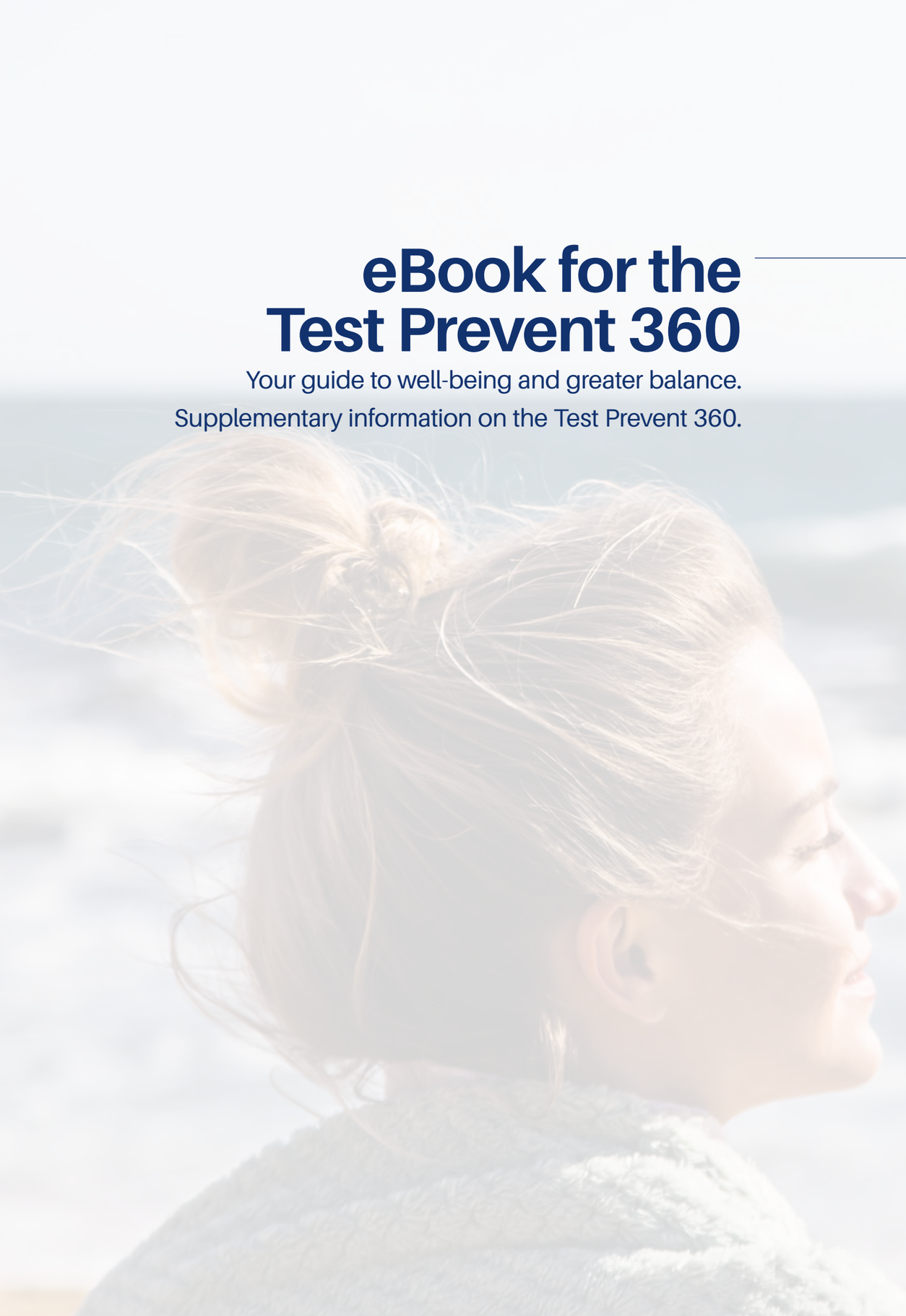

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Introduction

What should you bear in mind before looking at the individual results?

1. What is the Test Prevent 360 for?

As with looking at a navigation system, the 75 parameters included in the test show you where you stand in terms of your fitness and well-being, and where the journey is heading or could head.

This test and the eBook are intended solely to provide information about your current level of fitness; however, they do not replace a medical diagnosis or professional medical treatment or advice. In the case of persistent complaints or severe symptoms, a doctor should always be consulted.

2. What does health balance mean?

In the human body, there are many organ systems in which everything – both individually and as a whole – must remain in balance for a person to be healthy and vital.

Imbalances can contribute to exhaustion or illness.

Example: Water

If you drink too little water, you become dehydrated. If you drink too much water, the heart and kidneys become overstrained, and cells begin to swell. This can be just as life-threatening. The individually appropriate amount of water intake depends, for example, on body size, kidney function, outside temperature, and physical activity, and in adults normally amounts to 1.5 to 3.0 litres per day.

3. What is regulation?

For maintaining these balances, the body must be able to regulate itself.

Example: Water Regulation

If you drink little water, the kidneys reduce urine production. Blood volume is kept constant. If you drink a lot of water, the kidneys produce more urine. In this way, the kidneys regulate the amount of fluid in the blood vessels so that the heart and organs can be properly supplied with blood.

4. What does holistic nutrient supply mean?

To support the body optimally, it is essential to provide it with all the necessary nutrients. Vitamins, minerals, proteins, healthy fats, and dietary fibre play a crucial role in general well-being, cell regeneration, and the performance of your organs.

5. Why does the gut play such a central role?

Bacteria live in the gut with us like hotel guests. There are beneficial types of bacteria, such as the acidifying flora, and harmful ones, such as the putrefactive flora (Proteobacteria). Depending on what we eat, we "feed" one or the other. The healthy acidifying flora is strengthened by dietary fibre and fermented foods. Sugar and rapidly available carbohydrates promote the growth and metabolism of harmful bacteria and fungi. In so-called modern civilisation, changes in diet often lead to an imbalance in favour of harmful Proteobacteria. These produce an environment in which the beneficial acidifying flora and our intestinal lining cannot remain healthy. Particularly **a lack of dietary fibre** has been shown by current research to have a much more drastic effect than previously assumed.

Only in an optimal intestinal environment can the gut bacteria, digestive organs, intestinal wall, and the immune and nervous systems in the abdomen work together effectively and optimally supply the body.

In a putrefactive environment, the gut cannot absorb nutrients properly.

To correct this imbalance, a balanced diet alone is often no longer sufficient.

Based on this test, you can assess this balance and, if necessary, you will find further below in this eBook information on how to return to a healthy balance.

The **Test Prevent 360** makes it possible to assess 75 different parameters using just a few drops of capillary blood from the fingertip, thereby providing a comprehensive overview – **a 360-degree view** – of the current status quo.

Explanation of the Individual Parameters

Micronutrients

VITAMIN D

Vitamin D is an essential vitamin that plays a central role in the body. It is particularly important for bone health, as it promotes the absorption of calcium and phosphate and thus supports bone strength. Vitamin D is also essential for the proper functioning of the immune system, as it strengthens the body's defences. As vitamin D is mainly produced in the skin through exposure to sunlight, a deficiency may occur in regions with limited sunlight or in cases of insufficient sun exposure. In such cases, foods such as oily fish, eggs, or fortified products, as well as dietary supplements, can help to meet requirements. Regular monitoring of vitamin D levels is advisable to ensure the body is optimally supplied.

If vitamin D levels are low, sun exposure to the skin should first be increased by spending 15–30 minutes outdoors each day, ideally with arms and face uncovered. In addition, the diet can be supplemented with vitamin D-rich foods such as oily fish (e.g. salmon, mackerel), eggs, liver, and fortified products. If levels are significantly reduced or sufficient sun exposure is not possible, vitamin D supplements may be a sensible option. Regular monitoring of vitamin D levels is important to ensure the correct dosage and to avoid possible overdosing.

AIM: VITAMIN D SHOULD BE IN THE UPPER THIRD OF THE NORMAL RANGE.

ZINC

Zinc is an essential trace element that plays a crucial role in the functioning of the immune system. It is important for the development and function of immune cells, wound healing, and skin integrity. It also has antioxidant properties and influences testosterone production. In addition to increased susceptibility to infections, a zinc deficiency can also lead to fertility problems.

Zinc deficiency is widespread worldwide and can lead to a range of physical problems, including growth retardation in children, impaired immune function, hair loss, diarrhoea, and delayed wound healing.

Low zinc levels can be addressed through a diet containing zinc-rich foods such as meat, fish, nuts, seeds, and wholegrain products. In cases of more severe deficiency or increased demand, for example during periods of stress or in chronic illness, targeted supplementation may be appropriate.

AIM: ZINC SHOULD BE IN THE UPPER THIRD OF THE NORMAL RANGE.

MAGNESIUM

Magnesium is an essential mineral that plays a key role in over 300 enzymatic processes in the body. It is not only important for normal muscle function, but also supports protein synthesis, neurotransmitter release, and the maintenance of a stable heart rhythm. Magnesium deficiency is relatively common and may manifest through symptoms such as muscle cramps, fatigue, irritability, or cardiac arrhythmias. In the long term, a deficiency can increase the risk of chronic diseases such as osteoporosis, cardiovascular disease, and diabetes. Magnesium is also involved in energy metabolism and helps regulate blood sugar levels. Good sources of magnesium include wholegrain products, nuts, seeds, green leafy vegetables, and pulses. In cases of increased demand, such as during stress, intensive physical activity, or pregnancy, targeted supplementation may be necessary. Regular monitoring of magnesium levels can be helpful in identifying and correcting deficiencies at an early stage.

If magnesium levels are low, the diet should be supplemented with magnesium-rich foods such as wholegrain products, nuts, seeds, green leafy vegetables, bananas, and pulses. In cases of pronounced deficiency or increased demand, for example due to stress, intensive physical activity, or certain medical conditions, magnesium supplementation may be appropriate.

AIM: MAGNESIUM SHOULD BE IN THE UPPER THIRD OF THE NORMAL RANGE.

SELENIUM

Selenium is an essential trace element that performs numerous important functions in the human body. It has antioxidant properties and therefore protects cells from oxidative damage caused by free radicals. In addition, selenium plays a crucial role in the production of thyroid hormones, which regulate metabolism. This trace element supports the immune system by strengthening immune defences. Adequate selenium intake can reduce the risk of infections and thus promote overall fitness. Selenium is also important for male fertility, as a deficiency can impair sperm quality. Natural sources of selenium include nuts, particularly Brazil nuts, fish, meat, and wholegrain products. A balanced selenium status is therefore essential for maintaining many vital bodily functions.

If selenium levels are low, intake can be increased through selenium-rich foods such as Brazil nuts, fish, eggs, meat, and wholegrain products. If the deficiency is pronounced or caused by other factors, targeted supplementation with selenium preparations may be appropriate.

AIM: SELENIUM SHOULD BE IN THE UPPER THIRD OF THE NORMAL RANGE

IRON

Iron plays a central role in several vital processes in the human body. On the one hand, it is responsible for oxygen transport, and on the other, it also plays a role in energy production in muscles. Iron is also important for the immune system and brain function, for example by being involved in neurotransmitter production. Iron deficiency is one of the most common nutritional deficiencies worldwide and can lead to anaemia. In addition, a deficiency can weaken the immune system and thereby increase susceptibility to infections.

In cases of iron deficiency, the diet should be supplemented with iron-rich foods such as red meat, pulses, green leafy vegetables, wholegrain products, and nuts. The simultaneous intake of vitamin C-rich foods such as citrus fruits or peppers can improve iron absorption. In addition, the consumption of iron-inhibiting substances such as coffee, tea, or calcium supplements directly with meals should be avoided.

AIM: IRON SHOULD BE IN THE MIDDLE OR UPPER THIRD OF THE NORMAL RANGE

NO Production, Endothelial Function

ADMA UND SDMA

Amino acids are the building blocks of proteins and play a central role in many biological processes. In addition, amino acids can be used as an energy source, particularly during periods of fasting or intense physical exertion. Each amino acid has specific functions in the body.

Certain breakdown products of amino acids also perform important roles in the body and can be used as biomarkers. **ADMA** (asymmetric dimethylarginine) and **SDMA** (symmetric dimethylarginine), for example, are derivatives of the amino acid arginine and serve as biomarkers of endothelial function. ADMA acts as a competitive inhibitor of nitric oxide synthase (NO synthase) and thereby influences blood flow and vascular health. Elevated levels of ADMA and SDMA have a long-term negative effect on fitness.

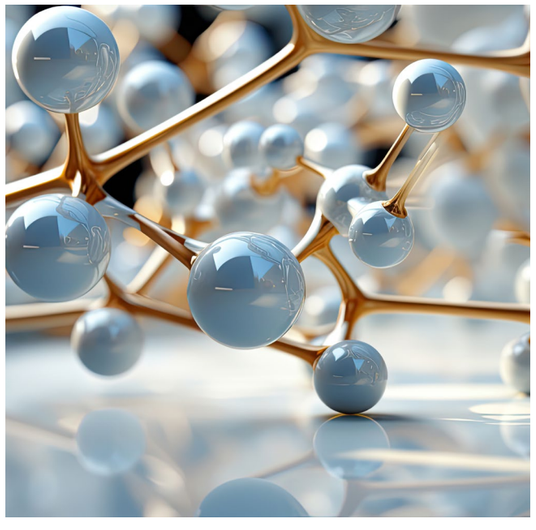
To reduce ADMA levels, a balanced diet, regular physical activity, and stress management practices can be beneficial. Dietary recommendations include consuming arginine-rich foods such as nuts and pulses, as well as foods rich in antioxidants.

AIM: ADMA AND SDMA SHOULD BE IN THE LOWER THIRD OF THE NORMAL RANGE.

Energy and Lipid Metabolism

CARNITINE

Carnitine is a substance formed from the amino acids lysine



and methionine and plays a central role in lipid metabolism. It transports fatty acids into the mitochondria, the energy-producing centres of our cells. In addition to its importance for energy production, carnitine supports muscle function and may promote muscle building. It also has neuroprotective effects, helping to protect nerve cells and maintain their function.

Carnitine supports the cardiovascular system, as it may improve blood lipid levels and cardiac function under certain conditions. A deficiency in carnitine can lead to impaired energy production, which has a negative impact on muscles and the heart. Adequate intake is particularly important in cases of increased demand, for example due to physical activity, stress, or certain medical conditions.

Carnitine is found in foods such as meat, fish, and dairy products, but can also be obtained through dietary supplements if necessary.

AIM: CARNITINE SHOULD BE IN THE UPPER THIRD OF THE NORMAL RANGE

Protein Synthesis, Brain Function, Mood, Neurotransmitters

PHENYLALANINE, TYROSINE AND VALINE

Aromatic amino acids such as **phenylalanine, tyrosine,** and **valine** play an important role in protein synthesis as well as in the production of neurotransmitters and hormones. Phenylalanine is an essential amino acid that is converted into tyrosine and serves as a precursor for the neurotransmitters dopamine, adrenaline, and noradrenaline, which influence brain function and mood. Tyrosine is the precursor for important neurotransmitters and hormones such as dopamine, adrenaline, noradrenaline, thyroxine, and melanin, and it influences mood, motivation, and alertness.

A deficiency may negatively affect your fitness and impair mood, sleep, and metabolism.

Reduced levels of phenylalanine, tyrosine, and valine may indicate insufficient protein intake, impaired protein digestion, or increased demand, for example during stress or chronic illness. A targeted optimisation of the diet with protein-rich foods may be beneficial.

AIM: ALL ESSENTIAL AMINO ACID PRECURSORS FOR NEUROTRANSMITTERS SHOULD BE IN THE UPPER THIRD OF THE NORMAL RANGE.

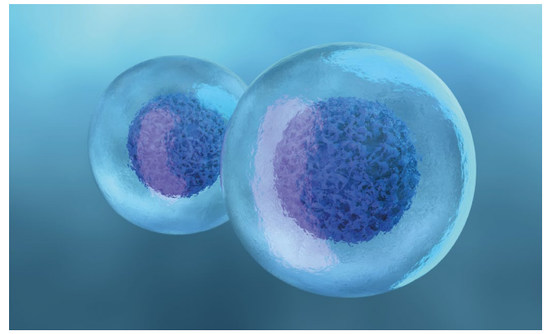
Lipid Absorption, Memory Performance, Metabolism

CHOLINE

Choline is an essential nutrient compound required by the body for numerous vital functions. It is a key component of cell membranes and plays a crucial role in maintaining cellular stability and function. Choline also serves as a precursor of the neurotransmitter acetylcholine, a messenger substance in the nervous system that is necessary for signal transmission between nerve cells and for cognitive functions such as memory and attention. Another important function of choline lies in lipid metabolism, as it supports the transport and processing of lipids and cholesterol in the liver.

A deficiency in choline is detrimental to fitness, as lipids cannot be efficiently transported out of the liver. In addition, long-term choline deficiency may cause cognitive impairment, negatively affecting memory and concentration. Choline is found primarily in foods such as eggs, meat, fish, pulses, and nuts. As the body is only able to produce small amounts of choline itself, an adequate dietary intake is essential to maintain the health of the liver, brain, and cellular structures.

AIM: CHOLINE SHOULD BE IN THE UPPER THIRD OF THE REFERENCE INTERVALL.



Regulators of Gastric Acid, Indicators of Histamine Intolerance

HISTIDINE/HISTAMINE

Histidine is an amino acid that is particularly important for the body, as it is required, among other things, for the formation of haemoglobin and the regulation of acid-base balance. Histidine also serves as a precursor to histamine, a biogenic amine. A deficiency in histidine may impair histamine production and thereby disrupt various physiological processes.

AIM: HISTIDINE SHOULD BE IN THE UPPER THIRD OF THE NORMAL RANGE.

Histamine plays a central role as a mediator in immune responses, allergic reactions, gastric acid secretion, and as a neurotransmitter in the nervous system. An excess of histamine may indicate impaired breakdown or mast cell activation, which can trigger symptoms such as itching, headaches, or digestive problems.

AIM: HISTAMINE SHOULD BE IN THE LOWER THIRD OF THE NORMAL RANGE.

Mood Regulation, Sleep, Relaxation

GAMMA-AMINOBUTYRIC ACID (GABA)

GABA is an inhibitory neurotransmitter in the brain and is important for mood regulation, anxiety control, and sleep. Lower levels may be a sign that the body and mind are currently under greater strain. Some people then experience inner restlessness, anxiety, panic feelings, or sleep disturbances more often.

A deficiency in GABA may indicate that stress levels are elevated or that the natural balance of neurotransmitters in the brain is out of sync — something that can usually be stabilised again through relaxation, restorative sleep, and targeted support.

AIM: GABA SHOULD BE IN THE MIDDLE THIRD OF THE NORMAL RANGE.

Muscle Regeneration, Weight Management, Fat Loss

ISOLEUCINE, LEUCINE AND VALINE

The amino acids **isoleucine, leucine** and **valine** belong to the branched-chain amino acids, known in English as BCAAs (for "branched-chain amino acids"). BCAAs make up a significant proportion of the total amino acids in muscle proteins and play an important role in muscle function. They are essential for muscle building, muscle recovery and reducing fatigue, serve as an energy source during intense physical activity, can support weight management and may influence muscle performance and recovery.

If the branched-chain amino acids isoleucine, leucine and valine are low, this may indicate insufficient protein intake or impaired protein utilisation. Adjusting the diet with protein-rich foods or nutritional supplements may be helpful.

AIM: ALL BCAAS SHOULD BE IN THE UPPER THIRD OF THE NORMAL RANGE.

Acid-Base-Balance, Energy Metabolism, Muscle Function

LACTATE

For a long time, **lactate** was viewed mainly as a waste product of muscular exertion that was responsible for muscle fatigue and post-exercise soreness. More recent research, however, has shown that lactate is also an important energy source for the heart, brain and other organs. It also serves as a signalling molecule, regulates the body's pH value, and influences, among other things, the way muscles adapt to training. Short-term lactate spikes through strength training promote muscle growth and are therefore important for the body. Persistently elevated levels indicate inadequate use or breakdown of lactate in the muscles and may therefore also lead to acidification of the body.

An elevated lactate level can therefore occur with too little physical activity, but also with overtraining from too much strength exercise. Possible correction may therefore include reducing intense physical exertion if the increase was caused by overtraining or increasing endurance training. This helps ensure an adequate oxygen supply to the body. In addition, the electrolyte and fluid balance should be stabilised through a balanced diet and sufficient fluid intake.

The lactate measurement carried out here is very dependent on the blood supply to the skin from which the blood sample was taken. The skin area used for capillary blood collection should therefore be warm and well perfused. Ideally, drink warm tea before the sample is taken.

As physical exertion also affects lactate levels, as described above, we recommend avoiding muscle exertion for at least 15 minutes before the blood sample is taken, and instead sitting or lying down.

AIM: LACTATE SHOULD BE AT THE LOWER END OF THE NORMAL RANGE.

Cell Protection, Fatty Liver Prevention, Cardiovascular System, Homocysteine Metabolism

BETAINE

Betaine is a natural compound found mainly in foods such as beetroot, wholegrain products and spinach. It supports metabolism by helping to control important chemical processes in the body, such as detoxification and the breakdown of homocysteine, a potentially harmful substance. Betaine also helps support liver function and digestion, particularly by promoting the production of stomach acid. It is often studied for its possible beneficial effects on cardiovascular disease and physical performance.

If betaine is reduced, the diet can be supplemented with betaine-rich foods such as beetroot, spinach, wheat bran, quinoa and shellfish. If the requirement is particularly high or intake from food is not sufficient, supplementation may be considered.

AIM: BETAINE SHOULD BE IN THE UPPER THIRD OF THE NORMAL RANGE.

Anti-Ageing, Autophagy, Cell Protection and Cell Renewal

SPERMIDINE / SPERMINE

Spermine and **spermidine** are natural cellular components that play a central role in cellular processes within the body. Spermidine is particularly important for cell regeneration and renewal, as it supports autophagy, the body's own process of cellular cleansing and repair. This mechanism makes spermidine a promising approach in the field of anti-ageing, as it may prolong the lifespan of cells and preserve their functionality. In addition, current research findings suggest that spermidine may have positive effects on the cardiovascular system by protecting blood vessels and supporting cardiac function.

Spermine, on the other hand, is directly involved in the regulation of cell division and cell growth and is therefore essential for maintaining cellular health. Furthermore, spermine has antioxidant properties that may protect cells from damage caused by free radicals.

Both substances occur naturally in the body but are also found in certain foods such as wheat germ, pulses, soya beans, and matured cheese. Owing to their diverse functions in cell biology, spermidine and spermine are being intensively investigated in research, particularly regarding their role in ageing processes and chronic diseases.

AIM: SPERMIDINE AND SPERMINE SHOULD BE IN THE UPPER THIRD OF THE NORMAL RANGE.

Nitrogen Transport, Ammonia Detoxification, Blood Circulation

CITRULLIN AND ARGININE

Citrulline and **arginine** are particularly important with regard to nitric oxide (NO) metabolism and the urea cycle. NO is a signalling molecule that may improve blood circulation and thereby contribute to the regulation of blood pressure. These closely related amino acids play important roles in nitric oxide metabolism and the urea cycle by regulating vascular tone, improving blood circulation, supporting immune function, and contributing to physical performance.

Reduced levels of citrulline and arginine may indicate impaired urea cycle function or reduced nitric oxide synthesis. Support through citrulline- or arginine-containing dietary supplements may be advisable if necessary.

AIM: CITRULLINE AND ARGININE SHOULD BE IN THE UPPER THIRD OF THE NORMAL RANGE.

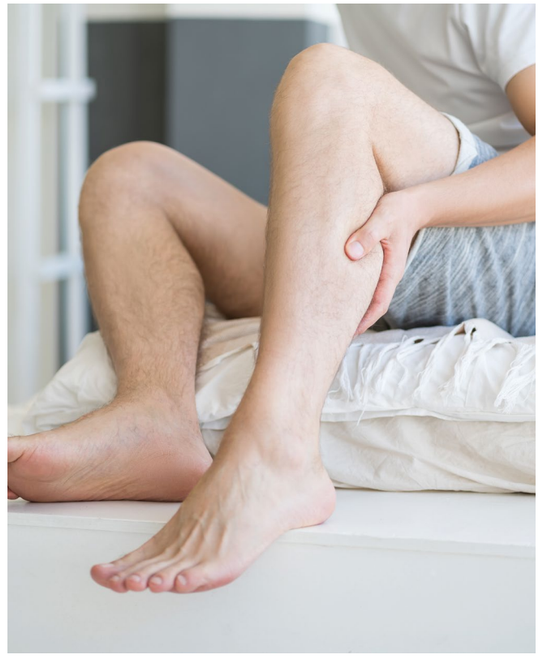
Muscle and Immune Weakness, Connective Tissue, Digestion

THREONINE

Threonine is an essential amino acid that must be obtained through the diet and performs important functions in the body in protein biosynthesis, immune defence (antibody production), support of the nervous system, and the formation of connective tissue. It also supports the function of the intestinal mucosa, primarily through the formation of mucins. Up to 90% of threonine is absorbed and utilised by tissues in the intestine. Accordingly, threonine supports intestinal function, the integrity of the intestinal mucosa, and biodiversity in the gut. An insufficient intake may cause digestive disturbances.

Reduced threonine levels may indicate insufficient protein intake, impaired protein absorption, or an increased requirement, for example during periods of stress or illness. Optimising the diet with threonine-rich foods such as dairy products, eggs, or pulses, as well as possible supplementation, may be beneficial.

AIM: THE AMINO ACID THREONINE SHOULD BE IN THE UPPER THIRD OF THE NORMAL RANGE.



Stress, Malaise, Exhaustion, Sleep Disturbances

TRYPTOPHAN, KYNURENINE, IDO ENZYME

Tryptophan is the precursor of the "happiness hormone" serotonin, an important neurotransmitter. However, tryptophan can also be metabolised into **kynurenine** via the kynurenine pathway. This metabolic pathway is intensified by stress. An increased kynurenine/tryptophan ratio therefore indicates activation of the immune system. This is observed, among other conditions, in depression and stress-associated disorders.

AIM: TRYPTOPHAN SHOULD BE IN THE UPPER THIRD OF THE NORMAL RANGE

The enzyme **IDO** (indoleamine 2,3-dioxygenase) catalyses the conversion of tryptophan into kynurenine. Its activity is promoted by pro-inflammatory cytokines, which are released, among other things, during inflammatory responses. Increased enzyme activity can lead to an imbalance in neurotransmitter production.

AIM: IDO SHOULD BE IN THE LOWER THIRD OF THE NORMAL RANGE

Elevated stress parameters may indicate chronic stress, lack of sleep, inflammatory processes, or certain medical conditions. Stress reduction through relaxation techniques, sufficient sleep, and a balanced diet is recommended.

CORTISOL

Cortisol is a stress hormone and an indicator of the level of stress burden. It is produced in the adrenal glands and is therefore also an indicator of the activity of the hypothalamic-pituitary-adrenal (HPA) axis. An elevated level indicates dysregulation of the stress response.

AIM: CORTISOL SHOULD BE IN THE LOWER THIRD OF THE NORMAL RANGE

DHEA

DHEA supports the nervous system and may help stabilise mood and promote psychological well-being. The DHEA/cortisol ratio provides information on sustained stress load.

AIM: DHEA SHOULD BE IN THE UPPER THIRD OF THE NORMAL RANGE.

HEALTH-DAMAGING

HEALTH-PROMOTING

Gut

BACTERIAL METABOLITES

Our **gut bacteria** are able to metabolise certain substances in the intestine. Depending on which substance is metabolised and by which type of bacteria, a wide variety of metabolic products — also known as metabolites — are produced. The individual metabolites allow different conclusions to be drawn regarding the organism.

- The production of **hippuric acid** is often associated with bacterial activity in the gut and may serve as a marker of the body's detoxification capacity. Elevated hippuric acid levels may indicate exposure to certain environmental toxins or dysbiosis of the intestinal flora.
- **p-Cresol** may impair the protective function of the gut and influence inflammatory processes in the body. If levels are elevated, this may indicate increased strain on the intestines or kidneys.
- **Indoxyl sulphate** may place stress on kidney cells and commonly occurs in progressive impairment of kidney function.
- **Putrescine** helps cells to grow but becomes problematic in excessive amounts. It is more frequently observed in long-term intestinal disorders.
- **Indole-3-acetate (IAA)** helps maintain a stable intestinal barrier and reduces irritation. It protects the intestine against excessive permeability.
- **Indolepropionic acid (IPA)** protects cells from damage and supports nerve cells. It also helps maintain a stable intestinal barrier and reduces irritation.

AIM: HEALTH-DAMAGING METABOLITES SHOULD NOT BE DETECTABLE. HEALTH-PROMOTING METABOLITES SHOULD BE IN THE UPPER THIRD OF THE NORMAL RANGE.

Energy Metabolism, Glucogenic Amino Acids and Immune Function

ALANINE, ASPARAGINE, ASPARTIC ACID, GLUTAMIC ACID, GLUTAMINE, GLYCINE, LYSINE, PROLINE

The amino acids **alanine, asparagine, aspartic acid, glutamic acid, glutamine, glycine, lysine,** and **proline** belong to the group of so-called glucogenic amino acids and are important for maintaining energy homeostasis. In cases of carbohydrate deficiency, for example, they help maintain blood glucose levels. In addition, they play a key role in protein synthesis, immune function, wound healing, and the general condition of cells.

A reduction in alanine may impair glucose metabolism and lead to hypoglycaemia and reduced energy levels, while a deficiency in asparagine may disrupt immune and neuronal function. Reduced aspartic acid levels may impair energy metabolism and protein synthesis. Glutamine deficiency may negatively affect immune function, intestinal health, and wound healing, whereas a deficiency in glutamic acid may impair cognitive function. Glycine deficiency **impairs the breakdown of homocysteine** and may disrupt collagen and creatine synthesis, as well as detoxification processes and tissue protection. Lysine is important for growth, tissue repair, and immune function, while proline is required for collagen synthesis and is therefore essential for healthy skin, ligaments, and tendons, as well as effective wound healing.

Reduced levels of alanine, asparagine, aspartic acid, glutamic acid, glutamine, glycine, lysine, and proline may indicate insufficient protein intake, impaired protein absorption, or increased requirements, for example due to stress. A balanced diet containing high-quality protein and the targeted intake of essential amino acids may therefore be beneficial.

AIM: THE AMINO ACIDS ALANINE, ASPARAGINE, ASPARTIC ACID, GLUTAMIC ACID, GLUTAMINE, GLYCINE, LYSINE, AND PROLINE SHOULD ALL BE IN THE UPPER THIRD OF THE NORMAL RANGE.

Central Nervous System, Bile Acid Synthesis, Regulation of Water and Mineral Balance

TAURINE

Taurine is a metabolic product derived from the amino acids methionine and cysteine. It can also be synthesised by the body itself if sufficient methionine and cysteine are available. Taurine occurs naturally in animal-derived foods such as meat, fish, dairy products, and eggs.

Taurine performs a wide range of functions in the body, including:

- Fat digestion: In the liver, taurine is conjugated with bile acids produced there in order to improve their solubility. After temporary storage in the gallbladder, these bile acid compounds enter the small intestine, where they are broken down again by bacteria. The free bile acids are then available for fat digestion.
- Development of the central nervous system and the heart in children
- Antiarrhythmic effects: Taurine helps maintain a regular heartbeat.
- Stabilisation of cell membranes
- Antioxidant effects: Taurine binds cell-damaging "free radicals" (reactive oxygen species).

When taurine levels are reduced, all of these functions may be impaired..

AIM: TAURINE SHOULD BE IN THE UPPER THIRD OF THE NORMAL RANGE.

Fatty Acid Status, Inflammation, Cardiovascular System and Immune System

FATTY ACIDS

Fatty acids not only provide energy but also support many bodily functions. In particular, the polyunsaturated omega-3 and omega-6 fatty acids are building blocks of cell membranes and are important for the brain and mental performance. Omega-3 fatty acids such as alpha-linolenic acid, eicosapentaenoic acid, and docosahexaenoic acid contribute to a stable cardiovascular system. They tend to have a balancing effect, whereas omega-6 fatty acids such as linoleic acid may have a pro-inflammatory effect in excessive amounts.

The ratio of omega-6 to omega-3 in the diet is crucial for the body. Modern dietary patterns often lead to an excess of omega-6 compared with omega-3, which can disrupt physiological balance.

Saturated fatty acids are fats that contain no double bonds in their chemical structure and are found mainly in animal products such as butter, meat, and dairy products, as well as in coconut and palm oil. Monounsaturated fatty acids are characterised by one double bond in their chemical structure and are abundant in plant-based foods such as olive oil, avocados, and nuts. They are considered to be relatively beneficial to health, as they may have positive effects on the cardiovascular system. However, it is not fully clear whether this effect can be attributed solely to monounsaturated fatty acids or also to other components, such as secondary plant compounds, contained in these foods.

Fatty acids provide energy and support many bodily functions. In particular, omega-3 and omega-6 fatty acids form cell membranes and support brain function and mental clarity. Omega-3 fatty acids such as alpha-linolenic acid, eicosapentaenoic acid, and docosahexaenoic acid are associated with a healthy cardiovascular system. They tend to have a balancing effect, whereas excessive amounts of omega-6 fatty acids such as linoleic acid may have an irritant or pro-inflammatory effect. The ratio of omega-6 to omega-3 in the diet is crucial. Modern dietary habits often lead to an excess of omega-6, which can disrupt internal balance.

AIM: HARMFUL FATTY ACIDS SUCH AS ARACHIDONIC ACID SHOULD BE IN THE LOWER THIRD OF THE NORMAL RANGE, WHILE BENEFICIAL FATTY ACIDS SUCH AS ALPHA-LINOLENIC ACID, EPA, AND DHA SHOULD BE IN THE UPPER THIRD OF THE NORMAL RANGE.

Bile Acid Metabolism

BILE ACIDS

Bile acids contribute to fat digestion and absorption and enable the uptake of the fat-soluble vitamins A, D, E, and K. They are also involved in energy metabolism and are linked to the gut microbiome. Individual bile acids differ in their molecular structure and therefore also in their properties. The formation of bile acids and the composition of the bile acid pool are largely determined by the bacteria residing in the gut. For this reason, the analysis of bile acids can provide information about the composition of the gut microbiome. Some bile acids are toxic to the organism.

- Toxic bile acids: GCDCA, DCA, LCA, TDCA, GDCA
- Protective bile acids: UDCA, GUDCA

AIM: DCA AND LCA SHOULD BE IN THE LOWER THIRD OF THE NORMAL RANGE, AND UDCA AND GUDCA SHOULD BE IN THE UPPER THIRD OF THE NORMAL RANGE.

Summary:

What do these findings tell me about my health situation?

The assessment provided by the **Test Prevent 360** offers indications of many different influencing factors that interact in a complex way:

What is the condition of the gut environment?

If one or more bacterial metabolites are excessively detectable in the results and, at the same time, the bile acid profile shows a higher proportion of toxic rather than protective bile acids, this indicates an overgrowth of proteolytic (putrefactive) bacteria in the gut, with a corresponding need to correct the intestinal balance. Our recommendations on this can be found further below.

Micronutrient status

If the results show low levels of amino acids in general, together with the above-mentioned signs of putrefaction, this suggests that your gut is not adequately absorbing proteins and micronutrients. In this case, ingested dietary protein is first utilised by intestinal bacteria as a nutrient source before the digested protein, in the form of amino acids and peptides, can pass through the intestinal wall into the bloodstream. This leads to the following corrective recommendations.

Recommendations for Correcting Possible Imbalances

1. How can I achieve as many optimal balances as possible?

- Create good conditions for optimal nutrient supply = a healthy gut
- Supplementation of all potentially missing nutrients = replenish all measured deficiencies

2. How can I create good conditions for my gut?

- Optimal digestion
- Regular bowel movements (1–2 times daily)
- Soft stool consistency

3. What role does the gut play in nutrient absorption?

The gut is more than just an aid to digestion – it influences the entire body. The microorganisms living there produce substances that can have either positive or negative effects. A healthy balance of gut microbes improves digestion, supports the absorption of essential nutrients, and strengthens the body's natural defences. Intestinal toxins can disrupt these processes and lead to digestive problems or imbalances.

4. Which factors contribute to optimal nutrient processing?

In addition to a healthy gut flora, there are further aspects that play a key role in the optimal utilisation of nutrients:

- **Physical activity** promotes blood circulation and metabolism, thereby enabling nutrients to be transported more efficiently.
- **Sleep** is essential for the regeneration of the gut and the processing of nutrients during the night.
- **Stress management** helps to prevent inflammation and hormonal imbalances that can negatively affect digestion.

5. Which additional measures support detoxification?

There are various methods that can support the body in eliminating toxins and optimising nutrient absorption:

- **Dry brushing** of the skin promotes blood circulation and supports detoxification through the skin.
- **Alternating showers and sauna sessions** activate the lymphatic system and stimulate detoxification.
- **Liver compresses and alkaline baths** support the liver and other detoxification organs.

6. What is the significance of regular detoxification programmes?

Periodic measures (e.g. 1–3 times per year) to support the body's natural detoxification processes may help to reduce the burden of intestinal toxins and promote the physiological regeneration of the gut flora. This may, under certain circumstances, have a positive effect on general well-being.

The benefits of such a programme include:

- Strengthening the immune system
- Improving digestion and reducing bloating
- Clearer skin and stronger hair
- Stimulating metabolism and supporting a healthy body weight
- Improving sleep quality
- Reducing inflammation and slowing the ageing process

7. The 4 stages of gut health

An effective gut programme is based on four fundamental steps:

1. Cleansing: Through fasting, an alkaline diet, and targeted nutrients, toxins are removed and harmful bacteria are reduced.
2. Probiotics: The development of a healthy gut flora is supported by beneficial bacteria (e.g. from fermented foods).
3. Prebiotics: Fibre from vegetables, pulses, and wholegrain products (e.g. oat bran) serves as food for beneficial bacteria.
4. Nutrient optimisation: A varied diet of regional, seasonal, and as fresh and unprocessed foods as possible – preferably organic or even from one's own garden – should be chewed very slowly and thoroughly, with plenty of saliva in the mouth. This prepares the food optimally for further digestion in the gut. Food choices should follow the Glycoplan by Dr Kurt Mosetter: https://www.myoreflex.de/uebersichtsseite-ernaehrung/glycoplan. In the **Test Prevent 360** report sent to you, individual recommendations are provided for supplementation with vitamins, minerals, and healthy fats to support the body sustainably.

8. Desired effects of an effective gut programme

- ✔ Promotes the growth of beneficial gut bacteria
- ✔ Supports the production of beneficial bacterial metabolic products
- ✔ Counters the production of harmful bile acids

9. Course of a 21-day detoxification programme

- **Week 1:** Cleansing of the gut, initial improvements in digestion.
- **Week 2:** The body begins to eliminate stored toxins. Increased energy and improved sleep quality become noticeable.
- **Week 3:** Cell renewal begins, skin appearance improves, cravings disappear, and the immune system is strengthened.

10. The 2 phases on the path to balance:

Our **Prevent 360** blood test provides valuable information about your current health status and enables targeted measures to optimise specific values. The process of improving and maintaining these values in the long term is divided into two phases:

1. **Correction phase – bringing values into balance** In this phase, the focus is on correcting imbalances and bringing your values into the optimal range. Based on the test results, we recommend targeted measures that may include dietary changes, lifestyle adjustments, or, where appropriate, supplementary nutrients. If you have any uncertainties or health complaints, you should consult a qualified doctor or therapist.
2. **Stabilisation and maintenance phase – securing long-term health** Once your values have been optimised, the aim is to maintain them in the long term. Regular follow-up tests help to identify changes at an early stage and adjust measures accordingly. By consistently implementing the recommended strategies, you can maintain the improvements achieved and provide lasting support for your individual health.

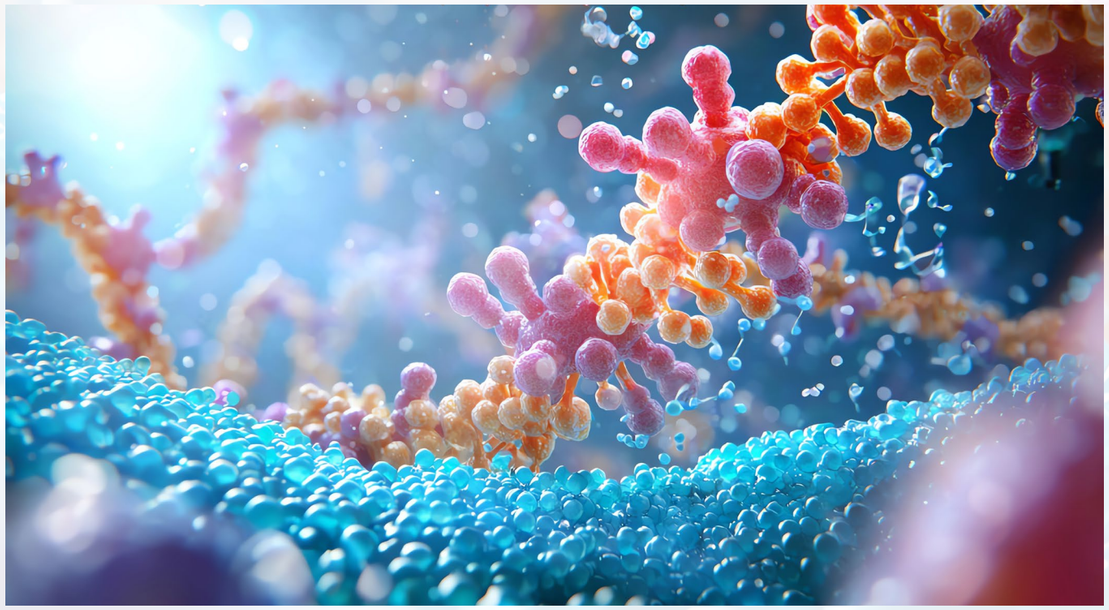
Recommendations on Micronutrients

Targeted micronutrient supplementation based on individual deficiencies

To ensure the body is optimally supplied with nutrients, micronutrients should be supplemented in a targeted manner based on the tested parameters. Depending on which values are abnormal or where a deficiency has been identified, the relevant micronutrients should be taken in accordance with the dosage guidelines set out below. Both the recommended daily and the maximum dosage should be observed to ensure safe and effective supplementation.

Uncontrolled supplementation may, at best, be ineffective and, at worst, lead to overdosing or undesirable interactions. To ensure that values develop in the desired direction and that no overdoses occur, the laboratory test should be repeated at regular intervals.

Before taking amino acids in an uncontrolled manner, the gut environment should first be optimised, as a damaged intestinal mucosa can impair nutrient absorption and utilisation. A compromised intestinal barrier may lead to amino acids not being properly absorbed and instead feeding undesirable bacteria in the small intestine. This increases the risk of small intestinal bacterial overgrowth (SIBO), as certain bacteria proliferate due to the excess availability of nutrients. In addition, a damaged mucosal lining may promote inflammatory responses, further disrupting the balance of the gut flora. Restoring mucosal integrity through targeted measures such as an anti-inflammatory diet and, where appropriate, the use of specific micronutrients is therefore advisable. Only once the gut has been stabilised should targeted amino acid supplementation be initiated to effectively correct deficiencies. Conversely, careless supplementation may exacerbate existing problems and negatively affect gut health in the long term.



The following table provides an overview of the recommended dosages according to the micronutrient:

Micronutrient	Daily dosage ONS*
B1 (Thiamine)	1.5–10 mg
B12	50–500 µg
B2 (Riboflavin)	1.5–5 mg
Nicotinamide	20–100 mg
B5	10–50 mg
B6 (e.g. P5P)	1–5 mg
B9 (e.g. 5-methyl-THF)	100–200 µg
B-Complex	5–10 mg
Choline	0.2–0.5 g
Vitamin C	100–300 mg
Vitamin D	800–2,000 IU
Retinol (Vitamin A)	800–2,000 IU
Vitamin E	30–100 IU
Vitamin K2 (MK-7)	20–100 µg
Calcium	200–500 mg
Magnesium	100–300 mg
Boron	1–3 mg
Manganese	2–5 mg
Selenium	30–100 µg
Zinc	5–10 mg
Coenzym Q10	30–100 mg
Alpha-Lipoic Acid	100–200 mg
L-Carnitine	100–1,000 mg
EPA/DHA	0.5–1 g
Curcumin	50–200 mg
Fisetin	0.2–1 g
Quercetin	0.2–1 g
Resveratrol	10–50 mg
Pycnogenol	30–100 mg
L-Arginine	0.2–1 g
L-Citrulline	0.2–1 g
L-Glutamine	1–3 g
L-Glycine	0.5–2 g
L-Lysine	0.2–1 g
L-Phenylalanine / L-Tyrosine	0.2–1 g
L-Ornithine	0.2–1 g
Taurine	200–1,000 mg
L- Tryptophan	0.2–1 g
5-Hydroxytryptophan (5-HTP)	0.1–0.5 g
VKAS	3–6 g

**) ONS = Optimal Nutrient Supply*

**) NRV = Nutrient Reference Values*

**) RDA = Recommended Daily Allowance*

NOTE:

The stated ONS values are guidance values for adults and do not replace medical advice, diagnosis or treatment. They differ from statutory reference values (NRV*/RDA*) and do not constitute any guarantee of health or cure. People with pre-existing conditions, pregnant or breastfeeding women, children and adolescents, as well as people taking long-term medication, should seek medical or therapeutic advice before use. The UL limits (Upper Intake Level) must not be exceeded without medical supervision. Nutrient supplements are foods and are not intended for the treatment of diseases.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system
Immunsystem
Muskel-
funktion
Vitamin D
Carnitin
Cholin
Spermidin/
Spermin
Betain
Gallensäuren
bakterielle
Metabolite
Cortisol
Tryptophan
GABA
DHEA
IDO-Aktivität
Laktat
Magnesium
Fettsäuren
Histidin/Histamin
Zink, Selen, Eisen

FURTHER INFORMATION IS AVAILABLE ON OUR WEBSITE.

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biovis Diagnostik MVZ GmbH
Brüsseler Str. 18
65552 Limburg-Eschhofen
Tel.: +49 6431 21248 0
Fax: +49 6431 21248 66
info@biovis.de

www.biovis.de

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