Last Name, First Name:

Gender:

ID number:

Date of birth:

Specimen collection:

Received at lab.:

Date of result:

NEUROSPOT BASIS

CTL & Ortholabor | Anemonenweg 3a | 26160 Bad Zwischenahn

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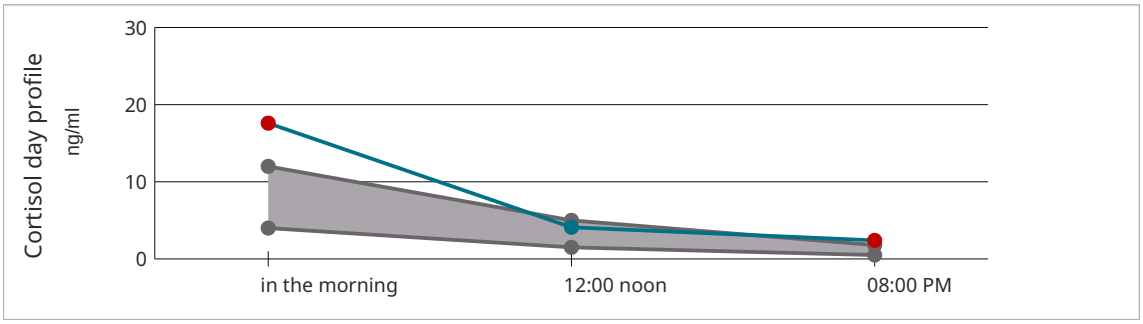
RESULTS

▼ Result ■ Reference range ■ Outside of reference range

Tested parameter	RESULT	Reference range	Unit	Assessment	Preliminary finding
Serotonin	59	55 - 129	µg/g creatinine	normal	not available
Creatinine	115.8	-	mg/dl	Reference value	not available
Catecholamines					
Dopamine	137	125 - 250	µg/g creatinine	normal	not available
Noradrenaline	25	25 - 55	µg/g creatinine	normal	not available
Adrenaline	3.8	3 - 12	µg/g creatinine	normal	not available
NADR/ADR quot.	6.5	3 - 7	-	normal	not available
Cortisol diurnal profile					
Cortisol (morning)	**17.6**	4,0 - 12,0	ng/ml	elevated	not available
Cortisol (12 noon)	4.1	1,5 - 5,0	ng/ml	normal	not available
Cortisol (8 p.m.)	**2.4**	0,5 - 1,8	ng/ml	elevated	not available
DHEA diurnal profile					
DHEA (morning)	**1064.5**	104 - 578	pg/ml	elevated	not available
DHEA (8 p.m.)	212.7	45 - 251	pg/ml	normal	not available



OVERALL ASSESSMENT / OPINION ON MEDICAL HISTORY

Clinical information:

Clinical conditions:
Not specified

Symptoms:
Sleeping Problems

Medication:
Not specified

The present results show a reduced noradrenaline level. Noradrenaline deficiency can lead to a lack of energy, concentration issues, listlessness, depressive states and disordered pain perception.

Furthermore, the diurnal cortisol curve displays a non-intakt course: It features an elevated level in the morning, dropping to a normal value at noon while having an excess again towards evening. In the full presentation, this profile can lead to symptoms such as sleep disorders, jumpiness, states of anxiety and aggression and susceptibility to infection.

DHEA is a direct cortisol antagonist and helps balance the stress reactions triggered by cortisol. Thus, DHEA can help maintain stress resistance. A moderate or temporarily occurring DHEA surplus most times will cause no negative symptoms. If, however, symptoms of a DHEA surplus are apparent and a medication can be ruled out as cause for the persistently high levels, further diagnostics should be considered.

Note on the serotonin value: in the course of regulatory adjustments, a new version of the serotonin test is in use since October 26th 2022, for which a modified (and lower) reference range is given.

Further diagnostic approaches

Basically, the following differential diagnostic starting points arise in cases of a neurotransmitter imbalance:

Certain micronutrients and amino acids are indispensable cofactors for neurotransmitter synthesis. Likewise, stress often leads to gastrointestinal dysfunction. Thus, a neurotransmitter deficiency may be a result of nutrient absorption disorders. This is how intestinal health plays a central role in any stress and neurotransmitter imbalance therapy. Especially where intestinal issues are present in cases of reduced neurotransmitter levels, intestinal repair should be considered (see also: Therapeutic Orientation Aid, Intestinal Repair).

Inflammation is one of the most common causes for serotonin deficiency. In cases of inflammation, tryptophan, basic component for serotonin synthesis, is used predominantly for kynurenin synthesis. This means that less or too little of it remains for serotonin synthesis. Hence, the cause of inflammation should be examined in cases of serotonin deficiency. An IgG food allergy may be one cause of chronic inflammation. Fructose and lactose intolerance are also associated with serotonin deficiency due to reduced tryptophan absorption.

Indication	Diagnostics	Medium	Parameters	Procedure
IgG food allergy / chronic inflammation	ImuPro Complete	Serum	specific IgG antibodies against foods	ELISA
Histamine intolerance	HIT	Serum	Diamine oxidase concentration	ELISA

The correlations depicted above are not tailored to any present results and apply generally. According to individual results as well as the patient's symptoms, it is at the discretion of the treating therapist to decide which of the options mentioned above may be the next advisable step.

EXPLANATION OF PARAMETERS

Serotonin

Serotonin, also called the "happiness hormone", is an important messenger substance in the brain and is created in the central nervous system as well as in the intestinal mucosa.
Serotonin is essentially responsible for our emotions. Acting together with adrenaline and dopamine, it elevates the mood and controls motivation. It also has a relaxing and sleep-enhancing and anti-depressive effect. In addition, it participates in regulating the feeling of satiety and sensitivity to pain. Essential functions of the intestine and the absorption of nutrients through the intestine are also affected by serotonin.

Initially, an intermediate substance, 5-hydroxytryptophan (5-HTP) is produced from the tryptophan amino acid. From this, serotonin is produced in a second step for which vitamin B6 is needed.
From the serotonin, the "sleep hormone" melatonin is formed. Therefore, a serotonin deficiency can lead to a melatonin deficiency and therefore to severe difficulty sleeping.

The basic component for serotonin, tryptophan, is ingested with food. The following foodstuffs contain particularly high amounts of tryptophan:
Soy beans and mung beans, peanuts, cashews, sunflower seeds, some types of cheese (e. g. Parmesan, Emmental, Edam, Brie, Camembert, Gruyère), eggs, meat, fish (in particular tuna, salmon, mackerel and trout), oatmeal and wheat germ.

Particularly high amounts of vitamin B6 are contained in the following foodstuffs: whole grain products, potatoes, bananas, legumes (e. g. soy beans, lentils), avocados, carrots, Brussels sprouts, sunflower seeds, walnuts, liver, meat and fish.

Your serotonin level is borderline low

Serotonin is in the lower end of normal range

The serotonin level is on the lower end of normal range. There may already be symptoms of serotonin deficiency present, depending on the individual disposition. In such cases, controlling the serotonin level may be sensible.

Serotonin deficiency is associated with difficulty sleeping, eating disorders with weight gain, dyspepsia, lack of drive and concentration, nervousness, increased sensitivity to pain, migraine, fibromyalgia, exhaustion, anxiety and depression. Possible causes for serotonin deficiency can be, among others, chronic inflammation, viral infections, as well as reduced absorption of nutrients. It is therefore recommended that a check-up of the intestines be carried out subsequently in case of serotonin deficiency. A lactose or fructose malabsorption has also been linked to tryptophan deficiency and therefore serotonin deficiency. Generally, a lifestyle with a lot of stress, imbalanced nutrition and only little exercise can cause a disruption of the hormone and neurotransmitter balance and thereby a serotonin deficiency.

Creatinine

The creatinine measurement is a necessary reference value in the laboratory analysis of various parameters and is of no diagnostic significance in these findings. Inference of a potential dysfunction is not possible from this.

DHEA

The hormone DHEA is made from cholesterol, mainly in the adrenal gland.
The production of DHEA decreases continually as we age, from age 25 on. The lowered DHEA level is responsible for a number of degenerative processes in the body. That is why the DHEA level can be used so well to determine the biological age of a human. Not only that, DHEA is also the precursor for the sex hormones testosterone and oestrogen.
DHEA has a short half-life period of only about 10 to 15 minutes. For this reason it is mainly only detected in the storage form DHEA-S, which is turned into DHEA when needed.

DHEA is a direct counteragent to cortisol and balances the stress reaction caused by cortisol and thus helps in dealing with stress. It has a muscle formation enhancing effect and increases HDL cholesterol which reduces the fat deposits in the vessels. This way, it counteracts an atherosclerosis. DHEA has an anti-inflammatory effect and activates the immune system.

Your DHEA level is elevated in the morning

Temporary DHEA surplus

In general, an isolated or temporary excess of DHEA is not associated with clinical symptoms. However, if controls confirm elevated DHEA levels and / or the presence of symptoms of excess DHEA (eg, acne, aggression), further investigation should be considered. If a DHEA drug substitution is in place, a reevaluation of the dosage review should be considered.

Cortisol

Cortisol, also called the "stress hormone", generally effects the body's adaptation to stimuli. It is secreted in response to stress and plays an important role in the complex regulation of other messenger substances involved in coping with stress. Its varied effects include increased metabolism and blood glucose for energy production, controlling the distribution of fat in the body (accumulation of fat in the abdominal region), increased appetite, lowered sensitivity to pain, altered emotional sensitivity, inhibition of growth processes, decreased immunity and inhibition of inflammation. On the other hand, in case of a continuously high cortisol level, inflammatory activity in the body can be increased.

The production of cortisol from cholesterol takes place in the cortex of the suprarenal gland and is subject to a circadian rhythm. While sleeping, during the second half of the night, the body produces the most cortisol, so that in the morning, shortly after getting up, the cortisol level is at its highest. It quickly drops by the early afternoon and then slowly drops further until the late evening. During the course of the second half of the night it increases again greatly. Within this basic rhythm, the level of cortisol rises briefly and slightly in case of acute stresses during the day.
However, in case of chronic stress, this rhythm can go haywire. Therefore, the deviations of the level of cortisol from their normal course are a good indicator of the current stress load.
In acute stress situations, the morning-time outpouring of cortisol increases and normalises in the course of the day. In the case of continuous stress, the entire daily curve shifts upward, meaning that the cortisol level is elevated permanently. If the stress load remains and turns into chronic stress, the daily rhythm may become "chaotic", meaning that the level of cortisol moves outside of the normal values for the time of day. If the chronic stress persists even longer, then, at some point, the production of cortisol ceases and cortisol level drops below the normal level. Lowered cortisol values are being measured in, for example cases of burnout syndrome.

People who exercise regularly have a lower level of cortisol than those who do not exercise. This is also true during acute stress: short term spikes in cortisol are less pronounced in individuals who exercise regularly. In the elderly, the body’s stress reaction is also much more pronounced.

Your cortisol level is elevated in the morning and in the evening

Excess cortisol:

An elevated cortisol level leads to symptoms such as difficulty sleeping, tenseness, metabolic disorders with weight gain, increased abdominal fat, elevated cholesterol values, hypertension, and susceptibility to infection.

Acute stress and the beginnings of chronic stress can be the cause for elevated cortisol.

NEURO SPOT BASIS

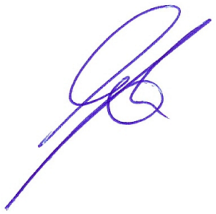
PARAMETERS OF NEUROSPOT
FUNCTIONS AND SYMPTOMS AT A GLANCE

Parameters	Responsible for	Symptoms at elevated level	Symptoms at diminished level
Serotonin	Mood Appetite Sleep	Rarely - except within the context of medication and serotonin syndrome	Depression Anxiety Sleeping difficulty Excessive appetite Headache Hot flashes Obsessive compulsive disorders
Dopamine	Good mood Joy and feeling well Satisfaction Voluntary muscle coordination Digestion Memory	Dyspepsia Developmental delay Attention disorders / concentration difficulty Mental disorders Autisms	Addiction problems Food craving attacks Motor disorders Restless legs syndrome Parkinson´s Disease
Noradrenaline	Attention / focus Alertness Emotional stability Emotional memory Endocrine function	Anxiety Hyperactivity Hypertension Post-traumatic stress disorder ADHD	Lack of energy Concentration difficulty Loss of motivation Abjection Impaired sensitivity to pain
Adrenaline	Energy Motivation Concentration States of agitation	Sleeping difficulty Anxiety Attention disorders	Fatigue / exhaustion Problems concentration Difficulties in losing weight
GABA	Rest and relaxation Learning Memory	Counter-regulation of increased excitatory neurotransmitters while under anaesthesia/tranquilizers	Uncontrolled fear Hyperactivity Sleeping difficulty
Glutamat	Learning Memory States of agitation	Disquiet Abjection Cramps Immune disorders Obsessive compulsive disorders Autisms	Fatigue / exhaustion Impaired perception Schizophrenia
DHEA	Decreases greatly with age Helps in dealing with stress Activation of the immune system Motivation	Usually no symptoms. However, persistently elevated levels can cause symptoms and should be investigated further.	Increased susceptibility to stress Malaises Depression Lack of sex hormones PMS Menopausal problems
Cortisol	Adaption to increased requirements due to stress Elevation of blood glucose level Inhibition of immune response Increased appetite Lowering of pain threshold	Sleeping difficulty Metabolic disorders with overweight Increased abdominal fat Elevated cholesterol values Hypertension Susceptibility to infection	Difficulty getting up in the morning Fatigue Passivity Apathy Increased sensitivity to pain Forgetfulness

NEUROSPOT BASIS

LABORATORY SUPERVISION

The examination of , born on , was carried out under my direction.



Dr. med. Ludwig Grüter

This finding was generated electronically and has been medically validated.

CTL & Ortholabor GmbH
Labordiagnostik
Anemonenweg 3a
Bad Zwischenahn

THERAPEUTIC ORIENTATION AID

How should this therapeutic orientation aid be read?

A QUICK START

At first glance the therapy for an imbalance of messenger substances appears to be highly complex.
For a better understanding, please observe the following fundamental principles of this therapeutic orientation aid. They may be able to facilitate the successful application.

The first therapy step is regulation of the serotonin level

Serotonin has higher-level control functionality with regard to the interplay of NeuroSpot parameters. Therefore, an appropriately high serotonin level has a balancing effect on other stress parameters. The optimum serotonin level differs in individual cases and can also be located very far in the upper normal range or sometimes even above this. Both with a measured serotonin deficiency as well as with levels within the normal range, it is often helpful during therapy to concentrate on increasing the serotonin level in the first step until the serotonin deficiency symptoms and general condition improve. In the next step the other parameters are regulated following a control NeuroSpot.

You can find the corresponding information in the therapeutic orientation aid whenever increasing the serotonin level seems appropriate as the initial therapeutic action.

The therapy is essentially geared to the symptoms

The stipulation of any therapy approach is: therapy is primarily geared to the condition of the patient.
This therapeutic orientation aid is created based exclusively on the NeuroSpot measured values. As a consequence, various therapy approaches are defined in the therapeutic orientation aid that are geared to different symptoms. Please select the most suitable approach for your patient.

The choice is yours

We act independently of the manufacturers of all named therapeutic substances and we also follow no commercial interests in our recommendations of specific medicines. As a result, several preparations, usually based on different therapeutic options, are listed in the case of many treatment goals. Please select the suitable preparation at your discretion and in accordance with your preferences, your own therapy focus and experience.

Serotonin level regulation

Serotonin plays an essential role in regulating overall neurotransmitter and hormone balance.
Regulated serotonin levels therefore will also help balance other stress parameters. Thus, it makes sense to focus on regulating serotonin levels as a first step. This applies both to a proven lack of serotonin or deficiency symptoms that might exist in spite of normal serotonin levels.
For therapy control and adjustment purposes, it is advisable to recheck all parameters with NeuroSpot after ca. 6 weeks. Taking into account the changed values, as the case may be, the regulation of other parameters may be approached in a targeted manner. In case of severe fatigue, rechecking values during therapy may only be necessary after ca. three months, seeing as the body takes some time to recover from severe deficiencies.

THERAPY:

Based on each individual's disposition, serotonin production as well as receptor sensitivity may vary significantly. For this reason, therapeutic recommendations may vary as well.
In cases where serotonin therapy does not yield the desired result, a genetic test may be helpful.

CAVE: Serotonin is removed from the synaptic cleft through reuptake into the neurones. Serotonin is broken down by the enzyme monoamine oxidase (MAO). Thus, tryptophan/5-HTP must not be substituted during medication with serotonin reuptake inhibitors (SSRI) or MAO inhibitors.

In cases of MAO inhibitor or SSRI therapy, we recommend the preparation NEUROadapt (MITOcare), for example.

The following preparations, amongst others, are suitable for regulating serotonin levels.

Preparation	Dosage	Remarks
NEUROtonin (MITOcare). See below for ingredients	Gradual increase: 1 - 0 - 1 after 2 weeks: 2 - 0 - 2	Additional GABA support, covering both essential inhibitory regulators. Contains 5-HTP, amino acids, adaptogens and neurotransmitter synthesis cofactors.
Proven formulation for serotonin level regulation. See table below	Symptoms during the day Gradual increase: 1 - 0 - 0 As required: 1 - 1 - 0 Symptoms during the night Gradual increase: 0 - 0 - 1 As required: 0 - 1 - 1 A careful increase in dosage is possible, if required.	The capsules can be manufactured in any suitable pharmacy. The capsules are kept in stock and ready for shipment, amongst others, at Flora Apotheke, Pharmacie International, Apotheker P. Domhardt e. K., Friesenstraße 24 A, 30161 Hannover, Germany. Phone: +49 511 34 13 87, Fax: +49 511 33 26 42 E-mail: mail@flora-pharm.de
NEUROadapt (MITOcare)	Initially: 1 - 0 - 1 After 2 weeks: 2 - 0 - 2	Supports natural neurotransmitter synthesis in the body by delivering necessary cofactors and provides adaptogens with balancing effects. Does not contain 5-HTP.

Remarks on administration and dosage as well as recommendations on combinations with other products can be found in the manufacturer's information.
The exact dosage with regard to age, sex, body weight and overall patient disposition is at the discretion of the treating therapist.

CAVE: The ingredient 5-HTP may cause nausea and gastrointestinal discomfort initially. In sensitive patients and in order to prevent serotonin syndrome, start dosage increasing gradually. Please control the therapeutic process through laboratory diagnostics with NeuroSpot regularly over the course of the therapy.

Formulations for prescription and non-prescription alternatives

Formulations	prescription alternative				non-prescription alternative		
Active ingredient	Dose per capsule in mg	Weighed portion per capsule in mg	Weighed portion per 100 capsules in g		Dose per capsule in mg	Weighed portion per capsule in mg	Weighed portion per 100 capsules in g
Zinc in orotate form	4,70	30,0	3,00		4,70	30,0	3,00
Riboflavin	5,00	5,0	0,50		5,00	5,0	0,50
Pyridoxal-5-phosphate	10,00	10,0	1,00		10,00	10,0	1,00
Nicotinamide	10,00	10,0	1,00		10,00	10,0	1,00
Mecobalamin, taurine trituration	0,05	20,0	2,00		0,05	20,0	2,00
Silicon dioxide, highly dispersed	5,00	5,0	0,50		5,00	5,0	0,50
5-hydroxytryptophan (5-HTP)	50,00	50,0	5,00		5-HTP is non-prescription if Griffonia extract is also declared.		
L-tryptophan	150,00	150,0	15,00		150,00	150,0	15,00
Taurine	100,00	100,0	10,00		100,00	100,0	10,00

Additionally, administrating 0.5 to 1 g of vitamin C per day is recommended.

NEUROtonin (MITOcare) ingredients

Ingredient	Amount	Ingredient	Amount
5-HTP (griffonia-Extrakt)	100,00 mg	Betaine	150,00 mg
Choline	50,00 mg	Folic acid	400,00 µg
Lavender extract	100,00 mg	L-glycine	150,00 mg
L-glutamine	150,00 mg	L-methionine	150,00 mg
L-theanin	150,00 mg	L-tyrosine	50,00 mg
Magnesium	25,00 mg	Taurine	150,00 mg
Grape seed extract (OPC)	40,00 mg	Vitamin B_3 (niacin)	120,00 mg
Vitamin B_5 (pantothenic acid)	50,00 mg	Vitamin B_6 (pyridoxine HCL)	10,00 mg
Vitamin B_{12} (cyanocobalamin)	50,00 µg	Vitamin C	40,00 mg
Vitamin E	10,00 mg	Zinc	5,00 mg

Vitamin C

In case of stress, the vitamin C demand is increased additionally.

Mental and physical stress go along with oxidative stress. For protection against free radicals, the brain – in particular – needs additional vitamin C because it has a neuro-protective effect and is important for stress tolerance.

Furthermore in case of chronic stress, a chronic infection is triggered via the increased production of inflammation markers.

INFUSION THERAPY

To counteract the damaging effects of stress in general, a high dosage vitamin C therapy (e.g. Pascorbin by Pascoe) is recommended as an infusion treatment to support the immune system, the pituitary gland and the adrenal glands, as well as to protect the brain from oxidative stress.
Duration and dosage: 1 – 2 times per week 7.5g of vitamin C, a total of ca. 4 – 6 infusions.

A vitamin C therapy is particularly recommended in case of the following measured values:

Increased cortisol level

Since cortisol has an immunosuppressive effect, vitamin C can be helpful in supporting the immune system and in counteracting an excessive cortisol production caused by inflammation. Vitamin C leads to a faster normalisation of the cortisol level in the blood subsequent to having been burdened by stress and, as such, promotes stress tolerance.

Reduced cortisol level

Since the synthesis of cortisol is vitamin C-dependent, vitamin C can have a supportive effect.

Reduced serotonin level

Serotonin deficiency is typically owed to inflammatory processes which can be counteracted with vitamin C.

Regulation of elevated cortisol levels

Tambogia (Sutherlandia frutescens), for example, can be administered as a regulating adaptogen for elevated cortisol levels.

Further suitable preparations, amongst others:

Preparation	Remarks
Pro Sirtusan (Tisso)	Contains antioxidant polyphenols
Pro Curmin Complete (Tisso)	
Neurapas balance (Pascoe)	In cases of nervous agitation, depressive moods
Neurexan (Heel)	In cases of nervous agitation and sleep disorders
Lasea (Schwabe Pharma)	In cases of nervous agitation, anxiety states, sleep disorders. Symptoms during the night: 0 - 0 - 1, during the day: 1 - 0 - 0, 1 - 2 - 1 is also possible

Remarks on administration and dosage as well as recommendations on combinations with other products can be found in the manufacturer's information.
The exact dosage with regard to age, sex, body weight and overall patient disposition is at the discretion of the treating therapist.

Regulation of cortisol levels with regard to symptoms

Essentially, cortisol therapy is oriented to symptoms.

In cases of serotonin deficiency symptoms such as anxiety, sleep disorders, depressive states, depression, mood swings, but also agitation, restlessness etc., serotonin levels should always be considered as well. The objective in such cases is to elevate serotonin levels towards the upper threshold (see also "Serotonin level regulation").

In cases of fatigue symptoms or concentration/memory disorders, a therapy designed to support cortisol is advisable.

In cases of disordered diurnal rhythms, the objective should be to restore them. That means preparations should be taken at times when cortisol levels are not in line with the diurnal rhythm.

In cases of nervous agitation

Passiflora extract has a balancing effect on states of nervous agitation and can support cortisol level regulation. Suitable preparations, amongst others, are:

Active ingredient	Preparation
Passiflora extract	e. g. Pascoflair (Pascoe) or Passiflora (WALA)

Remarks on administration and dosage as well as recommendations on combinations with other products can be found in the manufacturer's information.
The exact dosage with regard to age, sex, body weight and overall patient disposition is at the discretion of the treating therapist.

In cases of fatigue

In cases of fatigue symptoms, excitatory messenger substance support may be done with irregular, even with elevated cortisol levels. Suitable preparations, amongst others, are:

Preparation	Dosage	Remarks
For NEUROaktiv (MITOcare) ingredients see www.mitoshop.de	Initially: 1 - 1 - 0 After two weeks: 2 - 2 - 0	Contains essential nutrients which support adrenal gland function, cortisol synthesis cofactors as well as adaptogens such as maca and rhodiola. Contains 5-HTP
Phyto Cortal (Steierl)		Adrenal gland support
Phyto C (Steierl)		Increase dosage gradually, as required

Remarks on administration and dosage as well as recommendations on combinations with other products can be found in the manufacturer's information.
The exact dosage with regard to age, sex, body weight and overall patient disposition is at the discretion of the treating therapist.

Adaptogens for cortisol level regulation

Adaptogens are active ingredients which restore overall balance. They aid the individual in adapting to stress and have a balancing effect on the nervous system and neurotransmitter as well as cortisol synthesis. Thus, they can be used for states of deficiency as well as excess. Some examples of adaptogens are: Rhodiola rosea, schisandra, withania somnifera, ginseng, ginkgo biloba, eleutherococcus.

The complex preparation NEUROadapt (MITOcare) also contains well-dosed amounts of all these adaptogens and thus naturally promotes cortisol level balancing.
Recommended dosage: 2-0-2
Detailed information on ingredients can be found at www.mitoshop.de

Stress management

Elevated values for stress messenger substances (dopamine, noradrenaline, adrenaline, glutamate, cortisol) indicate a high level of stress.

In the first instance, stress is a physiological reaction of the body in situations of increased pressure which helps the individual to cope with said situations. A promising treatment approach for stress-related symptoms is therefore the determination of causes for stress and the elimination of those causes, where possible. Drug therapy alone is often not sufficient for lasting improvements. We recommend sustainable stress management tailored to individual living circumstances with the help of an expert.

Professional stress management may focus on reducing perceived pressure in order to increase the patient's well-being as well as his/her capacities. The basis thereof is a detailed analysis of causes for stress created together with the patient. It yields techniques suitable for each patient which can be used to reduce perceived pressure. Those techniques may be time management, yoga, hypnosis, autogenic training, progressive muscle relaxation, mindfulness training, physical exercise, dietary changes, communication training, personal demand management or psychotherapy, amongst others.
The choice of techniques should always happen together with the patient and tailored to his/her individual needs. Temporary intensive supervision by the stress therapist and regular result testing for the chosen techniques are also part of a professional stress management.

Increased micronutrient requirements in situations of stress
Due to stress, requirements in terms of micronutrients contributing to maintaining normal immune functions and protection against oxidative stress may multiply. Through dietary supplements the supply of vitamins, micronutrients and polyphenols essential for the human body can be supported.

DHEA level regulation

Elevated DHEA levels do not lead to negative symptoms. Therapy is not necessary.

Intestinal Repair

It is not uncommon for chronic stress to cause inflammation in the intestinal mucous membrane. However, intestinal health is crucial for an individual's neurotransmitter balance. Only a healthy bowel can absorb the micronutrients required for neurotransmitter synthesis sufficiently . Due to the close connection between the ENS (enteric nervous system) and the CNS (central nervous System), also referred to as the gut-brain axis, gastro-intestinal dysbiosis also causes adverse psychological effects. Especially in cases of present intestinal complaints pointing to a likely disturbed bowel function, intestinal repair can effectively support and supplement neurotransmitter regulation therapies.

For example, the following preparations are suitable to this end:

Preparation	Dosage	Remarks
Flora Balance (MITOcare) AND Flora Immun PLUS (MITOcare)	20 ml in the mornings, ca. 6 - 18 months	Contains 24 probiotic bacterial strains (10^{11} germs per 100 ml), select digestive bitter compounds and plant extracts.
	3 measuring spoons in the evenings, ca. 6 - 18 months	Contains 8 bacterial strains (ca. 10^{10} germs per daily portion), colostrum, glutamine and psyllium seed husks.
Pro Emsan (Tisso)	15 - 30 ml, ca. 6 - 18 months	
Pro Basan Complete (Tisso)	1 - 2 g powder, ca. 6 - 18 months	
Pro Mucosa (Tisso)	6 - 12 capsules, ca. 6 - 18 months	In case of mucous membrane-cleansing therapy resistance and persistently low serotonin levels.
Omni Biotic Stress Repair (Allergosan)	1 sachet in the mornings and / or evenings	
Omni Biotic Power (Allergosan)		
Symbioflor (Symbiopharm) according to the following formula:		
Weeks 1 - 4 (month 1) Pro-Symbioflor Weeks 5 - 24 (months 2 - 6) Symbioflor 1 Weeks 17 - 24 (months 4 - 6) Symbioflor 1 and additionally Symbioflor 2	 2 x 5 drops/day. Increase daily, towards 2 x 20 drops/day 2 x 30 drops/day 2 x 30 drops permanently 2 x 5 drops/day Increase daily, towards 2 x 20 drops/day	

Remarks on administration and dosage as well as recommendations on combinations with other products can be found in the manufacturer's information.
The exact dosage with regard to age, sex, body weight and overall patient disposition is at the discretion of the treating therapist.

NOTE: Fundamentally, the treating therapist's orders should be observed for all preparations specified in this therapeutic orientation aid. Recommendations regarding administration and dosage can be found in the manufacturer's information.

Therapy control

We recommend a laboratory diagnostic therapy control using NeuroSpot ca. 6 weeks after the start of the therapy and, as the case may be, appropriate treatment adjustments. In cases of severe neurotransmitter deficiency, however, it may be reasonable to control levels only after 3 months, since the body takes a certain amount of time to balance the deficiency.

Sources of supply:

Mitocare products: www.mitoshop.de or in pharmacies
Tisso products: https://shop.tisso.de

All other products mentioned are available in pharmacies or online.