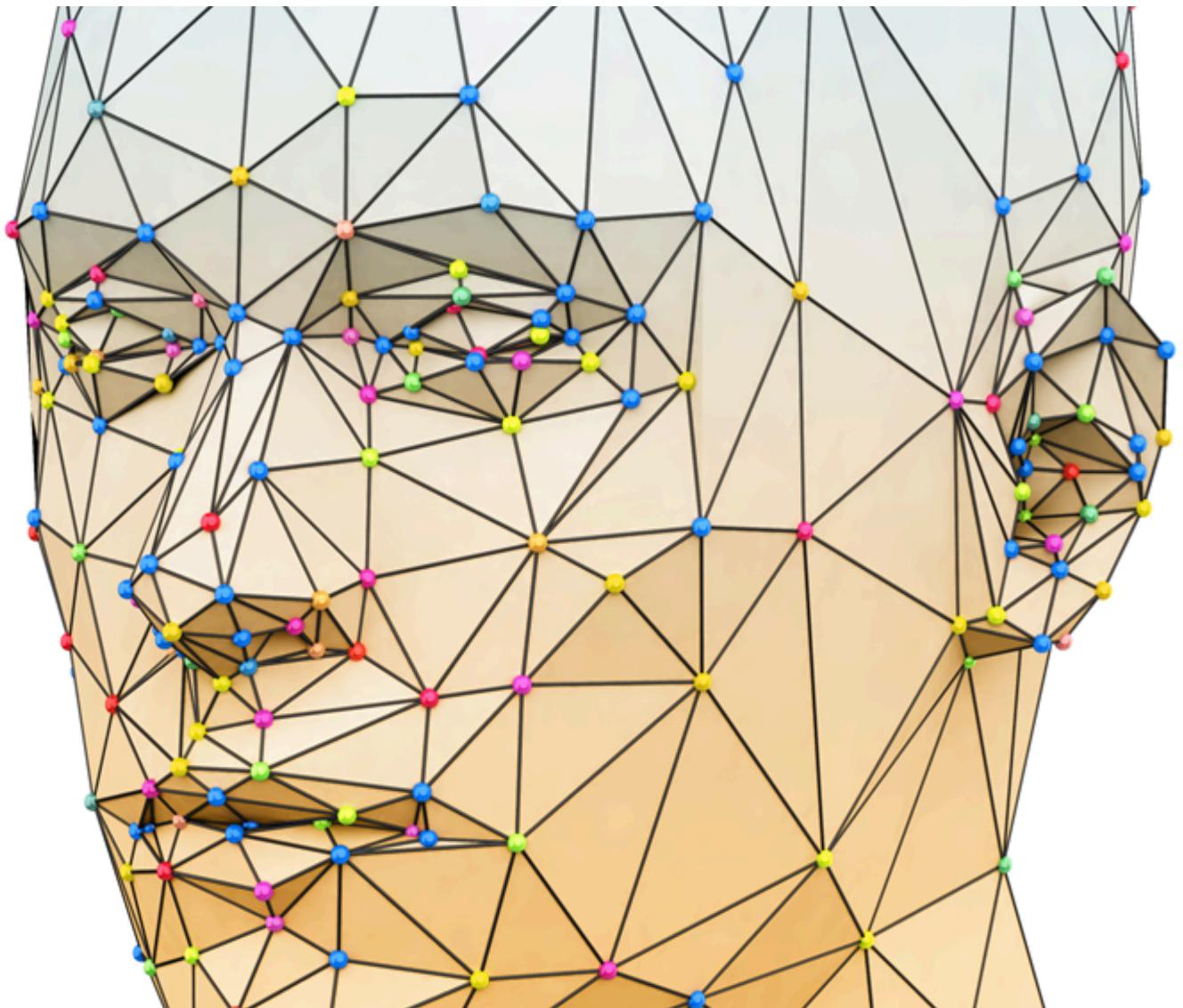




IFVBESA

Information is crucial



Focus on Melanin

Study on the effect of the Quantum Upgrade

P83 2.0 BESA-Detail-PROJECT



Project P83 2.0 to BESA-expert opinion

within the framework of a BESA seal of approval
on the effectiveness of the product

Quantum Upgrade
on the subject of melanin.

An exploratory study in the context of
quantum technology application, regulation and consciousness.



Client:

Firma Leela Quantum Tech, LLC
Attn: Eleonora Goldenberg
1421 LUISA STREET, STE G
SANTA FEE, NM 87505
USA

Project participant:

Project management: Wolfgang Hans Albrecht, President and Project Manager of IFVBESA

Project execution: Eva Schmidt, President and deputy Project Manager of IVFBESA

Test subjects (participants): 12 (6/6) participants of varying ages and health conditions in a randomised double blind study, quantum entangled.

Test subjects:

P83 1.0 and P83 1.1: 6 participants from P1 to P6

P83 2.0 and P83 2.1: 6 participants from P7 to P12

Project location: Location 1: International Professional Association for BESA (IFVBESA) Hauptstraße 1-2 A-4866 Unterach am Attersee

Date: from 28.November 2024 to 10.October 2025

Project duration: 286 Tage



Contents

BESA-Legend interpreting the BESA measurement results	5
Basics of research project creation P83	6
Project - Design	8
Participants	10
Abstract on an interdisciplinary perspective	10
Research funding services – BESA reference testing	13
Reacherch project description	13
Test procedure	15
Test procedure for hormones	15
Data sheet on the hormones tested and hormonal influencing factors	16
Die Ergebnisse der BESA-Testungen aus der Kontrollgruppe im Überblick	67
Effect of quantum technology as a test object in bioenergy information system analysis (BESA)	69
Generall to the Test Results (Placebo Group)	71
Authorized Summary	71
General Summary View by IFVBESA	73
Summery of Results and Interpretation of the Melanin Study According tor the Approach of IFVBESA	74
Discussion	75
Comparative-Studies	76

Important information

The client has the right to use this report/project. Regardless of this, this report/project constitutes the intellectual property of IFVBESA as the contractor. The contractor is entitled to use this report/project for other purposes, provided that this does not violate the client's data protection and confidentiality obligations. Apart from this, this project/report may not be modified or shortened without the consent of IFVBESA, with the exception of the 'authorised summary'. The commissioning for this report/project relates to physical and energy-informational measurable values, the interpretation of which is based on the guidelines of BESA and IFVBESA. Maintaining the quality/effectiveness of the tested technologies/processes/products and monitoring them regularly is the task and responsibility of the client. For this reason, the technologies/processes/products are subjected to regular effectiveness tests by IFVBESA in order to confirm their functionality in the respective certificates with a term of validity. The investigation of the manufacture, the mechanism of action or interpretations of the client's products vis-à-vis third parties are not the responsibility or task of the contractor. Video recordings may only be made with the permission of IFVBESA.



BESA-Legend interpreting the BESA measurement results

A measured value of 50 on the tested meridian represents an optimal energetic state in this organ or its subordinate and superordinate levels. Measured values in the range of 50 to a max. 70 still count as a neutral and balanced energy status. The organism is able to regulate irritations of the system (incorrect environmental signals) very well.

Measured values from over 70 to 100 represent the inflammatory range or a so-called energy surplus as a reaction to the stimulation of the system by corresponding environmental signals. Once the maximum values have been reached, the energy state tips into the degenerative (blue) range.

Measured values from below 50 to around 0 represent the so-called degenerative measuring range or a lack of energy as a reaction to the stimulation of the system by corresponding environmental signals.

Measured values that are represented by a so-called pointer drop of more than 3 scale lines indicate total deregulation. The influence of certain environmental signals then leads to such strong system overloads that they can only be harmonised by corresponding new signals.

The orange measured values represent a resonance of the tested substances (electronic honeycomb contents) in the respective bioenergy-informative control circuits called up as well as in its subordinate or superordinate structures.

BESA key figures:

- up to 0.79** very deep energetic regulation disorder (SSD) energy deficiency
- 0.8 to 1.19** Severe energy regulation disorder (SD) Degeneration/energy deficiency
- 1.2 to 1.59** energy regulation disorder (D) degeneration/energy deficiency
- 1.6 to 1.99** degenerative transition area (DÜ)
- 2.0 to 2.39** optimal regulation (OR)
- 2.4 to 2.79** in regulation (R)
- 2.8 to 3.19** partial ignition = regional energy surplus (PE)
- from 3.2** total inflammation = strong general energy surplus (TE)



Basics of research project creation P83

The International Association for Bioenergy Informative System Analysis was commissioned by Leela Quantum Tech, LLC to test the effect of the test object, Quantum Upgrade, using bioenergy informative system analysis (BESA) and vital blood analysis (darkfield microscopy) on the corresponding test subjects and to verify its effect on the test subjects.

The testing was conducted independently of the subjective perceptions of all test subjects. According to the commissioning company, the Quantum Upgrade was presented as follows.

Description of the test object, "Quantum Upgrade" by the client:

Firstly, it is important to understand that two independent objects can be energetically connected to each other. This connection or "association" is known as quantum entanglement. As soon as these two objects are entangled with each other, a change in one object or entity also causes a change in the other or the other - even if they are not in close proximity to each other.

This is why, for example, a mother can "feel" when something happens to her child, even if she is thousands of kilometres away. She is connected to her child (in quantum terms, they are said to be entangled with each other). In this way, scientists can also take a skin cell or blood sample from an astronaut on Earth, send it into space and detect any changes in the cells or samples that remain on Earth.

„Quantum Upgrade“ utilises the same proven principle

Through years of research and the development of the Quantum Upgrade product, the company "Leela Quantum Tech, LLC" has created one of the world's most powerful sources of usable quantum energy. With the Quantum Upgrade, any biological object can be connected to this quantum source (energy source).

Immediately after activation, there is an immediate quantum entanglement and quantum energy is channelled to the locations previously defined within the scope of the respective requirements. Healers, empathic people or those who are particularly sensitive to fields such as electromagnetic fields (EMF) or electromagnetic radiation will probably notice the difference immediately. Others may need a little more time or may not "feel" anything at first - until the first changes in their lives become apparent.

How quantum energy supports change

In physics, there is the so-called principle of inertia, which states that

"A body at rest remains at rest or maintains its state of motion as long as no force acts on it or the sum of the forces cancels out. A body in motion also continues to move at a constant speed as long as no external forces act on it".

This so-called first Newton's law can therefore be applied just as well to all biological objects as to humans: It is easier to keep something the same than to change it, as change requires more energy.

But what happens if you don't have enough energy to change? You get stuck. And that is precisely the point at which the majority of humanity finds itself. They are stuck in old ways of thinking, acting and living.



This is one of the reasons why meditation, prayer and other spiritual practices can lead to powerful changes. They connect us with the "source" or, in other words, back to our source (origin, the absolute) via quantum energy.

And thanks to this additional energy (quantum energy), the "quantum upgrade" can bring about a change that would have been impossible before.

The Quantum Upgrade as a tool

A "Quantum Upgrade" is a technology, one could also consider it a tool, that creates a concentrated quantum energy space.

This is able to balance energies, increase performance and build up protection against e.g. harmful electrosmog radiation (EMSF). Quantum Upgrade is the most innovative development in the field of natural health, combining science and quantum energy healing in an easy-to-use and easy-to-understand subscription service.

Quantum energy harmonises body, mind, spirit and consciousness (body as the embodiment of consciousness). It expands consciousness and activates the flow of pure life energy through the body!

However, juggling the demands of modern life can be tiring and stressful and can leave people feeling overwhelmed. Subconscious fears and ingrained opinions often make us forget that we all have infinite potential and are beings without limits.

And this is exactly where the Quantum Upgrade helps us to return to our natural ego state and expand our consciousness in the long term

In this way, a healthy, fulfilling and meaningful life can be experienced.

Polarity

There is no polarity in the Quantum Upgrade. Magnets add pressure, instability and a certain type of alignment to a quantum field, so the energy of a magnet-supported quantum field is a "trapped" and almost locked-in energy force that cannot flow freely and is constantly battling with the magnetic field. From an energetic point of view, the field must constantly recharge itself. The instability, disharmony and energetic pressure can be felt and "seen" in such devices, and they affect everything in their vicinity.

With the Quantum Upgrade, a groundbreaking new quantum energy generator has been created that provides not just a one-dimensional quantum field, but a truly multi-dimensional quantum space and is also very powerful. It is also not bound in any way to the Earth's magnetic fields and can therefore be considered (and energetically looks like) a quantum sun, as it radiates and emits freely in all directions without an Earth-bound flux. The "Quantum Upgrade" is dynamic, harmonic, always stable and retains these properties when the quantum energy concentration and the levels of consciousness/perspective are increased. Although the use of a Quantum Upgrade comes with a certain responsibility, one should know that the energy is always balanced and harmonious.

To the Quantum Upgrade as a test object

Animals also benefit from the "Quantum Upgrade"

Not only humans benefit from the positive effects of quantum energy. Animals can also sense the energy and utilise it very well for themselves, provided it is tailored to their needs.



These indications are intended as an interpretation of the scope of the effect of the test object and an indication of its holistic orientation. The effect of the "Quantum Upgrade" can thus be easily achieved for the animals.

The concept of this test object is therefore to harmonise and neutralise disturbances, problems, blockages and disharmonies in the animals' environment and thus replace negative states with positive states. Due to its mode of operation, the test object has a simple and yet very effective area of application for the animals.

The animals/subjects are primarily selected by the project partner Barbara Hollogschwandtner, MD. A detailed description of the animals can be found in the project description.

Project - Design

This study was designed as a pilot study with a total of 12 test subjects. The aim was to gain initial insights into the possible influences of the test object or the 'Quantum Upgrade' technology on melanin.

The study follows a double-blind, randomised and exploratory design that combines scientific objectivity with an open research dynamic.

The exploratory approach was deliberately chosen in order to go beyond the framework of classical hypothesis formation and also to capture subtle, hitherto little-described interactions and mechanisms of action between bioenergy-informative regulation, influences of consciousness and quantum field-based processes.

To ensure methodological validity, participants were randomly assigned to two groups:

- an experimental group (P83 1.0 and P83 1.1), which was connected to the active test object (Quantum Upgrade) via quantum entanglement
- and a control group (P83 2.0 and P83 2.1), which was entangled in an identical manner with a placebo field

Due to the double-blind study design, neither the test subjects nor the test administrators knew which group each person was assigned to. This approach ensures the greatest possible neutrality and excludes any influence of expectations.

Two complementary methods were used to collect data:

- Bioenergy-informative system analysis (BESA) to record energetic and regulatory changes in the organism's information field
- Darkfield vital blood analysis to reveal potential changes at the cellular and haematological level

The combination of these measurement methods allows for a multi-layered view of both physiological and energy-informative processes.

By integrating quantum entanglement as a connecting element between the test object and



the test subjects, a research framework is created that integrates the non-local level of quantum physical interactions into the scientific context.

The P83 project is thus exemplary of the IFVBESA approach, which combines classical methodology and consciousness research to gain new insights into regulation, resonance and quantum-informative effects.

The IFVBESA's exploratory research approach

New knowledge, new insights and new ideas are the breeding ground on which science and the technologies of the future thrive. The exploratory approach plays an important role in most of our research projects and is the seed for the information medicine and quantum technology of tomorrow. In our exploratory study design, we present a methodical research approach in which we investigate research areas and questions that have not yet been explored. This demonstrates both the development and the potential of novel approaches to researching future technologies.

The exploratory approach is ideal, especially in new fields of research such as the effect of quantum technology on bioenergy-informative and biological processes and melanin, because:

- on the one hand, it breaks new ground where no established models yet exist
- observations are collected in order to identify patterns and causal relationships
- it opens up avenues on which later, verifying studies can build

In summary:

Our approach to exploratory research is deliberately open, curious and interdisciplinary. The concrete and feasible application relevance of the International Professional Association for BESA further reduces the otherwise high research risk that often prevents companies and research institutes from addressing topics at a very early stage of development.

On quantum entanglement:

Quantum entanglement is not a physical connection between particles, but rather a synchronisation of information and energy in the field of consciousness. Everything is already connected, not through space and time, but through coherent resonance within a universal information network. Matter is thus merely a condensed manifestation of this interaction of consciousness.

For the current test object, this means that each test person receives an energy-informative signature via virtually defined coordinates. This signature forms an energetic-informative imprint in the quantum field and exists as a constant reality at every moment of movement. It stores the frequency and essence of what is mapped via the coordinates and remains stable in the universal information network as a real extract of the consciousness space. This creates an energy-informative bridge between the original moment and the current consciousness space, which remembers and acts independently of space and time.

Placebo (empty object): In this case, unlike the test object, the placebo is an empty object that does not contain any effective frequencies. Neither the test subjects nor the test persons can distinguish between the test object and the empty object (placebo).



Participants

In addition to the technology of the test object already described, this research project involves at least 12 test subjects. Further test subjects will be integrated in parallel as replacements for any unexpected dropouts.

The test subjects will be informed in advance about the general procedures for this project and their role as representatives (see relevant documents).

This means that neither the test subjects nor the test persons know the background to the series of measurements. The aim of this type of blinding is to obtain the most objective evaluation of the results possible in order to rule out so-called placebo effects.

The test subjects are anonymously assigned a number from P1 to P12. The test subjects are also anonymously assigned to either the control group or the experimental group.

The different schedules for the test subjects can mean that the numbers of the test subjects from P1 to P12 differ in both the experimental group and the control group. For this reason, the statistical evaluation includes additional numbering from 1 to 12 in front of the numbers of the test subjects P1 to P12 (see list of the experimental group (P83 1.0 and P83 1.1) and the control group (P83 2.0 and P83 2.1)).

The BESA tests and vital blood microscopy are performed on each test subject as follows:

1. At the beginning of the project, in order to establish a baseline (current situation).
2. In the second part of the project, after at least four weeks of exposure to the test object or the empty object (placebo).

Abstract on an interdisciplinary perspective

Hypothesis

It is assumed that health dysregulation, particularly in the area of neurovascular and electromagnetic stability of the organism, is directly related to reduced melanin activity, which can be promoted by copper deficiency or vice versa.

Copper, for example, plays a central role as an essential trace element in enzymatic processes (e.g. tyrosinase) that enable the formation and function of melanin. A deficiency of copper, especially in the nerve endothelium, can be exacerbated by oxidative or electromagnetic environmental stress and lead to a disruption of cellular energy flows.

Since melanin potentially acts as a biological resonance carrier and electron buffer, reduced melanin activity could impair the organism's ability to harmonise electromagnetic stimuli and maintain electrical stability in the nervous system.

The hypothesis therefore postulates that there is a reciprocal relationship between copper status, melanin activity and the bioenergy-informative regulatory capacity of the human system, which can be positively modulated by targeted quantum technological influences.

In summary:

- Biochemical logic (copper–tyrosinase–melanin)



- Neurophysiological significance (endothelial function, electrical stability)
- resulting project design: bioenergy-informative and biological regulation through quantum fields

In this project, we are therefore observing a very exciting and highly complex field that combines several levels:

- Melanin as a biological-physical substance with light-absorbing, redox-active and possibly also quantum biological properties.
- Copper as an essential trace element that not only plays a role in enzymes (e.g. tyrosinase, which is crucial for melanin formation), but also in the electrical conductivity of tissues, in antioxidant protection (Cu/Zn superoxide dismutase (SOD1) is a cellular enzyme that converts superoxide radicals into oxygen and hydrogen peroxide to reduce oxidative stress) and in energy production (cytochrome c oxidase is an enzyme in complex IV of the mitochondrial respiratory chain that reduces oxygen to water by accepting electrons from cytochrome c and passing them on).
- Environmental influences such as electrosmog, electromagnetic fields, toxic metals or oxidative stress, which could impair both the bioavailability of copper and the function of melanin.

From a scientific point of view, we can now say that:

There is a direct link between **copper** and **melanin** at a biochemical level. A copper deficiency reduces tyrosinase activity, which leads to reduced melanin production.

- Melanin acts not only as a pigment, but also as an electron or energy buffer that may modulate electromagnetic stimuli (there are already exciting, but not yet fully recognised, studies on this).
- The endothelium, especially in the nervous system, is very sensitive to oxidative and electromagnetic stress. Copper is key to protecting these structures.

If this hypothesis is interpreted in terms of energy and information, a coherent picture emerges:

A copper deficiency weakens melanin activity => melanin loses its potential protective and bridging function between the electromagnetic environment and the biological system => the electrical stability and regulation of the organism become more susceptible to dysregulation.

This is an area that literally calls for interdisciplinary research, because it brings together biochemistry, electrophysiology and quantum biology.

It also fits in perfectly with the IFVBESA's approach, as it already investigates an interface between the materially measurable level (copper, melanin, endothelial function) and the energy-informative field (electromagnetic stability, quantum field).

This hypothesis is entirely plausible and a valuable idea for this stage of research.

Research questions addressed in this current project



In this current study, we are investigating the effect of an innovative test object on the general health parameters of the test subjects. Bioenergy-informative system analysis (BESA) is used to detect possible changes in the energy-informative status and vital blood (darkfield vital blood analysis) of the test subjects. Initial results indicate that quantum technology at least stabilises the status of the energy-informative system, opens blocked control loops, modulates inflammatory processes and promotes a sustainable balance in the organism. The initial results of BESA tests show a clear regulation of the energy-informative parameters towards a regulative behaviour. Particularly noteworthy is the observed interaction between the emotional stress of the test subjects and their vitality.

The research questions primarily concern the coherent and multidimensional evidence for what the IFVBESA has intuitively, theoretically and through research projects built up and tested over many years in connection with all projects relating to this quantum technology. Is it possible that this quantum technology can intervene deeply in biological, energy-informative and regulatory processes via entangled fields without directly applying physical stimuli?

This project examines the following hypotheses at various levels:

1. Energetic and bioinformative level

To what extent can bioenergy-informative system analysis (BESA) be used to demonstrate sustainable regulatory changes in the experimental group compared to the control group as a result of the quantum technology applied?

What influence or reorganisation can quantum-informative impulses have on melanin development, the HPA axis (stress axis) and oxidative and nitrosative processes?

Is so-called quantum entanglement merely a theoretical transmission mechanism, or is it an indication of a practically measurable resonance behaviour in the direction of regulation? (see page 81; summary of results and interpretation of the melanin study, in line with the IFVBESA approach).

2. Biochemical-physiological level

To what extent is it possible to initiate a regulatory influence on copper status, enzyme activities and antioxidant protection within four weeks, or as follows:

- to stimulate the resumption of melanin formation via tyrosinase activation and, subsequently, energetic or electromagnetic buffering
- stimulate the neutralisation of free radicals via Cu/Zn superoxide dismutase to relieve the endothelium
- stimulate an increase in mitochondrial energy production via cytochrome c oxidase to stabilise cell communication

To what extent is it possible to use quantum technology to initiate impulses for physiological regulation in order to enable the recalibration of these aspects?

3. Neurovascular level



The nerve endothelium is one of the systems most sensitive to stressors. To what extent is it possible to use quantum technology to generate electrical coherence throughout the entire electromagnetic field?

4. Blood and milieu level (darkfield vital blood analysis)

To what extent is regulation morphologically visible in vital blood analysis through the application of quantum technology?

5. Scientific and philosophical level

Ist es durch die Anwendung der Quantentechnologie und seinem Informationsfeld, welches über Quantenverschränkung vermittelt wird, möglich, biologische Strukturen auf molekularer, zellulärer und systemischer Ebene neu zu ordnen?

In summary

Initial results suggest that the technology used in the test object can bring about energy-informative harmonisation, in particular supporting the homeostasis of the HPA axis and promoting the regulation of melanin and cell communication.

Research funding services – BESA reference testing

Project P83 2.0 deals specifically with proving the effectiveness of the test object's technology on test subjects 7-12.

The test object is tested in accordance with the client's wishes within the framework of the applicable conditions of the IFVBESA for the award of seals of approval. Depending on the significance of the test results and taking into account all tests of a project, seals of approval are generally awarded in three categories. For the test object, it is to be determined whether its application can harmonise and neutralise the aforementioned stresses from typical environmental influences and, as a result, harmonise and neutralise any existing or emerging disturbances, problems, blockages and disharmonies in the energy system of the test subjects, thereby replacing negative pathological states with positive ones. This will be investigated in the following commissioned tests for this project.

Research project description

The purpose of this test is to prove the functionality of the test object using objectively verifiable measurement results. To this end, the test subjects first underwent a BESA baseline test (BEFORE measurement) to record their initial energy-regulatory state. This was followed by the AFTER measurement, in which the test subjects were connected to the test object via quantum entanglement (Quantum Upgrade) and tested again.

- The BEFORE measurements are taken without the test object/empty object
- The AFTER measurements are taken with the test object (experimental group) and with the empty object (control group)



The question for each AFTER measurement is: 'Is the test object suitable and capable of harmonising or neutralising the perceived stressful effects on the energy information system of the test subjects from the BEFORE tests?'

The appropriately designed tests are intended to provide information on this by comparing the BEFORE tests without the test object with the test results of the AFTER tests to be carried out using the test object.

The client's concern is to determine whether the test object, the 'Quantum Upgrade' as noted in the product description, is suitable for harmonising the disturbances, problems, blockages and disharmonies in the meridian system of the test subjects resulting from the BEFORE measurements.

General information on the transmission of information from the test object

Information is transmitted from the hyperspace of the test object to the hyperspace of biological objects (humans, animals, plants). From there, the information reaches the reference space or energy space via so-called interaction channels. This is a combination of, among other things, all organs and energy forms in the biological object. There, the information from the programme can be dynamically realised and thus change current states. The changes can manifest themselves in the form of neutralisation or harmonisation of disturbances, the resolution of problems, blockages and disharmonies.

Conditions:

The corresponding measurements are carried out on natural wood flooring at the IFVBESA premises under laboratory conditions at a room temperature of 20°Celsius. As a rule, the test subjects are de-switched (made ready for testing) before the measurements are taken, or the test possibility is questioned accordingly.

The corresponding DF microscopy is carried out under laboratory conditions at a room temperature of 20°Celsius.

Pos.1	BESA 1 Basic testing (bioenergetic status) on the test subjects
Pos.2	BESA testing after 4 weeks of exposure of the test subjects to the test object (empty object placebo)
Pos.3	Evaluation of the results in the project and summary in a corresponding report according to the template

Procedure and specifications for implementation

1. **BESA baseline measurements of the test subjects** at all predetermined measurement points (TING points) are used to determine the actual condition. The results are determined exactly according to the BESA specifications and documented using the BESA graphics.
2. **Activation of the test object**
 - 2.1. When activating the test object, it is used or activated according to the client's specifications.



2.2. The test subjects are brought into contact with the test object (empty object placebo) via quantum entanglement. The measurement points mentioned in section 1 are measured in the same order and for the same duration in order to determine the current energy state. The results are determined exactly according to BESA specifications and documented using BESA graphics.

Test procedure

BESA 1 BASIC testing BEFORE as status

In the first step, a basic bioenergetic test (bioenergetic status) is performed on the meridian end points (TING points) of the test subjects.

Objective: To create a basic test (status) to represent the initial energetic situation for all further BESA tests.

BESA 2 testing AFTER, after the test subjects have been confronted with the test object

In the second test series, the test subjects are connected to the test object (empty object placebo) via quantum entanglement for 4 weeks in advance, or in other words, the test object is activated via the measuring circuit in relation to the respective test subjects.

The question now is: How does the meridian system of the test subjects react within the 4-week effective range of the test object/placebo?

Test procedure for hormones

With its methodologies and applications (BESA individual tests), IFVBESA actively contributes to the reshaping of scientific perspectives. Through its research work, it is shaping the paradigm shift towards a holistic view of health and regulation in a special way.

Bioenergy-informative system analysis (BESA) goes far beyond conventional material testing methods. It captures regulatory processes at the energy-informative level, thereby integrating the quantum physical reality of the body.

Energy-informative regulation is primary, not secondary

Modern scientific fields such as quantum biology, epigenetics and information medicine are increasingly proving that biological systems are not only controlled by biochemical processes, but are also significantly influenced by consciousness and, consequently, by electromagnetic signals, quantum coherence and bioenergetic fields.

Hormones are much more than biochemical substances – they are also carriers of information on the energy-informative level. They act as mediators between consciousness, the body and the environment. Thus, bioenergy-informative regulation determines the biochemical reaction, not the other way around.

A noticeable hormone field at the energy-informative level can already indicate a biochemical imbalance before it is measurable at the physical level. Studies and empirical values from BESA tests show that deviations in these fields are often later reflected in laboratory parameters.



Renowned scientists such as Prof. Fritz-Albert Popp and Dr Ulrich Warnke have proven that biological systems react to electromagnetic and coherent light signals. Biophotons, frequencies and fields not only control enzyme activities and cell communication, but even influence DNA.

BESA is based on this science, which is shaping the next generation of medicine: information medicine.

With BESA, objective answers to subjective questions can be found, with repeatable, meaningful and correlating results. Experience reports, case studies and scientific findings show that BESA is an essential addition to classic diagnostics, often even the decisive key to a holistic view.

Data sheet on the hormones tested and hormonal influencing factors

Cortisol

Cortisol is a steroid hormone produced by the adrenal cortex and belongs to the group of glucocorticoids. It plays a central role in the body's stress response and is involved in various physiological processes. Here are its most important functions:

Progesterone

Progesterone is a steroid hormone that plays an important role in both women and men. It is often referred to as the 'mother hormone' because it serves as a precursor hormone for the synthesis of other essential steroid hormones such as cortisol, testosterone and oestrogen.

Testosterone

Testosterone is a steroid hormone from the androgen group and plays a central role in both sexes, although it is often known as the 'male sex hormone'. It is produced in both men and women, but in different amounts and with slightly different functions.

Estriol

Estriol (E3) is one of the three main oestrogens in the human body (alongside oestradiol (E2) and oestrone (E1)) and is considered the 'weakest oestrogen'. It plays a special role in the formation of the internal and external mucous membranes, in reproduction and in hormonal balance in women, but is also relevant in men, albeit in smaller quantities.

Oestradiol

Oestradiol (E2) is the most biologically active and strongest of the three main oestrogens (alongside oestrone (E1) and estriol (E3)). It plays a central role in both women and men, particularly in hormonal balance, reproduction and general health.

DHEA

DHEA is a steroid hormone produced mainly in the adrenal cortex, and in smaller amounts in the gonads (ovaries and testicles) and the brain. It is one of the most common steroid hormones in the human and animal body and is a precursor for the production of androgens (e.g. testosterone) and oestrogens.

What is the thyroid gland?



The thyroid gland is a butterfly-shaped gland located in the front of the neck below the larynx. It is a central component of the endocrine system and produces hormones that regulate numerous processes in the body, including metabolism, energy production and growth. It acts as a kind of external sensor for our environment.

Melanin

Melanin is a pigment found in the skin, hair and eyes. It is produced in specialised cells called melanocytes.

Function: Protection against UV radiation: Melanin absorbs UV rays, protecting the skin from DNA damage caused by sunlight. It determines individual skin, hair and eye colour. As a radical scavenger, it protects cells from oxidative stress.

Special feature:

Melanin also has an energy-informative significance and is increasingly being researched in science as a bridge between physical and energetic existence (e.g. protection against electromagnetic fields).

Melatonin

Melatonin is a naturally occurring hormone produced primarily in the pineal gland in the brain and plays a central role in regulating the sleep-wake cycle. It is primarily known for promoting sleep and synchronising the circadian rhythm by signalling to the body when it is time to sleep and when it is time to wake up. In a spiritual context, the pineal gland is often referred to as 'the third eye' and is considered a centre for intuition, consciousness and spiritual perception. The pineal gland is also where melatonin is produced, and therefore melatonin plays a special role in spiritual understanding.

5-HMF oder 5-Hydroxymethylfurfural

This is an organic compound that is produced from sugar sources through thermal or acid decomposition. It is a furanoid compound that occurs in many natural substances, such as honey, coffee, fruit and certain sugar products that have been heated.

In medical research in particular, 5-HMF has potential antioxidant and anti-inflammatory properties, making it a hot topic of research in the field of health and medicine. Oxidative and nitrosative stress play an important role in the development of many chronic diseases, and in this context, 5-HMF serves as a marker for the extent of this stress.

AKG or alpha-ketoglutaric acid

Alpha-ketoglutarate (AKG) is an important compound in human metabolism and plays a central role in the citric acid cycle (also known as the Krebs cycle), which supports energy production in cells. AKG is used as a kind of intermediate product in the conversion of amino acids and carbohydrates into energy. It is also involved in the synthesis of glutamate, an important neurotransmitter.

AKG as a marker for oxidative stress provides information about the extent to which a substance or technology (in this case, the quantum technology of the test object) is capable of reducing oxidative stress in order to verify the improvement of cell functions. The



connection between AKG and oxidative stress is particularly relevant because it plays a role in the detoxification process of cells and can help minimise damage caused by free radicals.

Methylene blue

Methylene blue is a chemical molecule that plays a role in various medical and scientific applications. In this study, its role as a marker is an interesting aspect in the context of research on oxi- and nitro-stress. In connection with melanin and melatonin, the association lies in its ability to act as an antioxidant and protective agent that supports the body in defending itself against stress factors.

Similarities to melanin and melatonin:

Protective effect: Like melanin and melatonin, methylene blue may play a protective role against oxidative stress and damage caused by free radicals. Melanin protects the skin from UV radiation, while melatonin plays an antioxidant role in the brain. Methylene blue appears to have a similar protective effect on cells.

Neuroprotection: All three substances also have neuroprotective properties, with methylene blue and melatonin being compared in their ability to protect the brain from damage caused by oxidative processes.

Copper

Copper is an essential trace element that stands for energy, protection and communication, thus acting as a catalyst for numerous vital processes.

It plays a central role in energy production in the mitochondria (cytochrome c oxidase), supports antioxidant cell protection (Cu/Zn superoxide dismutase) and is significantly involved in the formation of melanin (tyrosinase).

In addition, copper plays an important role in the synthesis of neurotransmitters, in the stability of connective tissue and in the immune system.

A balanced copper level promotes electrical conductivity and communicative coherence in biological systems, while a deficiency can lead to dysregulation at the nervous, haematological and energetic levels.

In a broader sense, copper can be seen as a key trace element for balance, bringing together the material and electrical levels, contributing to the harmonisation of energy flow and thus supporting the regulatory capacity of the entire organism.



Test subject 7 (P1) IV

BEFORE Testing – control group

BESA 1 Testing BASIC BEFORE

Eva Schmidt performs a basic BESA measurement on all test subjects, regardless of whether they are in the experimental group or the control group. All BESA measurements are taken at the TING points (40 nail fold endpoints on the fingers and toes).

Goal: To create a baseline measurement (status) to represent the energy-informative starting point for all further BESA tests.

BESA Test evaluation P83 2.0

from **03-12-2024 at 16:12 – 16:28** (16 minutes) page 21 to 23

Result: The measurement results indicated energetic stress at several meridian endpoints and, consequently, effects on the participant's subordinate metabolic situation.

97 % in the blue area

2 % in the green area

1 % in the yellow transition area

Conclusion: As the graphical representations demonstrate, almost all measurement points lie within the degenerative blue range, indicating an energy deficiency.

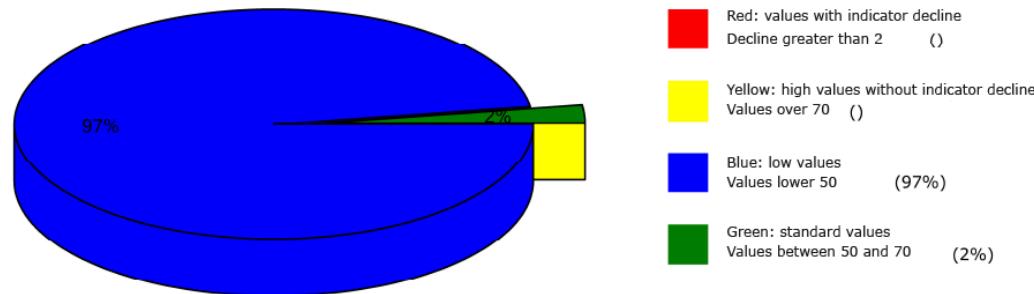
These measurement values reflect a partially pronounced energy deficit at the respective tested acupuncture points.

Comparisons of the BESA charts confirm the stress-inducing influences on the energy-informational processes within the meridian system of the participant.

The subsequent statistical evaluations of the hormonal profile show a similar pattern of deregulation and thereby confirm the expression of energetic imbalance.



Overview of BESA measuring



BESA basic test

+++: Indicator decline > 15 Skt.
++: Indicator decline 6-15 Skt.
+: Indicator decline 3-5 Skt.

T: Total inflammation (>89 Skt.)

P: Partial inflammation (70-89 Skt.)

D: Degeneration (< 50 Skt.)

Standard values: (50-70 Skt.)

Element: lu - sk - li - ct													
0	10	20	30	40	50	60	70	80	90	100	Lung	Right	Left
				49/1							Lu 1 (11.) Parenchym	35/1	
0	10	20	30	40	50	60	70	80	90	100	Skin	Right	Left
				31/2							Sk 1 (1.) Lower Body	24/0	
0	10	20	30	40	50	60	70	80	90	100	Large intestine	Right	Left
				38/0							Li 1 (1.) Colon transv./sigm.	41/0	
0	10	20	30	40	50	60	70	80	90	100	Connective tissue	Right	Left
				28/0							Ct 1 (1.) Abdomen	28/0	

Element: st - nd - ps - od													
0	10	20	30	40	50	60	70	80	90	100	Stomach	Right	Left
				41/0							St 1 (45.) Pylorus/body	31/1	
0	10	20	30	40	50	60	70	80	90	100	Nerves deg.	Right	Left
				41/0							Nd 1 (1.) lumb./sakral.	37/0	
0	10	20	30	40	50	60	70	80	90	100	Pancreas-spleen	Right	Left
				30/0							Ps 1 (1.) Eiw./w.Pulpa	32/0	
0	10	20	30	40	50	60	70	80	90	100	Organ deg.	Right	Left
				43/1							Od 1 (1.) Abdominal region	39/1	

Element: bl - ly - ki - al													
0	10	20	30	40	50	60	70	80	90	100	Bladder	Right	Left
				27/0							BL 1 (67.) body	24/0	



BESA basic test

+++: Indicator decline > 15 Skt.

++: Indicator decline 6-15 Skt.

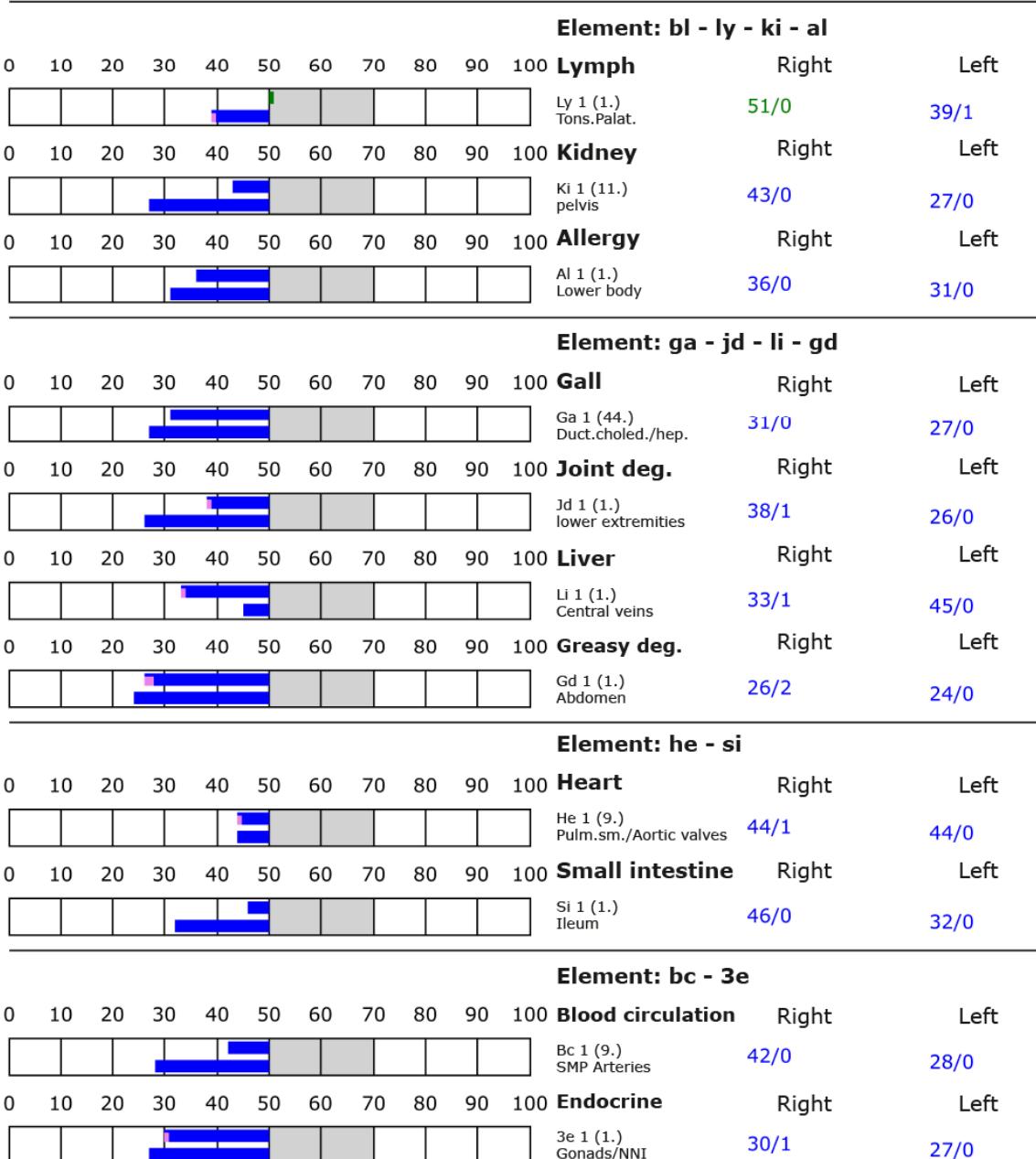
+: Indicator decline 3-5 Skt.

T: Total inflammation (>89 Skt.)

P: Partial inflammation (70-89 Skt.)

D: Degeneration (< 50 Skt.)

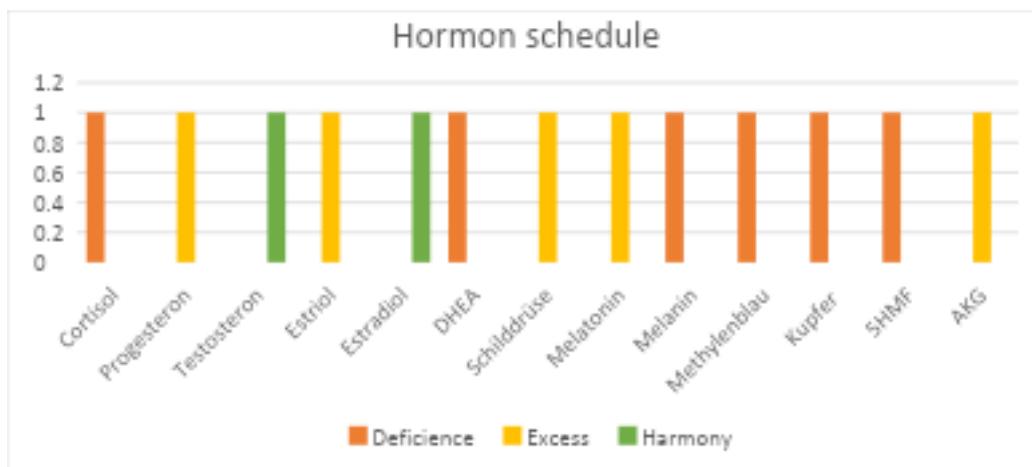
Standard values: (50-70 Skt.)





Hormone Schedule - BEFORE

	Deficiency	Excess	Harmony
	Hypofunction	Hyperfunction	
Cortisol	+		
Progesteron		+	
Testosteron			+
Estriol		+	
Estradiol			+
DHEA	+		
Schilddrüse		+	
Melatonin		+	
Melanin		+	
Methylenblau		+	
Kupfer	+		
5-HMF		+	
5-Hydroxymethylfulfural			
AKG		+	
Alpha-Ketoglutarat			



Cortisol-Level

	Morning	Midday	Evening
Cortisol			
too high		+	
too low	+		+
neutral			

Elektromagnetic interference fields VORHER

	yes	no
GE 1 Silicea – EMSF stress	+	
GE 2 elektromagnetic charge	+	
GE 3 stress of the radio transmitter	+	



Test subject 7 (P1) IV

AFTER Testing – control group

BESA 2 Testing AFTER

Eva Schmidt conducted a BESA post-measurement (BESA–AFTER) for all participants, regardless of whether they belonged to the control group (placebo) or the experimental group (test object).

All BESA measurements were again performed at the TING points, the 40 nailfold endpoints located on the fingers and toes.

Goal: To establish an effect measurement (status) that illustrates the energy-informational development resulting from the application of the test object (experimental group) or the placebo (control group).

BESA-Test evaluation P83 2.0
from **07-01-2025 at 14:13 to 14:19 (6 minutes)** page 25 to 28

Result: The measurement results after the application of the placebo as the test object showed a significant increase in degenerative values at the measurement points of the meridian endpoints and in the participant's overall energetic condition.

87 % in the blue area

12 % in the red area

1 % in the yellow transition area

Conclusion: As illustrated in the graphical representations, after approximately **four weeks of exposure to the placebo object**, all measurement points were found in the **degenerative (energy-deficient) range**.

Due to the large number of measurement values in the **deep blue range**, as well as those in the **red range** (indicating complete deregulation of measurement sectors), a **significant increase in deregulation** within the **energetic system and meridian structure** of the participant was observed compared to the **BESA pre-test (BEFORE)**.

All measurement values were far below the **50 Skt. scale reference**, clearly within the blue energy-deficiency zone.

Comparisons of the **BESA charts** confirm both the **increase and persistence of stress-related factors** within the meridian system.



Likewise, the **subsequent statistical evaluations of the hormonal profile** confirm an **almost unchanged pattern of deregulation**.

The **empty object (placebo)** therefore **showed no significant influence on the regulation of the energetic circuits**.



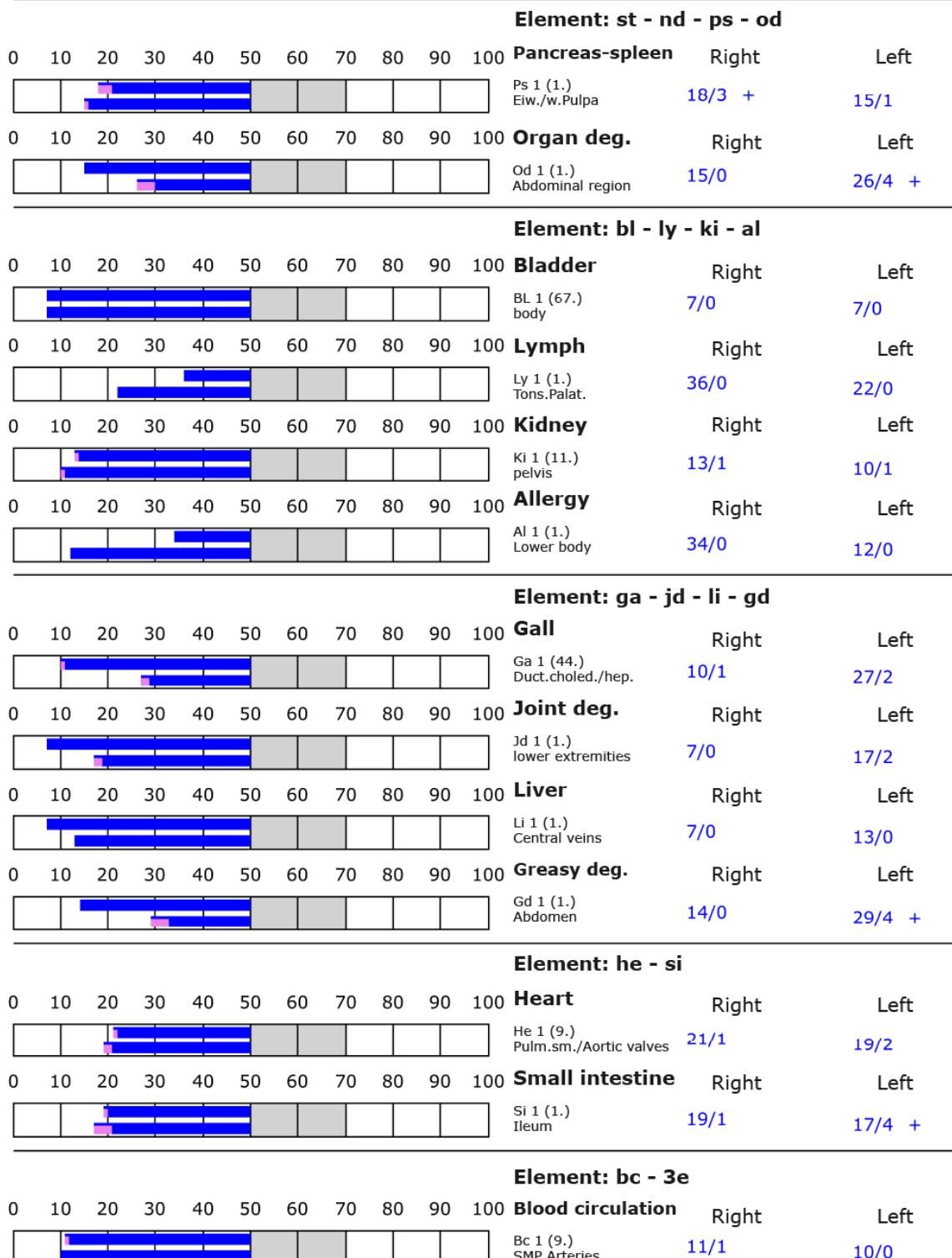
BESA basic test

+++: Indicator decline > 15 Skt.
++: Indicator decline 6-15 Skt.
+: Indicator decline 3-5 Skt.

T: Total inflammation (>89 Skt.)
P: Partial inflammation (70-89 Skt.)

D: Degeneration (< 50 Skt.)

Standard values: (50-70 Skt.)





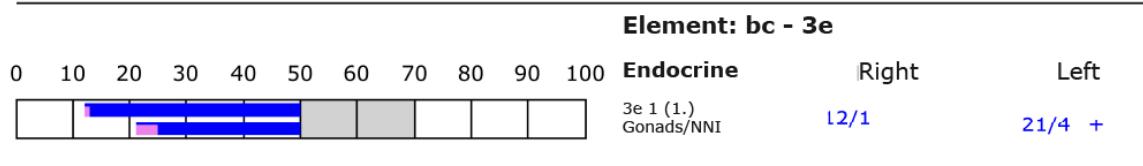
BESA basic test

+++: Indicator decline > 15 Skt.
 ++: Indicator decline 6-15 Skt.
 +: Indicator decline 3-5 Skt.

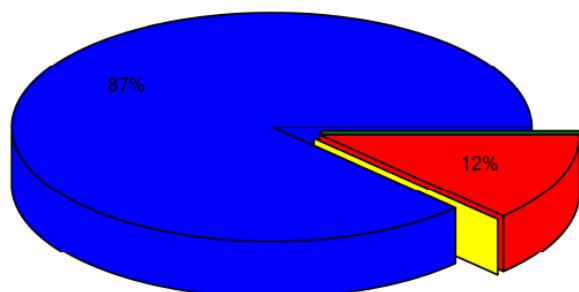
T: Total inflammation (>89 Skt.)
 P: Partial inflammation (70-89 Skt.)

D: Degeneration (< 50 Skt.)

Standard values: (50-70 Skt.)



Overview of BESA measuring



- █ Red: values with indicator decline
Decline greater than 2 (12%)
- █ Yellow: high values without indicator decline
Values over 70 (1%)
- █ Blue: low values
Values lower 50 (87%)
- █ Green: standard values
Values between 50 and 70 (0%)

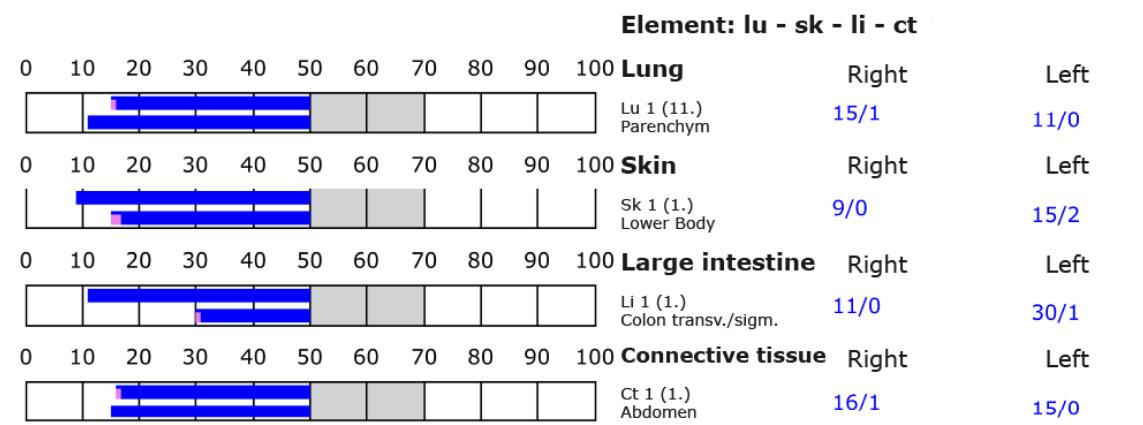
BESA basic test

+++: Indicator decline > 15 Skt.
 ++: Indicator decline 6-15 Skt.
 +: Indicator decline 3-5 Skt.

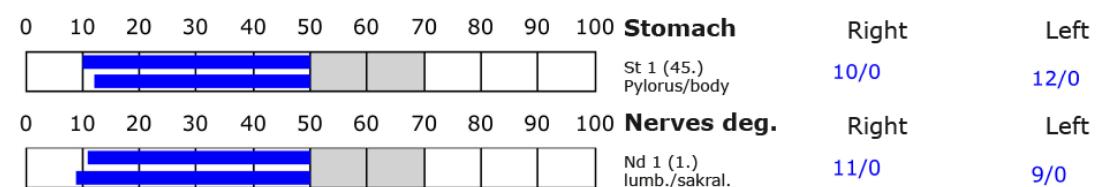
T: Total inflammation (>89 Skt.)
 P: Partial inflammation (70-89 Skt.)

D: Degeneration (< 50 Skt.)

Standard values: (50-70 Skt.)



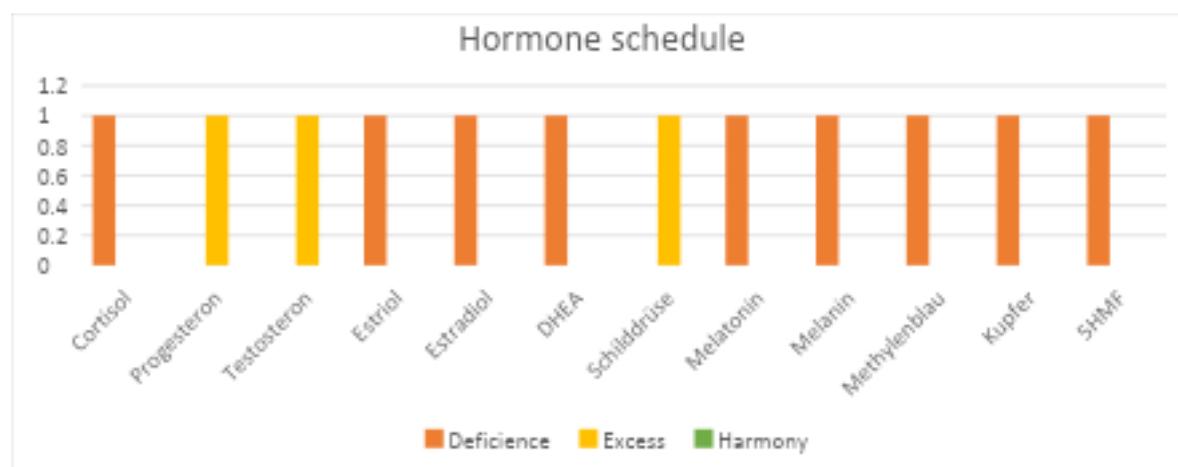
Element: st - nd - ps - od





Hormone Schedule - AFTER

	Deficiency	Excess	Harmony
	Hypofunction	Hyerfunction	
Cortisol	+		
Progesteron		+	
Testosteron		+	
Estriol	+		
Estradiol	+		
DHEA	+		
Schilddrüse		+	
Melatonin	+		
Melanin	+		
Methylenblau	+		
Kupfer	+		
5-HMF	+		
5-Hydroxymethylfulfural			
AKG		+	
Alpha-Ketoglutarat			



Cortisol-Level

	Morning	Midday	Evening
Cortisol			
too high			
too low	+	+	+
neutral			

Elektromagnetic interference fields

	jes	No
GE 1 Silicea – EMSF stress	+	
GE 2 elektromagnetic charge	+	



GE 3 stress of the radio transmitter	+	
---	---	--

Test subject 8 (P3) HT

BEFORE Testing – control group

BESA 3 Testing BASIC BEFORE

BESA-Test evaluation P83 2.0
from **07-01-2025 at 13:42 – 13:49** (5 minutes) page 29 to 31

Result: The measurement results indicated partially severe energetic stress at several meridian endpoints and, consequently, an impact on the participant's subordinate metabolic situation.

100 % in the blue area

Conclusion: As the graphical representations show, all measurement points lie within the deeply degenerative blue range, indicating a state of pronounced energy deficiency.

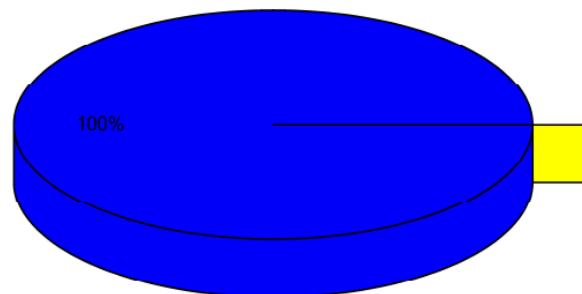
These measurement values interpret a strong energy deficit across the respective tested acupuncture points.

Comparisons of the BESA charts confirm the stress-inducing influences on the energy-informational dynamics within the participant's meridian system.

The subsequent statistical evaluations of the hormonal profile show a similar pattern of deregulation, confirming the overall expression of energetic imbalance.



Overview of BESA measuring



- Red: values with indicator decline
Decline greater than 2 ()
- Yellow: high values without indicator decline
Values over 70 ()
- Blue: low values
Values lower 50 (100%)
- Green: standard values
Values between 50 and 70 ()



BESA basic test

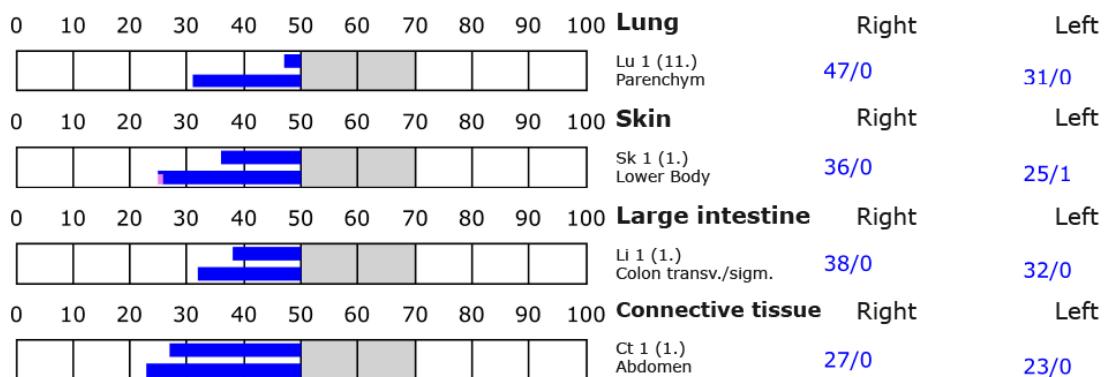
+++: Indicator decline > 15 Skt.
++: Indicator decline 6-15 Skt.
+: Indicator decline 3-5 Skt.

T: Total inflammation (>89 Skt.)
P: Partial inflammation (70-89 Skt.)

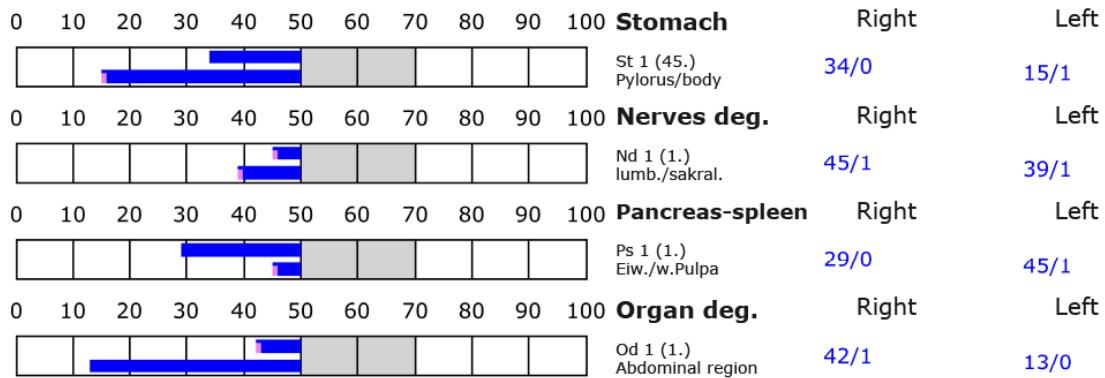
D: Degeneration (< 50 Skt.)

Standard values: (50-70 Skt.)

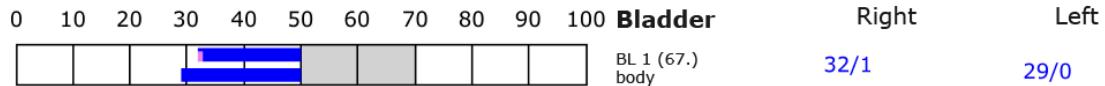
Element: lu - sk - li - ct



Element: st - nd - ps - od



Element: bl - ly - ki - al





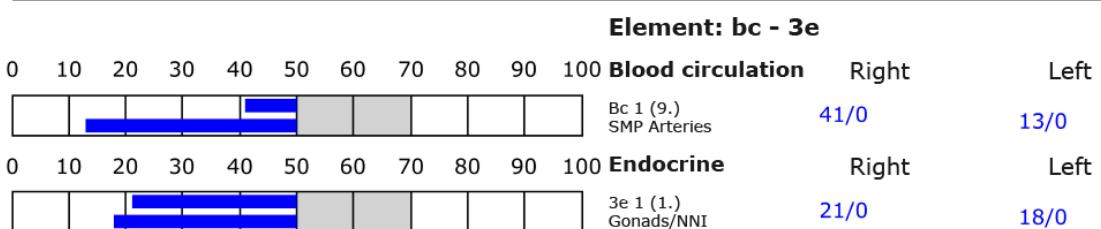
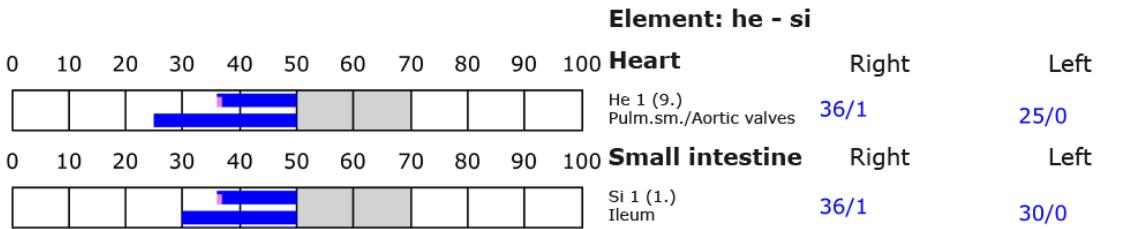
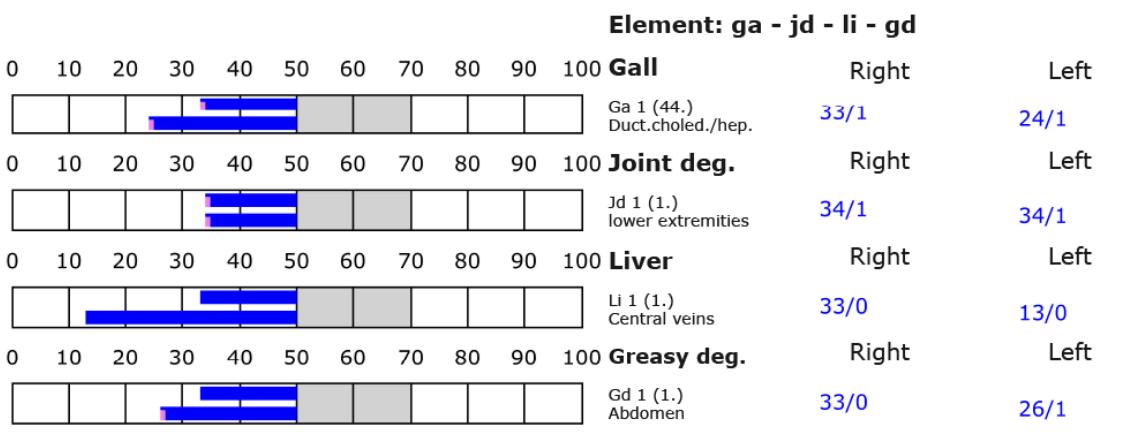
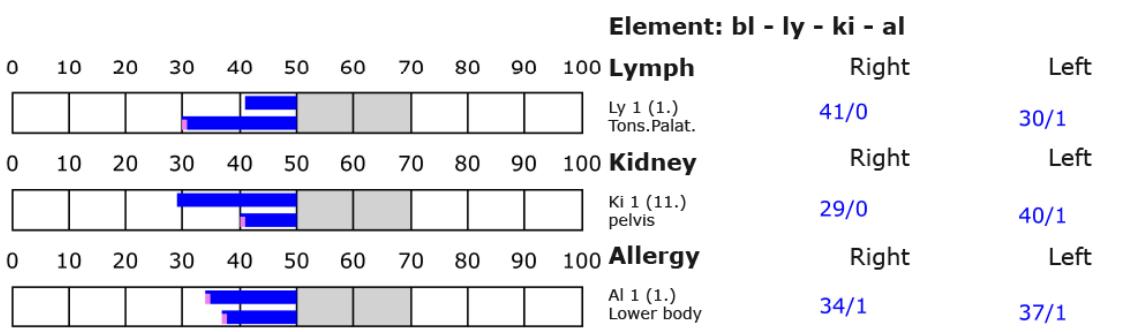
BESA basic test

+++: Indicator decline > 15 Skt.
++: Indicator decline 6-15 Skt.
+: Indicator decline 3-5 Skt.

T: Total inflammation (>89 Skt.)
P: Partial inflammation (70-89 Skt.)

D: Degeneration (< 50 Skt.) Standard values: (50-70 Skt.)

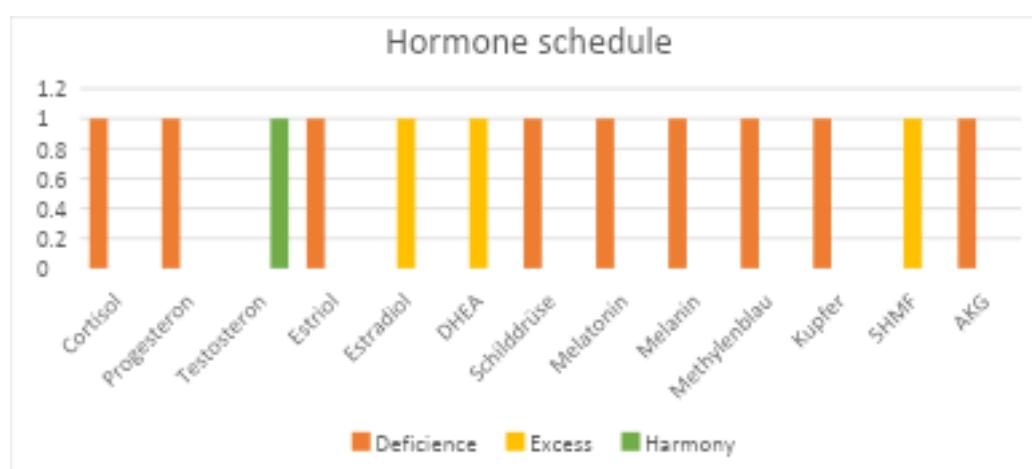
Standard values: (50-70 Skt.)





Hormone Schedule - BEFORE

	Deficiency	Excess	Harmony
	Hypofunction	Hyperfunction	
Cortisol	+		
Progesteron	+		
Testosteron			+
Estriol	+		
Estradiol		+	
DHEA		+	
Schilddrüse	+		
Melatonin	+		
Melanin	+		
Methylenblau	+		
Kupfer	+		
5-HMF		+	
5-Hydroxymethylfulfural			
AKG	+		
Alpha-Ketoglutarat			



Cortisol-Level

	Morning	Midday	Evening
Cortisol			
too high			+
too low		+	
neutral	+		

Elektromagnetic interference fields

	jes	No
GE1 Silicea – EMSF stress	+	
GE 2 elektromagnetic charge	+	
GE 3 stress of the radio transmitter	+	



Test subject 8 (P3) HT

AFTER Testing – control group

BESA 4 Testing AFTER

BESA-Test evaluation P83 2.0

from **09-02-2025 at 09:45 to 09:55 (10 minutes)** page 34 to 37

Result: The measurement results after the application of the test object showed no significant improvements at the meridian endpoints or in the participant's overall energetic condition.

87 % in the blue area

2 % in the green area

1 % in the yellow transition area

Conclusion:

As the graphical representations show, after approximately **four weeks of exposure to the placebo as the test object**, almost all measurement points remained in the **blue, degenerative range** (indicating **energy deficiency within the meridian system**).

The **BESA analysis** revealed an **essentially unchanged energetic situation** in the participant's meridian system compared with the **BESA pre-test (BEFORE)**.

All measurement values were found **below or just around the optimal range of 50 Skt**, indicating a **moderate blue-level energy state**.

No notable changes occurred within the participant's **energy system**.

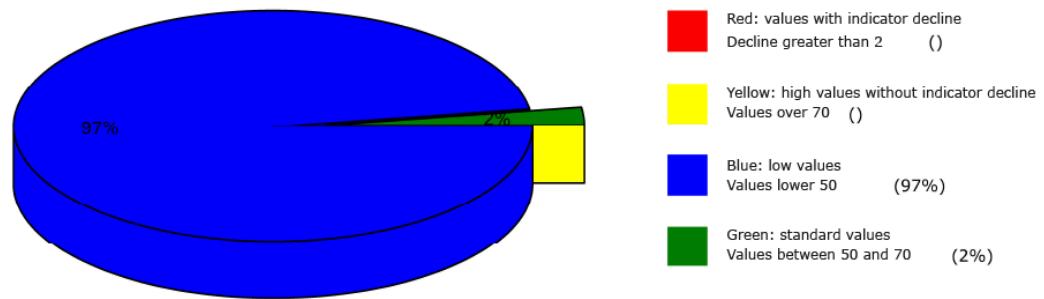
Comparisons of the **BESA charts** confirm the **stagnant or minimal harmonization** of stress-related factors within the meridian system.

The subsequent **statistical evaluations of the hormonal schema** also confirm an **almost unchanged pattern of deregulation**.

The **empty object (placebo)** therefore **had no significant influence** on the **regulation of the energetic circuits**.



Overview of BESA measuring





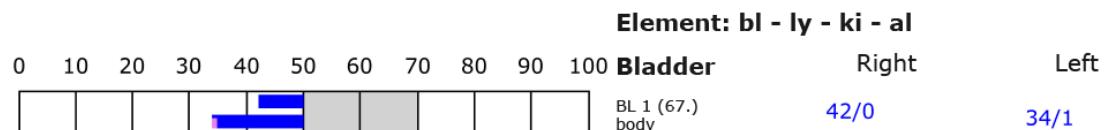
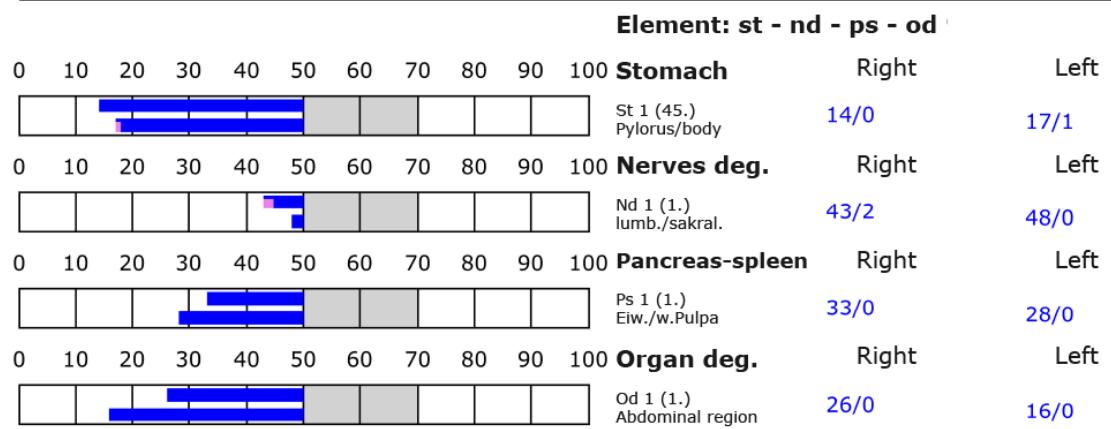
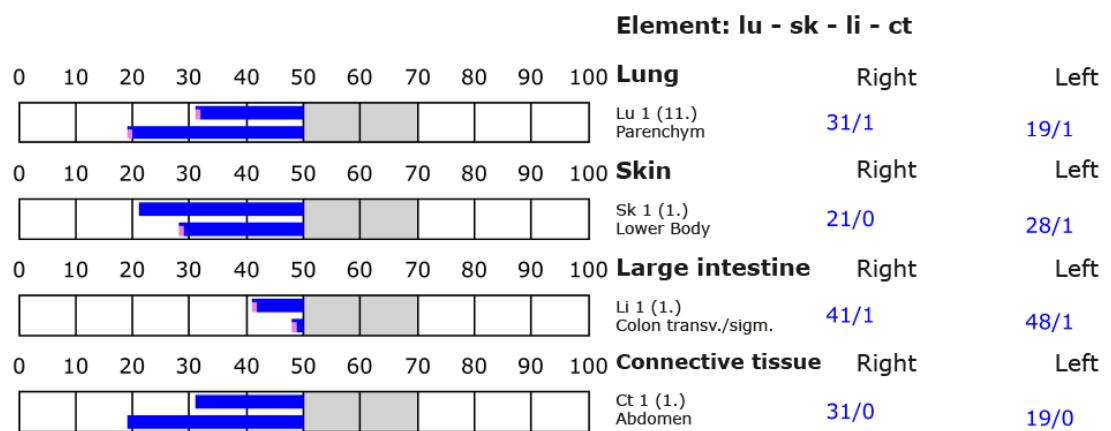
BESA basic test

++++: Indicator decline > 15 Skt.
+++: Indicator decline 6-15 Skt.
++: Indicator decline 3-5 Skt.

T: Total inflammation (>89 Skt.)
P: Partial inflammation (70-89 Skt.)

D: Degeneration (< 50 Skt.)

Standard values: (50-70 Skt.)





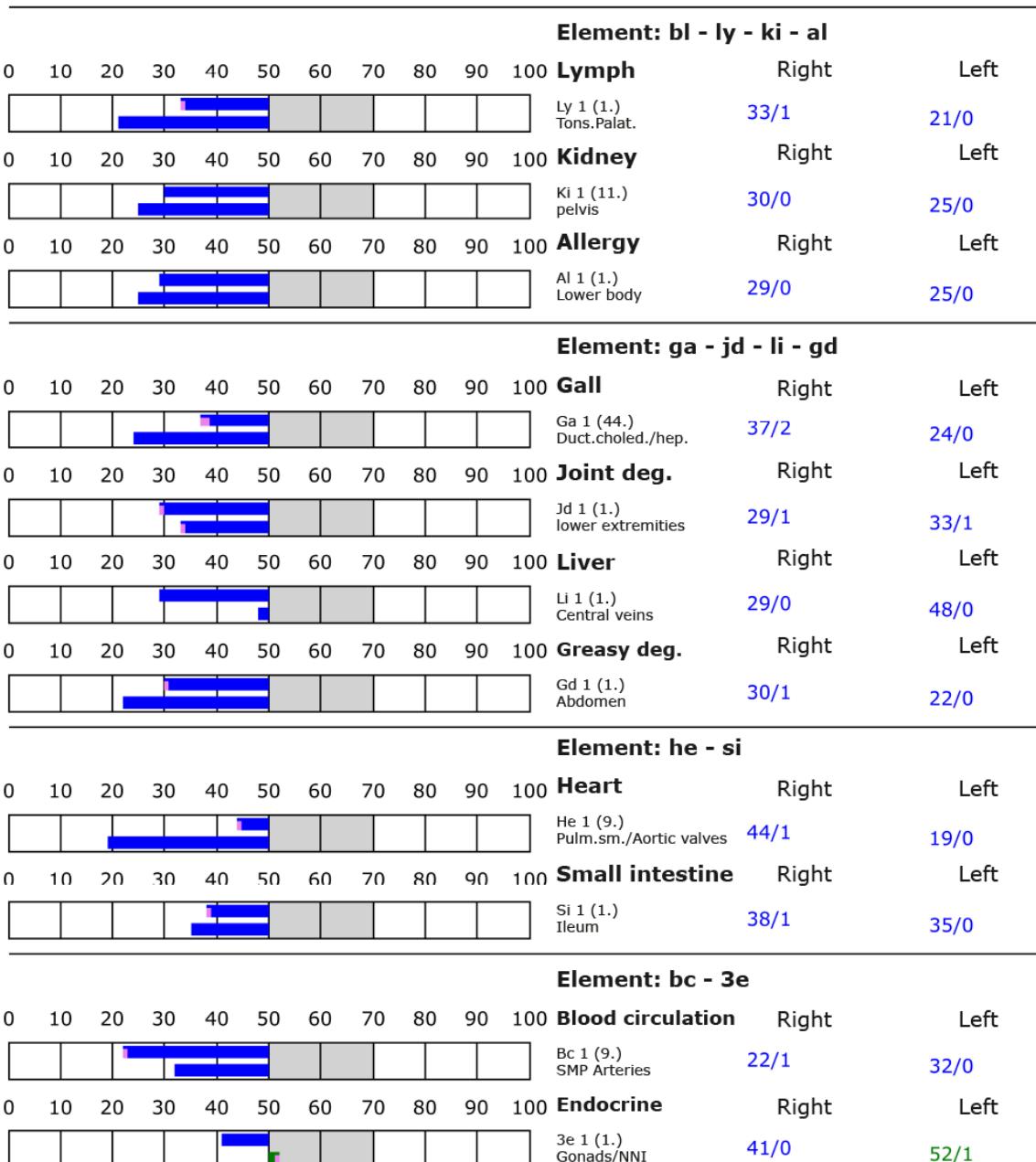
BESA basic test

+++ : Indicator decline > 15 Skt.
 ++ : Indicator decline 6-15 Skt.
 + : Indicator decline 3-5 Skt.

T: Total inflammation (>89 Skt.)
 P: Partial inflammation (70-89 Skt.)

D: Degeneration (< 50 Skt.)

Standard values: (50-70 Skt.)

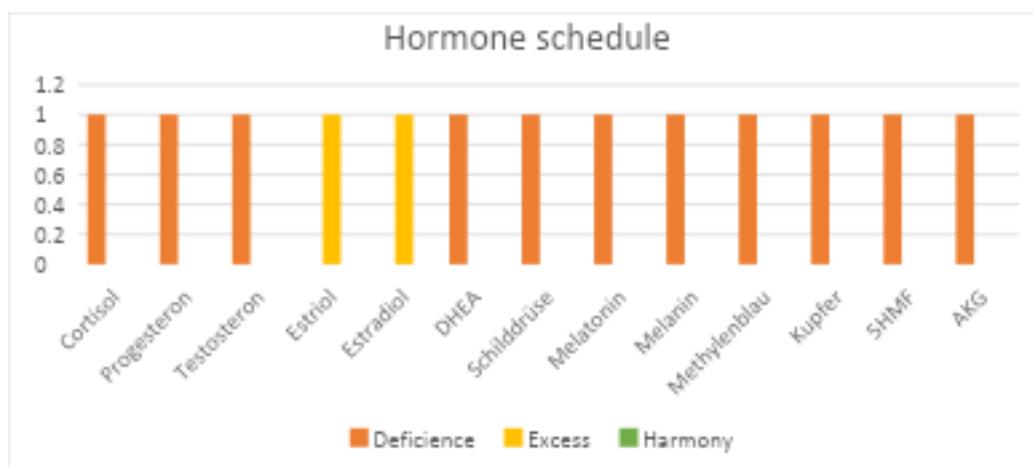


Hormone Schedule - AFTER

	Deficiency	Excess	Harmony
--	------------	--------	---------



	Hypofunction	Hyperfunction	
Cortisol	+		
Progesteron	+		
Testosteron	+		
Estriol		+	
Estradiol		+	
DHEA		+	
Schilddrüse	+		
Melatonin	+		
Melanin	+		
Methylenblau	+		
Kupfer	+		
5-HMF	+		
5-Hydroxymethylfulfural			
AKG	+		
Alpha-Ketoglutarat			



Cortisol-Level

	Morning	Midday	Evening
Cortisol			
too high			+
too low	+	+	
Neutral			

Elektromagnetic interference fields

	yes	no
GE1 Silicea – EMSF stress	+	
GE 2 elektromagnetic charge	+	
GE 3 stress of the radio transmitter	+	



Test subject 9 (P6) KK

BEFORE Testing – control group

BESA 5 Testing BASIC BEFORE

BESA-Test evaluation P83 2.0
from **02-12-2024 at 16:43 – 16:47** (4 minutes) page 37 to 39

Result: The measurement results indicated partially deep energetic stress at the meridian endpoints, and consequently, an effect on the participant's subordinate metabolic condition.

100 % in the blue area

Conclusion:

As the graphical representations show, **nearly all measurement points** are located within the **deeply degenerative blue range**, indicating a **state of energy deficiency**.

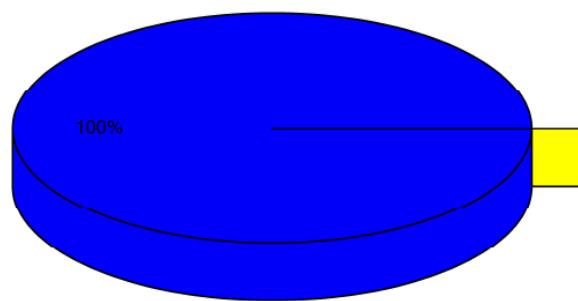
These measurement values reflect a **predominantly strong energy deficit** at the respective tested acupuncture points.

Comparisons of the **BESA charts** confirm the **stress-related influences** on the **energy-informational processes** within the participant's meridian system.

The subsequent **statistical results of the hormonal schema** show a **similar pattern of deregulation**, confirming the **expression of energy deficiency**.



Overview of BESA measuring



- Red: values with indicator decline
Decline greater than 2 (%)
- Yellow: high values without indicator decline
Values over 70 (%)
- Blue: low values
Values lower 50 (100%)
- Green: standard values
Values between 50 and 70 (%)

BESA basic test

+++: Indicator decline > 15 Skt.
++: Indicator decline 6-15 Skt.
+: Indicator decline 3-5 Skt.

T: Total inflammation (>89 Skt.)
P: Partial inflammation (70-89 Skt.)

D: Degeneration (< 50 Skt.)

Standard values: (50-70 Skt.)

Element: lu - sk - li - ct

0	10	20	30	40	50	60	70	80	90	100	Lung	Right	Left
											Lu 1 (11.) Parenchym	35/0	37/0
0	10	20	30	40	50	60	70	80	90	100	Skin	Right	Left
											Sk 1 (1.) Lower Body	32/0	35/1
0	10	20	30	40	50	60	70	80	90	100	Large intestine	Right	Left
											Li 1 (1.) Colon transv./sigm.	31/0	49/1
0	10	20	30	40	50	60	70	80	90	100	Connective tissue	Right	Left
											Ct 1 (1.) Abdomen	21/1	23/0

Element: st - nd - ps - od

0	10	20	30	40	50	60	70	80	90	100	Stomach	Right	Left
											St 1 (45.) Pylorus/body	38/0	33/0
0	10	20	30	40	50	60	70	80	90	100	Nerves deg.	Right	Left
											Nd 1 (1.) lumb./sakral.	44/1	43/0
0	10	20	30	40	50	60	70	80	90	100	Pancreas-spleen	Right	Left
											Ps 1 (1.) Eiw./w.Pulpa	34/1	29/1
0	10	20	30	40	50	60	70	80	90	100	Organ deg.	Right	Left
											Od 1 (1.) Abdominal region	34/1	33/1

Element: bl - ly - ki - al

0	10	20	30	40	50	60	70	80	90	100	Bladder	Right	Left
											BL 1 (67.) body	20/0	24/0



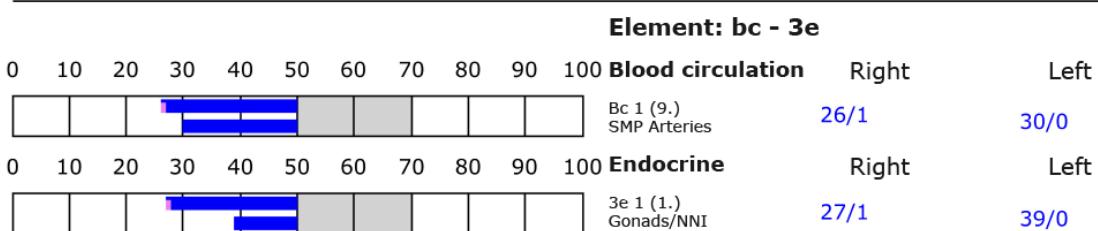
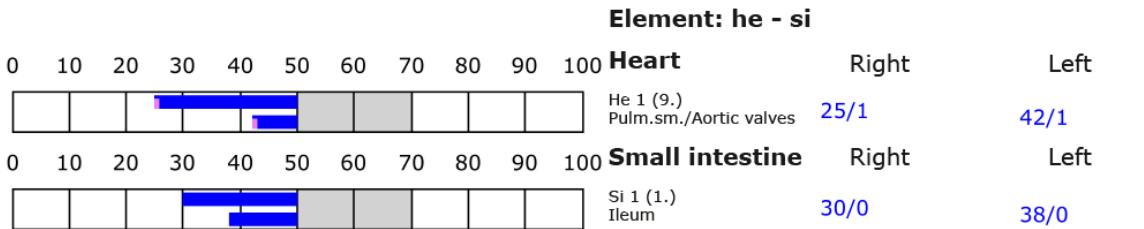
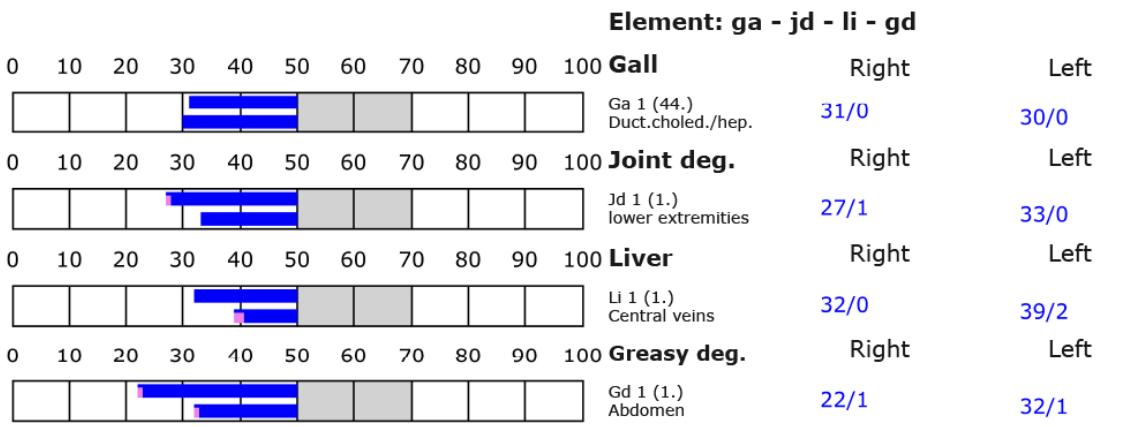
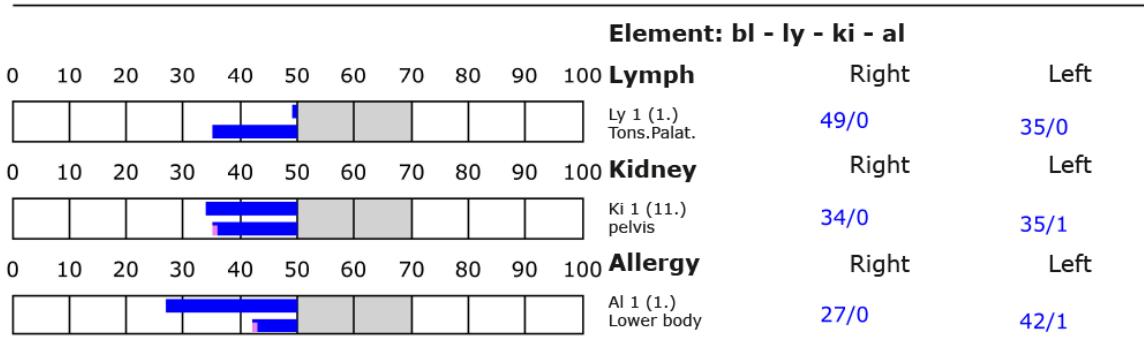
BESA basic test

+++: Indicator decline > 15 Skt.
++: Indicator decline 6-15 Skt.
+: Indicator decline 3-5 Skt.

T: Total inflammation (>89 Skt.)
P: Partial inflammation (70-89 Skt.)

D: Degeneration (< 50 Skt.)

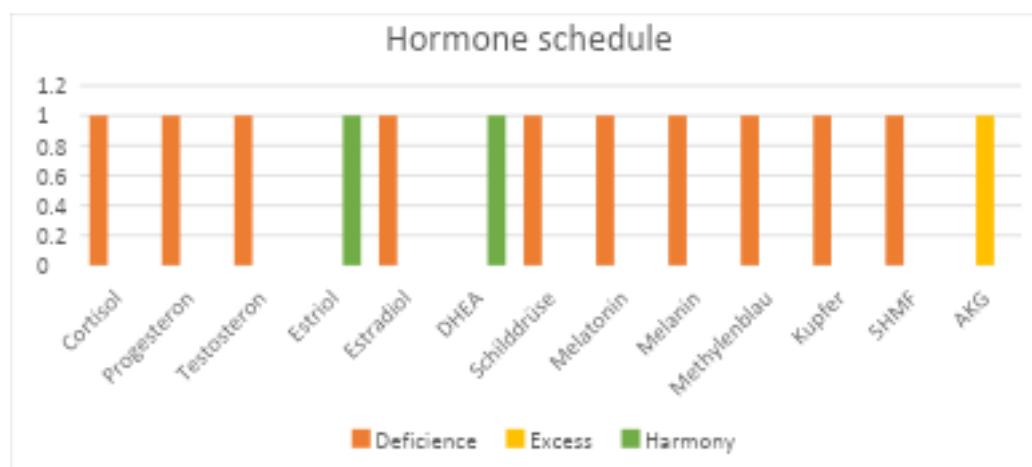
Standard values: (50-70 Skt.)





Hormone Schedule - before

	Deficiency	Excess	Harmony
	Hypofunction	Hyperfunction	
Cortisol	+		
Progesteron	+		
Testosteron	+		
Estriol			+
Estradiol	+		
DHEA			+
Schilddrüse	+		
Melatonin	+		
Melanin	+		
Methylenblau	+		
Kupfer	+		
5-HMF	+		
5-Hydroxymethylfulfural			
AKG		+	
Alpha-Ketoglutarat			



Cortisol-Level

	Morning	Midday	Evening
Cortisol			
too hoch			+
too low	+	+	
Neutral			

Elektromagnetic interference fields

	yes	no
GE1 Silicea – EMSF stress	+	
GE 2 elektromagnetic charge	+	
GE 3 stress of the radio transmitter	+	



Test subject 9 (P6) KK

AFTER Testing – control group

BESA 6 Testing AFTER

BESA-Test evaluation P83 2.0
from **07-01-2025 at 11:48 – 11:53** (5 minutes) page 41 to 43

Result: The measurement results after the application of the test object (placebo) showed no significant improvements at the meridian endpoints or in the participant's overall energetic condition.

95 % in the blue area

5 % in the green area

Conclusion:

As the graphical representations show, after approximately **four weeks of exposure to the placebo as the test object**, nearly all measurement points remained within the **blue, degenerative range** (indicating **energy deficiency within the meridian system**).

Only **5%** of the measurement values shifted into the **green, optimal and harmonized range** (representing a balanced energy system).

The **BESA analysis** revealed **no significant improvement** in the participant's **energetic state** compared to the **BESA pre-test (BEFORE)**.

All measurement values were found **deep within the degenerative zone**, well below the **50 Skt reference mark**.

It became evident that the **placebo** was **not capable of providing the necessary impulse** to counteract the deregulations identified in the **BESA pre-tests** and to initiate **harmonization or neutralization** toward a life-supporting energetic state.

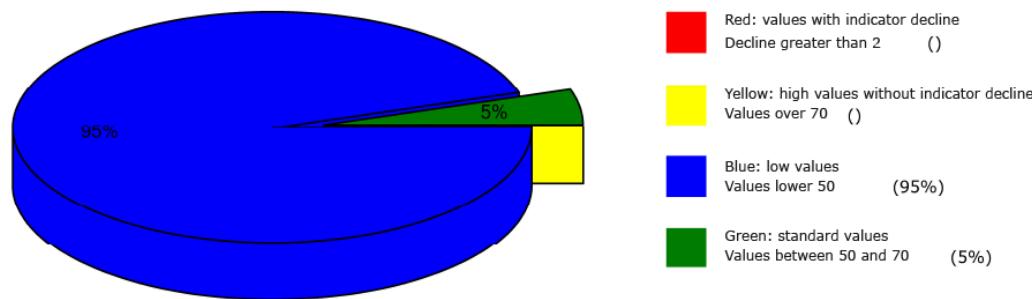
Comparisons of the **BESA charts** confirm the persistence of **stress-related factors** within the meridian system.

The subsequent **statistical results of the hormonal schema** show a **similar pattern of deregulation**, further confirming the **expression of energetic deficiency**.

The **empty object (placebo)** therefore **had no significant influence** on the **regulation of the energetic circuits**.



Overview of BESA measuring



BESA basic test

+++: Indicator decline > 15 Skt.

T: Total inflammation (>89 Skt.)

D: Degeneration (< 50 Skt.)

Standard values: (50-70 Skt.)

++: Indicator decline 6-15 Skt.

P: Partial inflammation (70-89 Skt.)

+: Indicator decline 3-5 Skt.

Element: lu - sk - li - ct

0	10	20	30	40	50	60	70	80	90	100	Lung	Right	Left
				41	1						Lu 1 (11.) Parenchym	41/1	35/1
0	10	20	30	40	50	60	70	80	90	100	Skin	Right	Left
				40	1						Sk 1 (1.) Lower Body	40/1	31/1
0	10	20	30	40	50	60	70	80	90	100	Large intestine	Right	Left
				35	0						Li 1 (1.) Colon transv./sigm.	35/0	49/1
0	10	20	30	40	50	60	70	80	90	100	Connective tissue	Right	Left
				24	0						Ct 1 (1.) Abdomen	24/0	33/0

Element: st - nd - ps - od

0	10	20	30	40	50	60	70	80	90	100	Stomach	Right	Left
				43	1						St 1 (45.) Pylorus/body	43/1	28/1
0	10	20	30	40	50	60	70	80	90	100	Nerves deg.	Right	Left
				28	1						Nd 1 (1.) lumb./sakral.	28/1	51/1
0	10	20	30	40	50	60	70	80	90	100	Pancreas-spleen	Right	Left
				52	1						Ps 1 (1.) Eiw./w.Pulpa	52/1	32/0
0	10	20	30	40	50	60	70	80	90	100	Organ deg.	Right	Left
				43	1						Od 1 (1.) Abdominal region	43/1	41/0

Element: bl - ly - ki - al

0	10	20	30	40	50	60	70	80	90	100	Bladder	Right	Left
				27	0						BL 1 (67.) body	27/0	38/0



BESA basic test

+++: Indicator decline > 15 Skt.

T: Total inflammation (>89 Skt.)

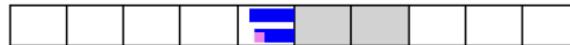
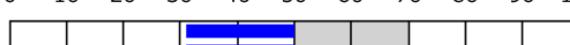
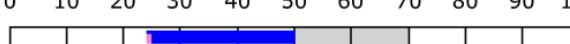
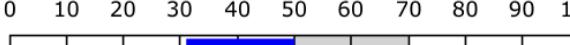
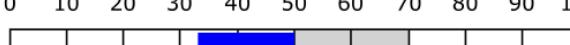
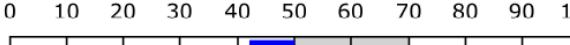
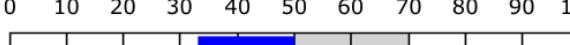
D: Degeneration (< 50 Skt.)

Standard values: (50-70 Skt.)

++: Indicator decline 6-15 Skt.

P: Partial inflammation (70-89 Skt.)

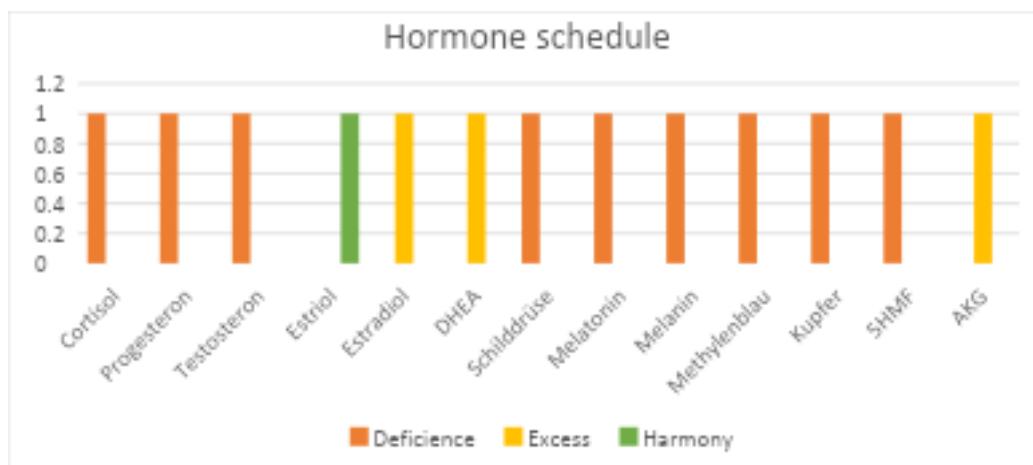
+: Indicator decline 3-5 Skt.

Element: bl - ly - ki - al												
0	10	20	30	40	50	60	70	80	90	100	Lymph	Right Left
					42/0						43/2	
0	10	20	30	40	50	60	70	80	90	100	Kidney	Right Left
					45/0						42/1	
0	10	20	30	40	50	60	70	80	90	100	Allergy	Right Left
					31/0						41/0	
Element: ga - jd - li - gd												
0	10	20	30	40	50	60	70	80	90	100	Gall	Right Left
					34/1						31/0	
0	10	20	30	40	50	60	70	80	90	100	Joint deg.	Right Left
					31/0						31/0	
0	10	20	30	40	50	60	70	80	90	100	Liver	Right Left
					24/1						26/0	
0	10	20	30	40	50	60	70	80	90	100	Greasy deg.	Right Left
					31/0						36/0	
Element: he - si												
0	10	20	30	40	50	60	70	80	90	100	Heart	Right Left
					33/0						49/1	
0	10	20	30	40	50	60	70	80	90	100	Small intestine	Right Left
					42/0						33/1	
Element: bc - 3e												
0	10	20	30	40	50	60	70	80	90	100	Blood circulation	Right Left
					33/0						43/0	
0	10	20	30	40	50	60	70	80	90	100	Endocrine	Right Left
					35/1						43/1	



Hormone Schedulea - AFTER

	Deficiency	Excess	Harmony
	Hypofunction	Hyperfunction	
Cortisol	+		
Progesteron	+		
Testosteron	+		
Estriol			+
Estradiol		+	
DHEA		+	+
Schilddrüse	+		
Melatonin	+		
Melanin	+		
Methylenblau	+		
Kupfer	+		
5-HMF	+		
5-Hydroxymethylfulfural			
AKG		+	
Alpha-Ketoglutarat			



Cortisol-Level

	Morning	Midday	Evening
Cortisol			
too high			+
too low	+	+	
neutral			

Elektromagnetic interference fields

	yes	no
GE 1 Silicea – EMSF stress	+	



GE 2 elektromagnetic charge	+	
GE 3 stress of the radio transmitter	+	

Test subject 10 (P8) RK

BEFORE Testing – control group

BESA 7 Testing BASIC BEFORE

BESA-Test evaluation P83 2.0
from **07-01-2025 at 17:08 – 17:12** (4 minutes) page 45 to 47

Result: The measurement results indicated energetic stress at several meridian endpoints and, consequently, an effect on the participant's subordinate metabolic condition.

97 % in the blue area

2 % in the green area

1 % in the yellow transition area

Conclusion:

As the graphical representations show, **almost all measurement points** are located in the **degenerative blue range** (indicating **energy deficiency**).

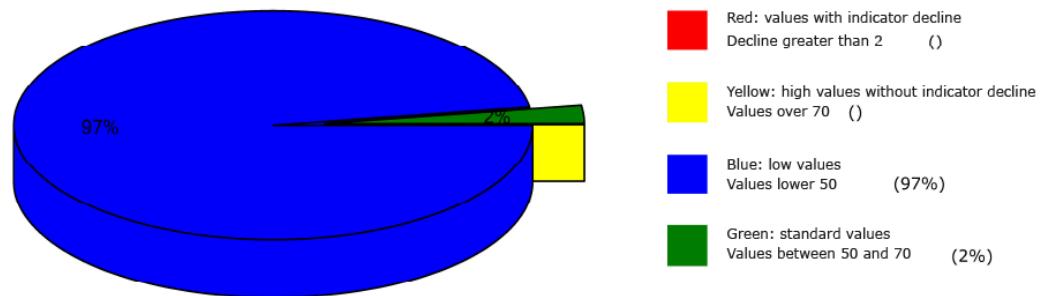
These measurement values reflect an **energy deficit** in many of the tested acupuncture points.

Comparisons of the **BESA charts** confirm the **stress-inducing influences** on the **energy-informational dynamics** within the participant's meridian system.

The subsequent **statistical evaluations of the hormonal schema** show a **similar pattern of deregulation**, confirming the **expression of energetic deficiency**.



Overview of BESA measuring





BESA basic test

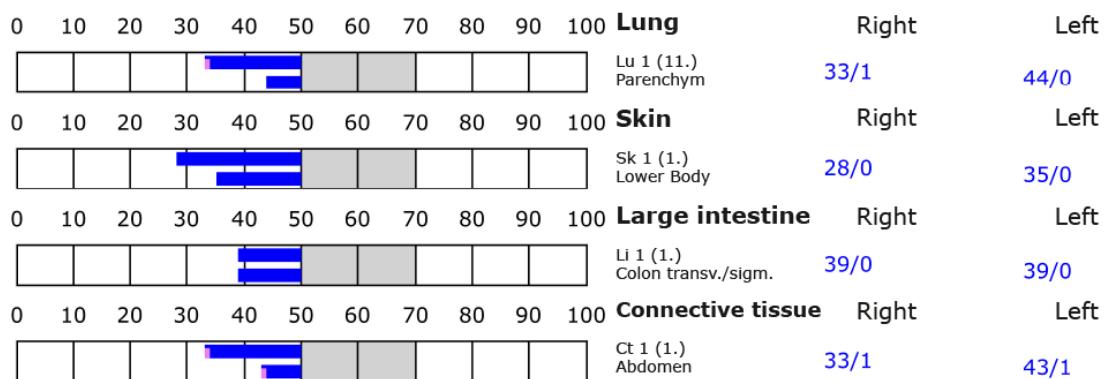
+++: Indicator decline > 15 Skt.
++: Indicator decline 6-15 Skt.
+: Indicator decline 3-5 Skt.

T: Total inflammation (>89 Skt.)
P: Partial inflammation (70-89 Skt.)

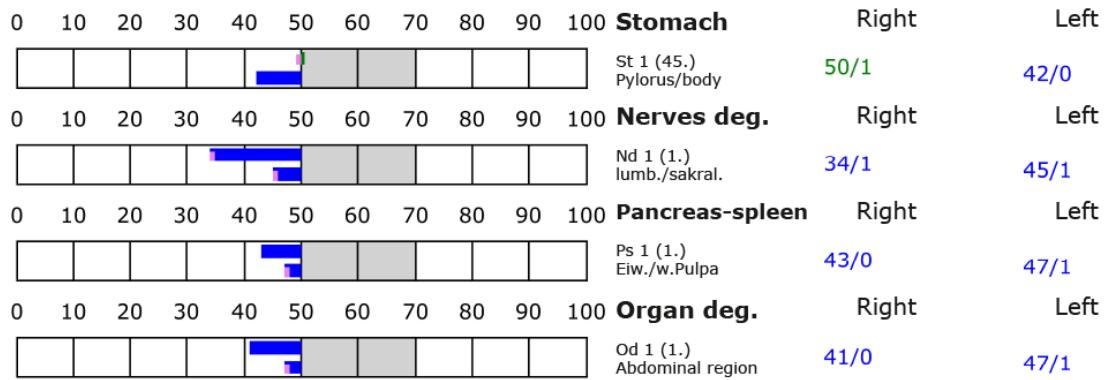
D: Degeneration (< 50 Skt.)

Standard values: (50-70 Skt.)

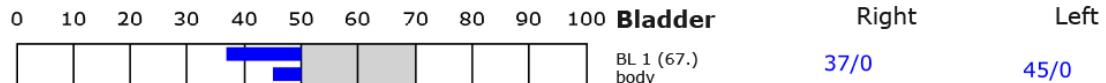
Element: lu - sk - li - ct



Element: st - nd - ps - od



Element: bl - ly - ki - al





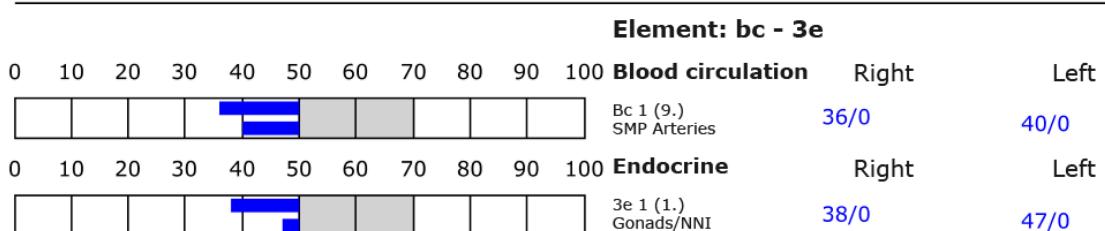
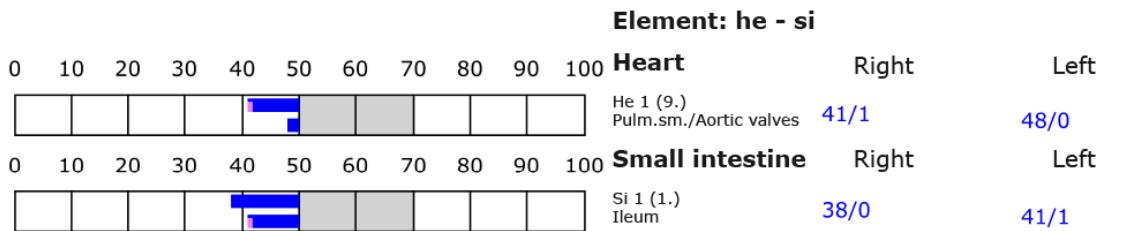
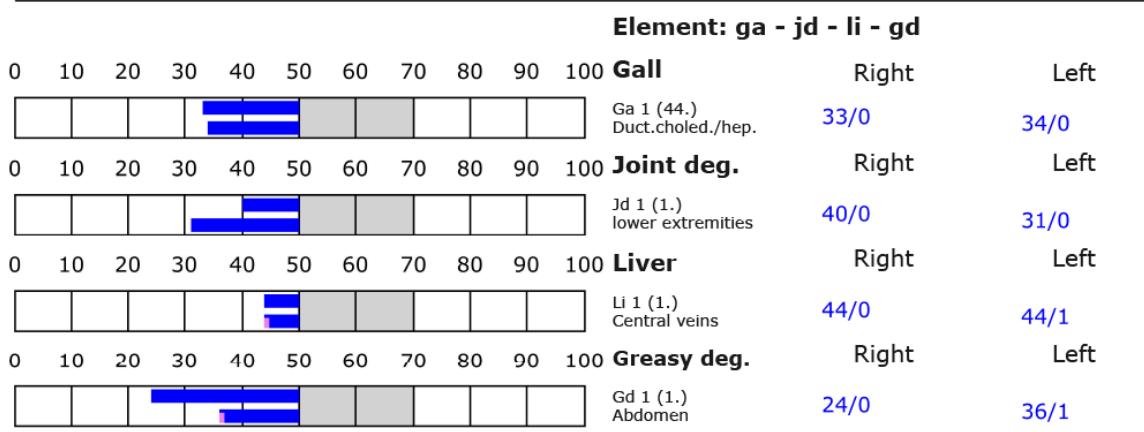
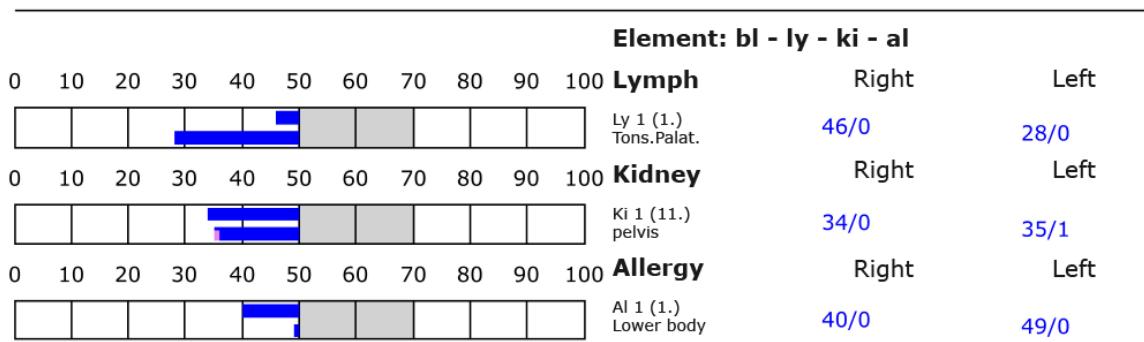
BESA basic test

+++: Indicator decline > 15 Skt.
++: Indicator decline 6-15 Skt.
+: Indicator decline 3-5 Skt.

T: Total inflammation (>89 Skt.)
P: Partial inflammation (70-89 Skt.)

D: Degeneration (< 50 Skt.)

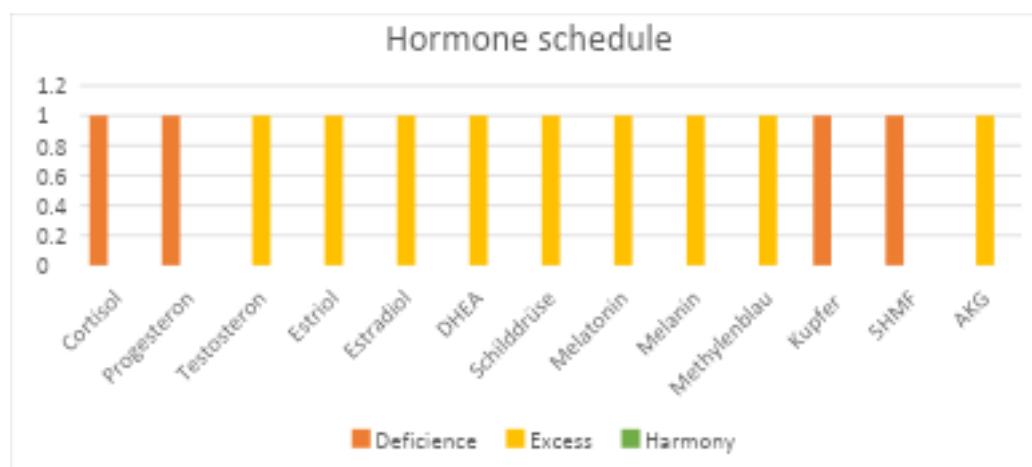
Standard values: (50-70 Skt.)





Hormone Schedule - BEFORE

	Deficiency	Excess	Harmony
	Hypofunction	Hyperfunction	
Cortisol	+		
Progesteron	+		
Testosteron		+	
Estriol		+	
Estradiol		+	
DHEA		+	
Schilddrüse		+	
Melatonin		+	
Melanin		+	
Methylenblau		+	
Kupfer	+		
5-HMF	+		
5-Hydroxymethylfulfural			
AKG		+	
Alpha-Ketoglutarat			



Cortisol-Level

	Morning	Midday	Evening
Cortisol			
too high			+
too low	+	+	
Neutral			

Elektromagnetic interference fields

	yes	No
GE1 Silicea – EMSF stress	+	
GE 2 elektromagnetic charge	+	
GE 3 stress of the radio transmitter	+	



Test subject 10 (P8) RK

AFTER Testing – control group

BESA 8 Testing AFTER

BESA-Test evaluation P83 2.0
from **09-02-2025 at 15:04 to 15:10 (6 minutes)** page 49 to 51

Result: The measurement results after the application of the placebo as the test object showed no noteworthy or significant changes at the meridian endpoints or in the participant's overall energetic condition.

97 % in the blue area

2 % in the green area

1 % in the yellow transition area

Conclusion:

As the graphical representations show, after approximately **four weeks of exposure to the placebo as the test object**, all measurement points remained **virtually unchanged**.

A large portion of the measurements even shifted **deeper into the blue range**, indicating a **degenerative energetic system** corresponding to a **marked energy deficiency**.

The **BESA analysis** revealed **no significant improvement** in the participant's energetic condition compared with the **BESA pre-test (BEFORE)**.

It became evident that the **placebo object** was **not capable of providing the necessary impulse** to counteract the deregulations observed in the **BESA pre-tests**, nor to initiate **harmonization (neutralization)** toward a life-supporting energetic balance.

Comparisons of the **BESA charts** largely confirm the **persistence of stress factors** within the meridian system, as seen in the previous BESA test.

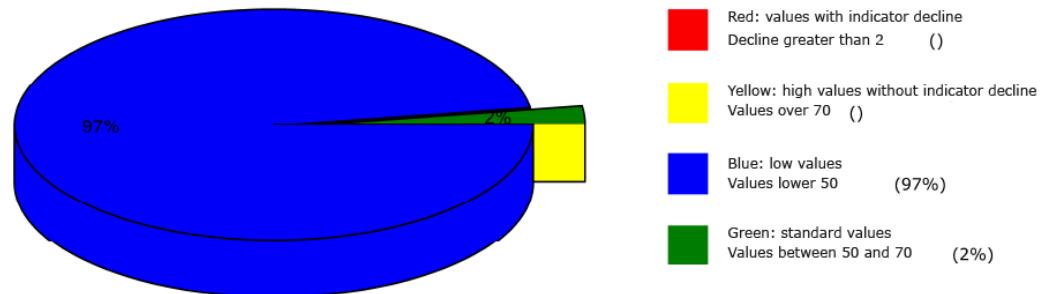
The subsequent **statistical evaluations of the hormonal schema** also confirm an **almost unchanged pattern of deregulation and energy deficiency**.

The **empty object (placebo)** therefore **had no significant influence** on the **regulation of the energetic circuits**.

.



Overview of BESA measuring





BESA basic test

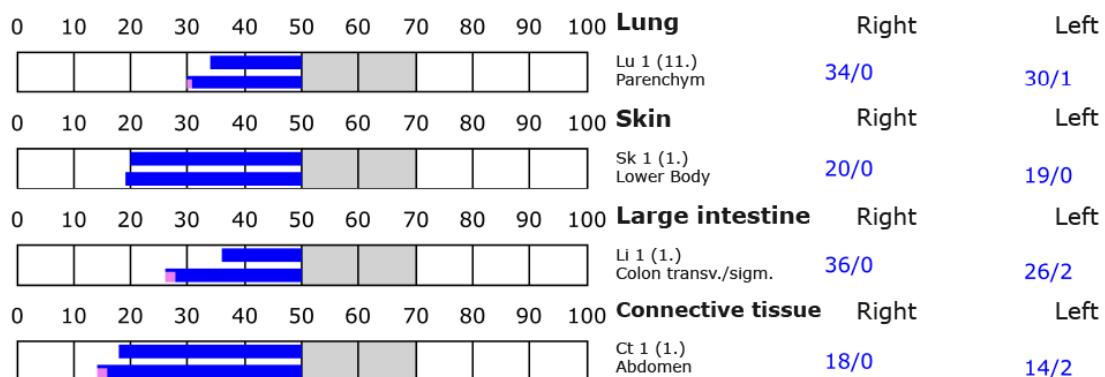
+++: Indicator decline > 15 Skt.
++: Indicator decline 6-15 Skt.
+: Indicator decline 3-5 Skt.

T: Total inflammation (>89 Skt.)
P: Partial inflammation (70-89 Skt.)

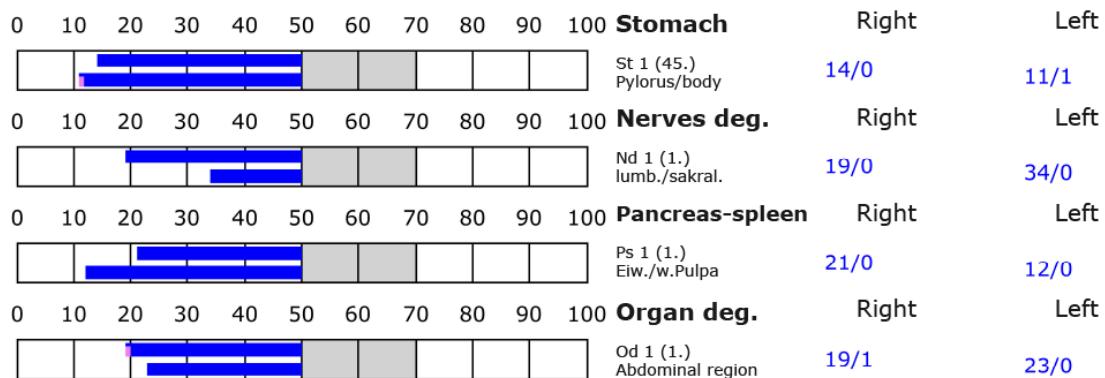
D: Degeneration (< 50 Skt.)

Standard values: (50-70 Skt.)

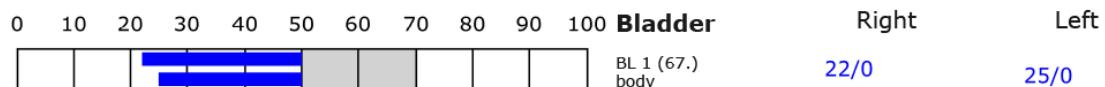
Element: lu - sk - li - ct



Element: st - nd - ps - od



Element: bl - lv - ki - al





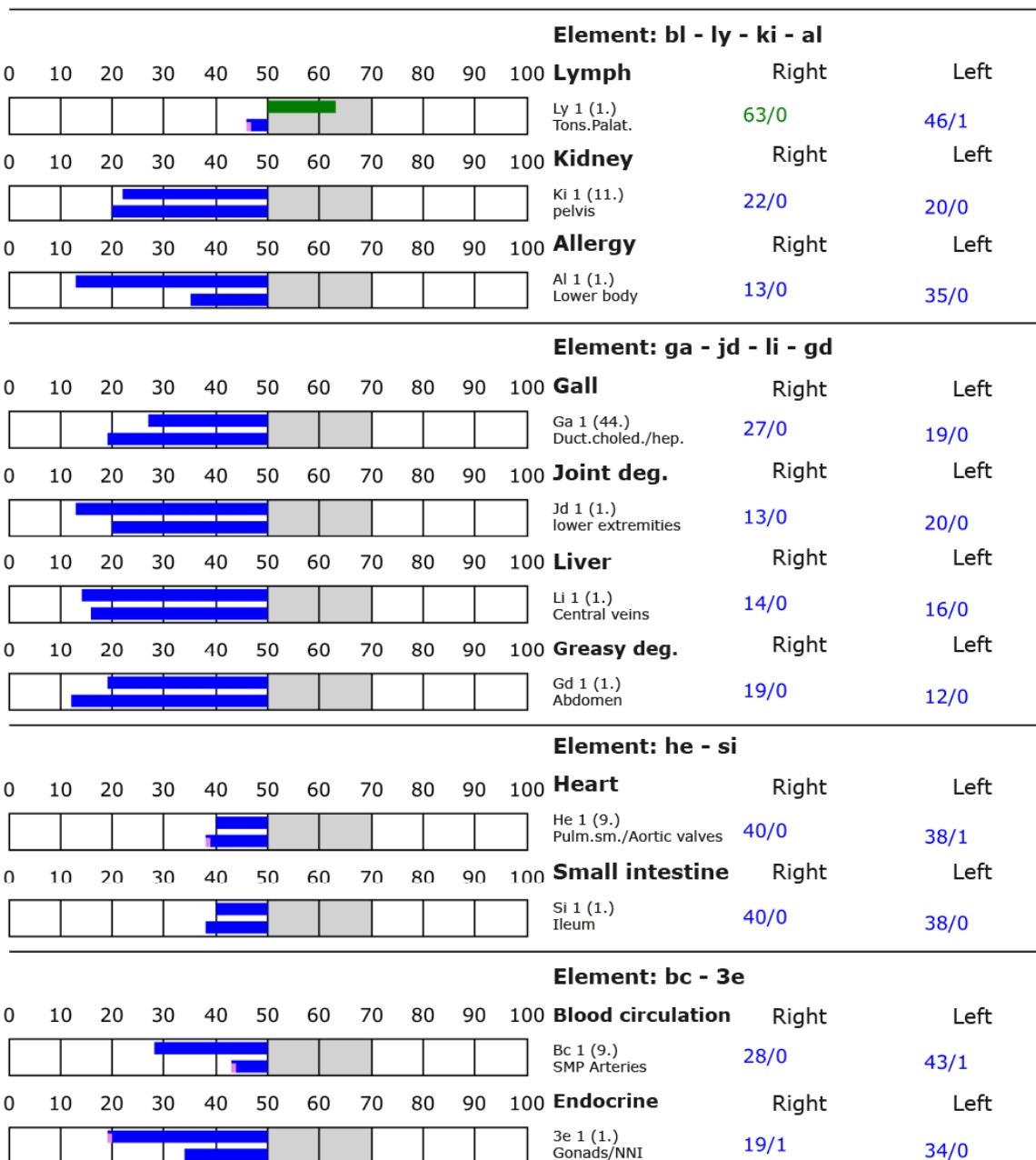
BESA basic test

+++ : Indicator decline > 15 Skt.
++ : Indicator decline 6-15 Skt.
+ : Indicator decline 3-5 Skt.

T: Total inflammation (>89 Skt.)
P: Partial inflammation (70-89 Skt.)

D: Degeneration (< 50 Skt.)

Standard values: (50-70 Skt.)

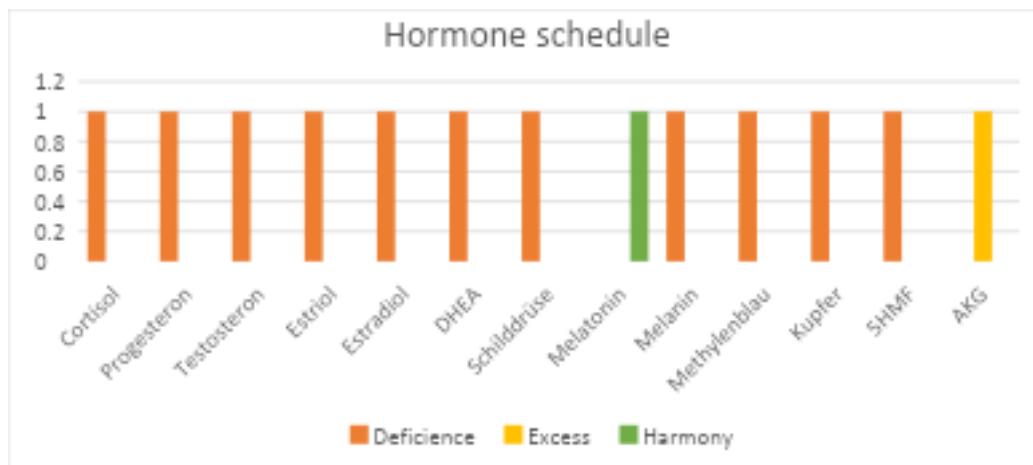


Hormone Schedule - AFTER

	Deficiency	Excess	Harmony
--	------------	--------	---------



	Hypofunction	Hyperfunction	
Cortisol	+		
Progesteron	+		
Testosteron	+		
Estriol	+		
Estradiol	+		
DHEA	+		
Schilddrüse	+		
Melatonin			+
Melanin	+		
Methylenblau	+		
Kupfer	+		
5-HMF	+		
5-Hydroxymethylfulfural			
AKG		+	
Alpha-Ketoglutarat			



Cortisol-Level

	Morning	Midday	Evening
Cortisol			
too high			
too low	+	+	+
neutral			

Elektromagnetic interference fields

	yes	No
GE 1 Silicea – EMSF stress	+	
GE 2 elektromagnetic charge	+	
GE 3 stress of the radio transmitter	+	

Test subject 11 (P11) EM



BEFORE Testing – control group

BESA 10 Testing BASIC BEFORE

BESA-Test evaluation P83 2.0

from **07-01-2025 at 18:01 – 18:05** (4 minutes) page 53 to 55

Result: The measurement results indicated partial energetic stress at several meridian endpoints and, consequently, effects on the participant's subordinate metabolic situation.

77 % in the blue area

22 % in the green area

1 % in the yellow transition area

Conclusion:

As the graphical representations show, **many measurement points** are located within the **degenerative blue range** (indicating **energy deficiency**).

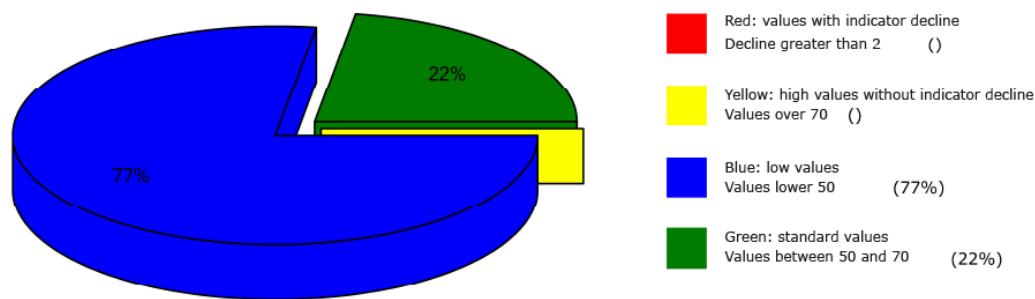
These measurement values reflect a **moderate energy deficit** at the respective tested acupuncture points.

Comparisons of the **BESA charts** confirm the **stress-related influences** on the **energy-informational processes** within the participant's meridian system.

The subsequent **statistical evaluations of the hormonal schema** show a **similar pattern of deregulation**, confirming the **expression of energy deficiency**.



Overview of BESA measuring



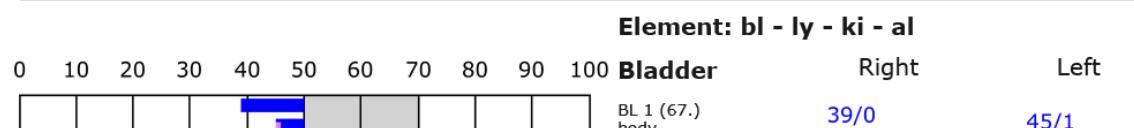
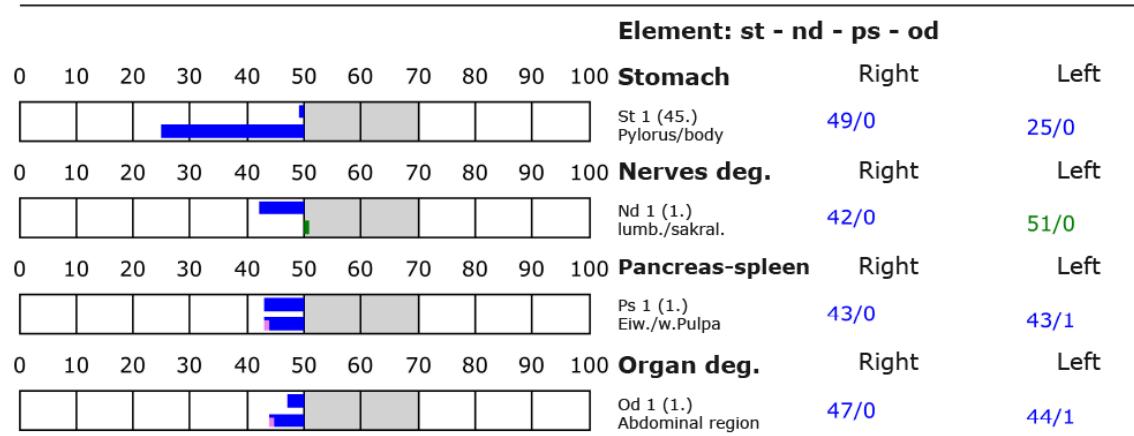
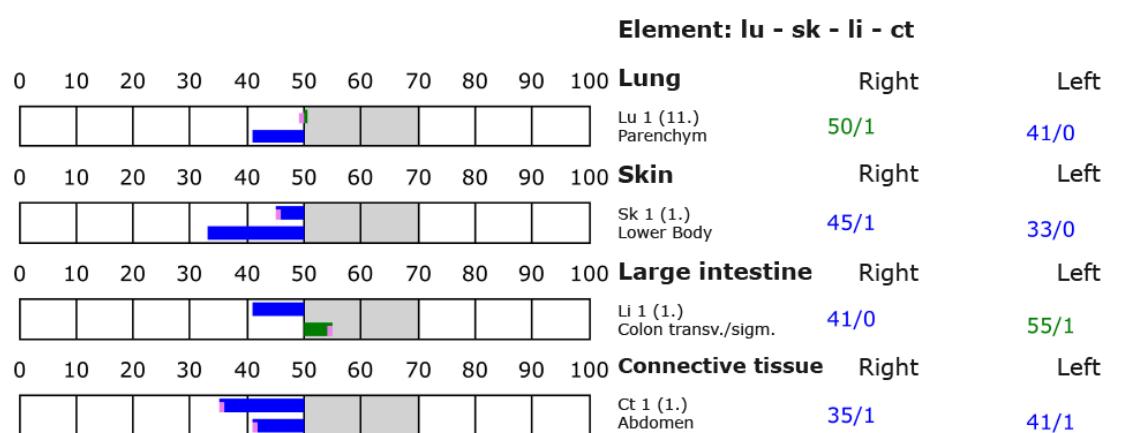
BESA basic test

+++: Indicator decline > 15 Skt.
++: Indicator decline 6-15 Skt.
+: Indicator decline 3-5 Skt.

T: Total inflammation (>89 Skt.)
P: Partial inflammation (70-89 Skt.)

D: Degeneration (< 50 Skt.)

Standard values: (50-70 Skt.)





BESA basic test

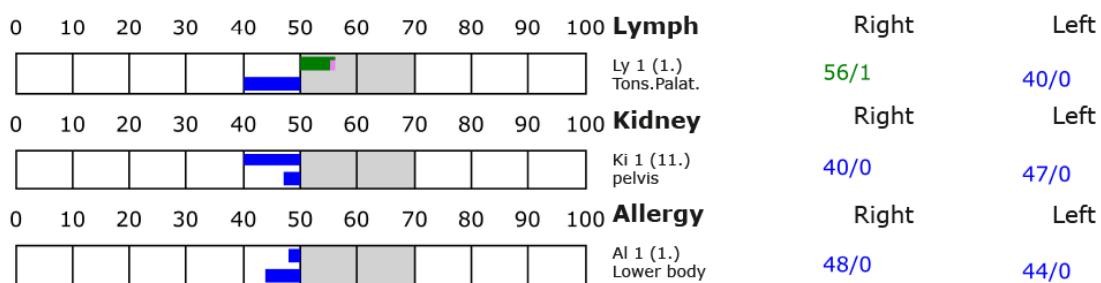
+++: Indicator decline > 15 Skt.
++: Indicator decline 6-15 Skt.
+: Indicator decline 3-5 Skt.

T: Total inflammation (>89 Skt.)
P: Partial inflammation (70-89 Skt.)

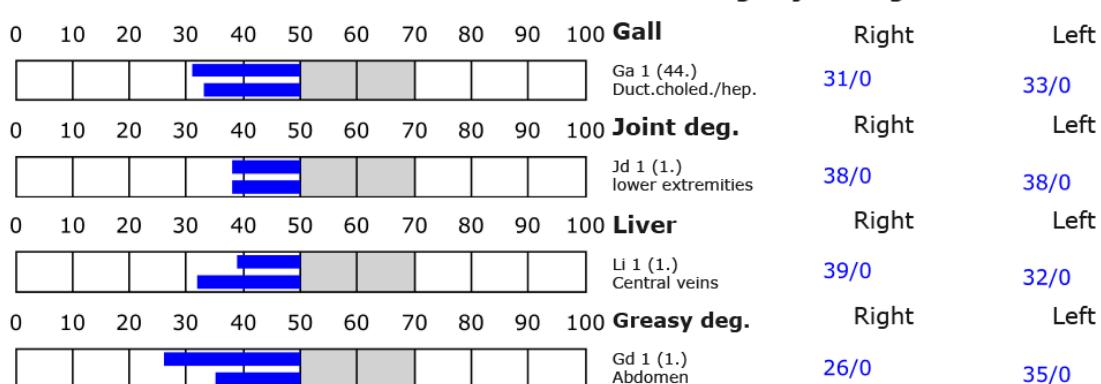
D: Degeneration (< 50 Skt.)

Standard values: (50-70 Skt.)

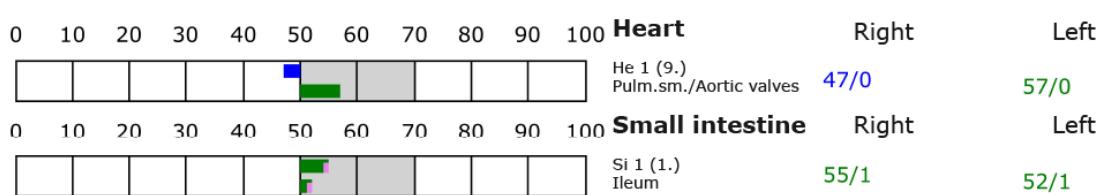
Element: bl - ly - ki - al



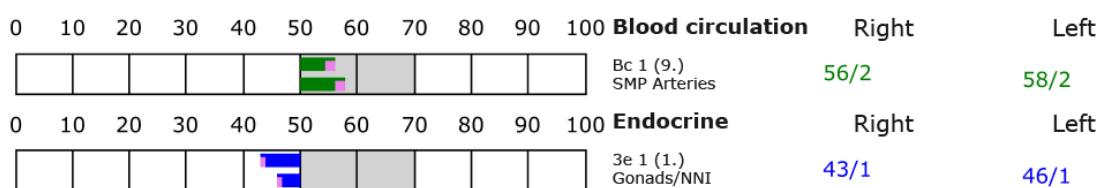
Element: qa - id - li - qd



Element: he - si



Element: bc - 3e

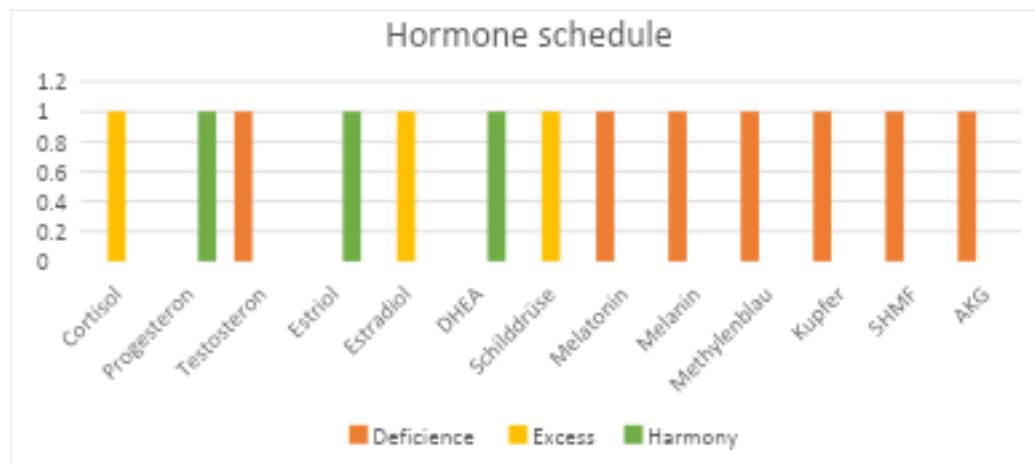


Hormone Schedule - BEFORE

	Deficiency	Excess	Harmony
--	------------	--------	---------



	Hypofunction	Hyperfunction	
Cortisol		+	
Progesteron			+
Testosteron	+		
Estriol			+
Estradiol		+	
DHEA			+
Schilddrüse		+	
Melatonin	+		
Melanin	+		
Methylenblau	+		
Kupfer	+		
5-HMF	+		
5-Hydroxymethylfulfural			
AKG	+		
Alpha-Ketoglutarat			



Cortisol-Level

	Morning	Midday	Evening
Cortisol			
too high	+	+	
too low			+
Neutral			

Elektromagnetic interference fields

	yes	no
GE1 Silcea – EMSF stress	+	
GE 2 elektromagnetic charge	+	
GE 3 stress of the radio transmitter	+	

Test subject 11 (P11) EM



AFTER Testing – control group

BESA 10 Testing AFTER

BESA-Test evaluation P83 2.0

from **02-02-2025 at 17:56 – 18:01** (5 minutes) page 57 to 59

Result: The measurement results after the application of the test object (placebo) showed slight but not significant improvements at the meridian endpoints and in the participant's overall energetic condition.

67 % in the blue area

32 % in the green area

1 % in the yellow transition area

Conclusion:

As the graphical representations show, after approximately **four weeks of exposure to the placebo as the test object, many measurement points** appeared in the **green, optimal, and harmonized range** (representing a balanced energy system).

However, the **majority of measurement points** still remained within the **degenerative blue range**.

The **BESA analysis** revealed **no significant improvement** in the participant's **energetic condition** within the meridian system compared with the **BESA pre-test (BEFORE)**.

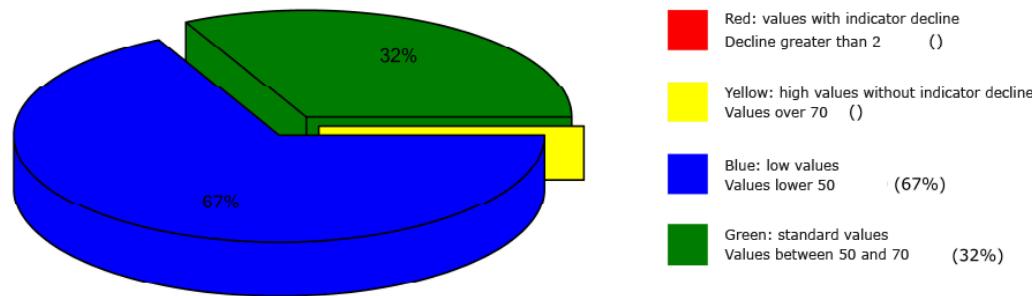
It became evident that the **placebo test object** was **not capable of providing the necessary impulse** to counteract the deregulations observed in the **BESA pre-tests**, nor to initiate **harmonization (neutralization)** toward a life-supporting energetic balance.

Comparisons of the **BESA charts** confirm the persistence of **stress-related influences** within the meridian system.

The subsequent **statistical evaluations of the hormonal schema** also confirm an **almost unchanged pattern of deregulation and energy deficiency**.



Overview of BESA measuring



BESA basic test

+++: Indicator decline > 15 Skt. T: Total inflammation (>89 Skt.) D: Degeneration (< 50 Skt.) Standard values: (50-70 Skt.)
++: Indicator decline 6-15 Skt. P: Partial inflammation (70-89 Skt.)
+: Indicator decline 3-5 Skt.

Element: lu - sk - li - ct

0	10	20	30	40	50	60	70	80	90	100	Lung	Right	Left
											Lu 1 (11.) Parenchym	33/0	58/1
0	10	20	30	40	50	60	70	80	90	100	Skin	Right	Left
											Sk 1 (1.) Lower Body	50/0	41/0
0	10	20	30	40	50	60	70	80	90	100	Large intestine	Right	Left
											Li 1 (1.) Colon transv./sigm.	40/1	49/0
0	10	20	30	40	50	60	70	80	90	100	Connective tissue	Right	Left
											Ct 1 (1.) Abdomen	57/1	34/0

Element: st - nd - ps - od

0	10	20	30	40	50	60	70	80	90	100	Stomach	Right	Left
											St 1 (45.) Pylorus/body	50/1	47/1
0	10	20	30	40	50	60	70	80	90	100	Nerves deg.	Right	Left
											Nd 1 (1.) lumb./sakral.	43/1	47/0
0	10	20	30	40	50	60	70	80	90	100	Pancreas-spleen	Right	Left
											Ps 1 (1.) Eiw./w.Pulpa	46/0	48/1
0	10	20	30	40	50	60	70	80	90	100	Organ deg.	Right	Left
											Od 1 (1.) Abdominal region	56/2	34/1

Element: bl - ly - ki - al

0	10	20	30	40	50	60	70	80	90	100	Bladder	Right	Left
											BL 1 (67.) body	46/1	51/1



BESA basic test

+++: Indicator decline > 15 Skt.

T: Total inflammation (> 89 Skt.)

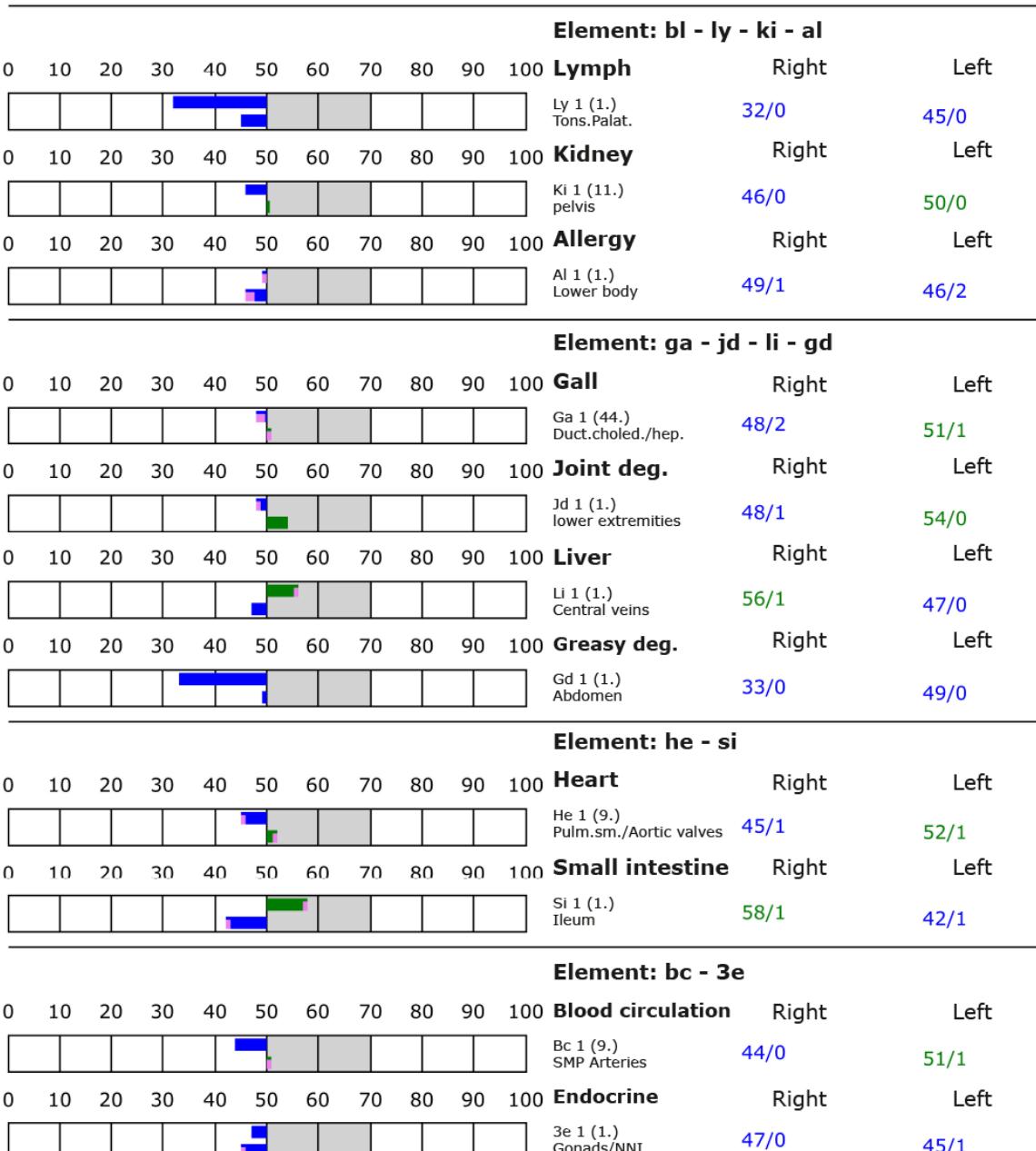
D: Degeneration (< 50 Skt.)

Standard values: (50-70 Skt.)

++: Indicator decline 6-15 Skt.

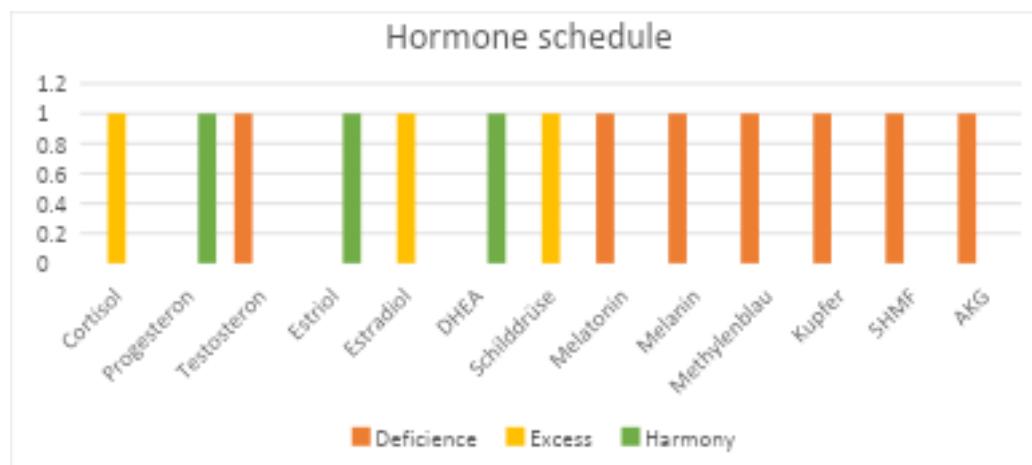
P: Partial inflammation (70-89 Skt.)

+: Indicator decline 3-5 Skt.



Hormone Schedule - AFTER

	Deficiency	Excess	Harmony
	Hypofunction	Hyperfunction	
Cortisol		+	
Progesteron			+
Testosteron	+		
Estriol			+
Estradiol		+	
DHEA			+
Schilddrüse		+	
Melatonin	+		
Melanin	+		
Methylenblau	+		
Kupfer	+		
5-HMF	+		
5-Hydroxymethylfulfural			
AKG	+		
Alpha-Ketoglutarat			



Cortisol-Level

	Morning	Midday	Evening
Cortisol			
too high	+	+	
Too low			
Neutral			+

Elektromagnetic interference fields

	yes	no
GE 1 Silicea – EMSF stress		+
GE 2 elektromagnetic charge		+



GE 3 stress of the radio transmitter		+
--------------------------------------	--	---

Test subject 12 (P12) BS

BEFORE Testing – control group

BESA 11 Testing BASIC BEFORE

BESA-Test evaluation P83 2.0
from **06-12-2024 at 14:34 – 14:41** (7 minutes) page 61 to 63

Result: The measurement results indicated energetic stress at several meridian endpoints and, consequently, an impact on the participant's subordinate metabolic condition.

72 % in the blue area

27 % in the green area

1 % in the yellow transition area

Conclusion:

As the graphical representations show, **many measurement points** are located within the **degenerative blue range** (indicating **energy deficiency**).

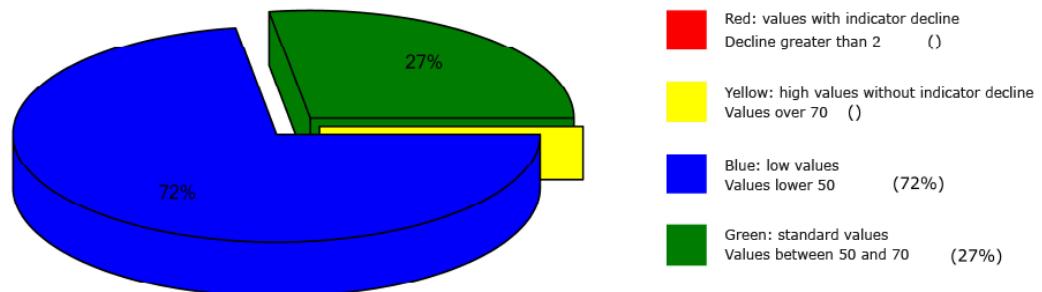
27% of the measurement values were found in the **green range**, representing **optimal regulatory behavior**.

All remaining measurement values indicate a **moderate energy deficit** at the respective tested acupuncture points.

Comparisons of the **BESA charts** confirm the **stress-related influences** on the **energy-informational processes** within the participant's meridian system.

The subsequent **statistical evaluations of the hormonal schema** show a **similar pattern of deregulation**, confirming the **expression of energy deficiency**.

Overview of BESA measuring





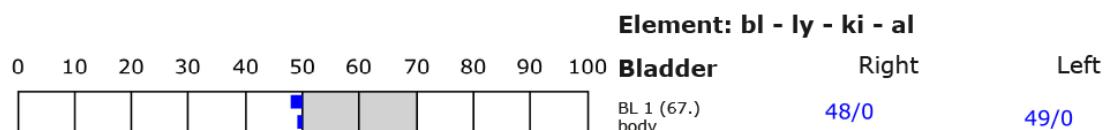
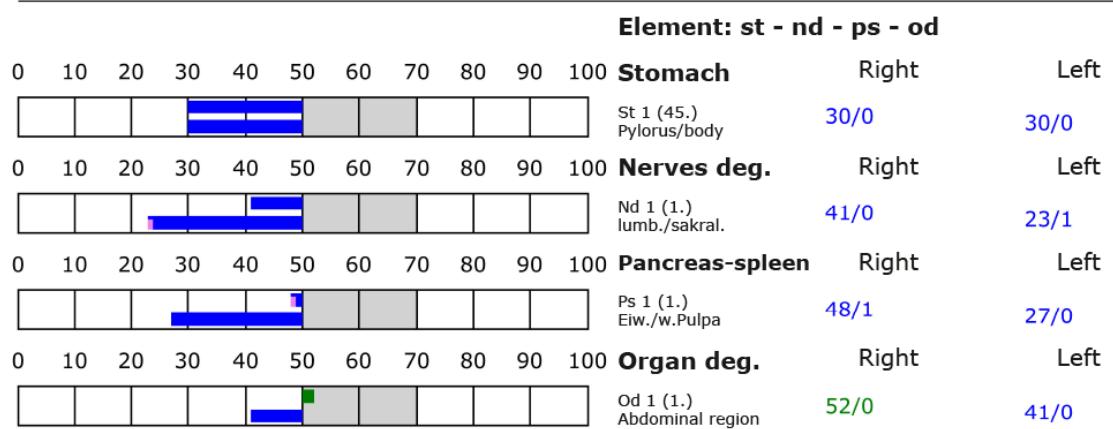
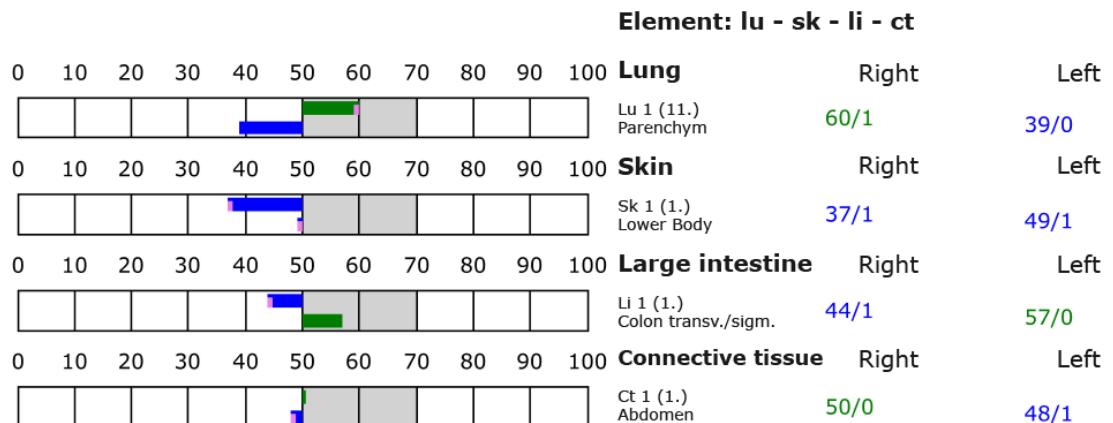
BESA basic test

++++: Indicator decline > 15 Skt.
+++: Indicator decline 6-15 Skt.
++: Indicator decline 3-5 Skt.

T: Total inflammation (>89 Skt.)
P: Partial inflammation (70-89 Skt.)

D: Degeneration (< 50 Skt.)

Standard values: (50-70 Skt.)





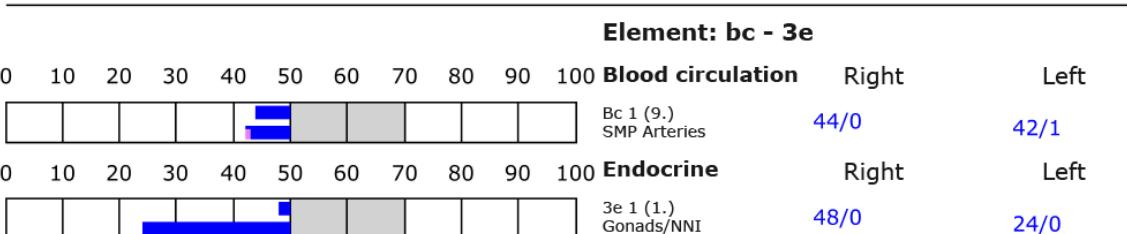
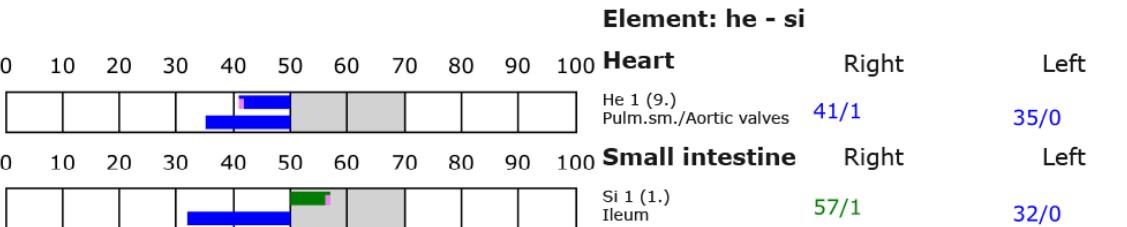
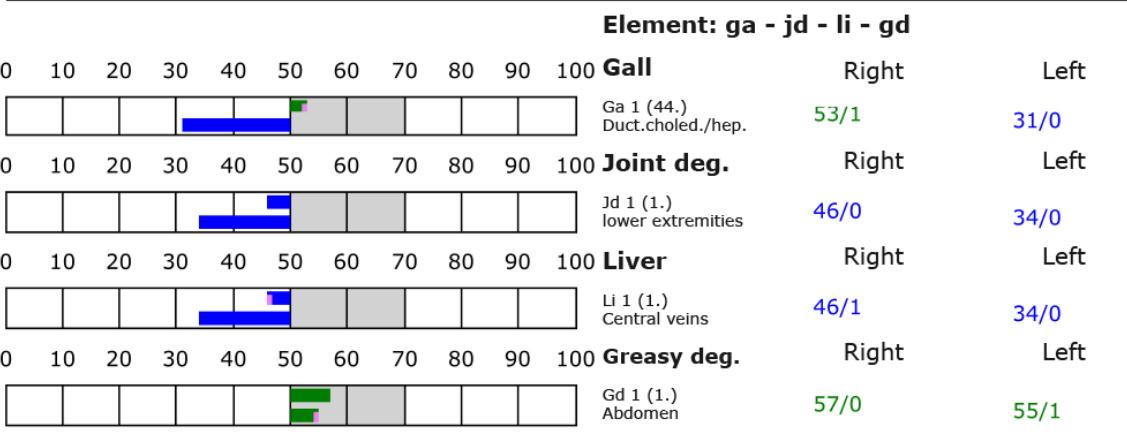
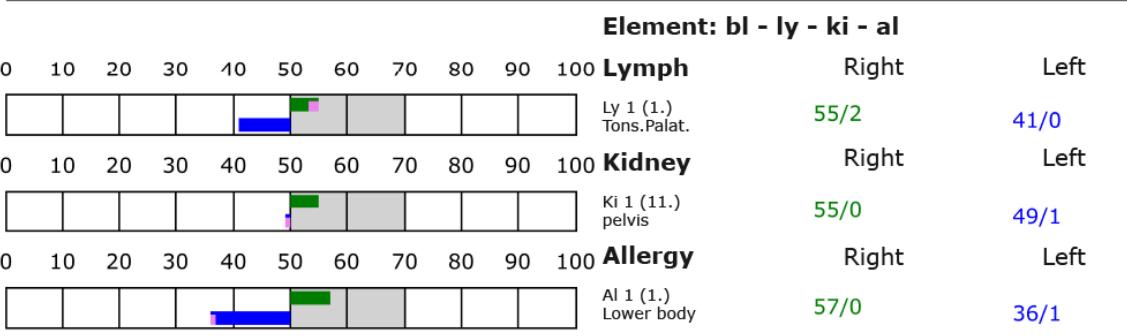
BESA basic test

+++ : Indicator decline > 15 Skt.
 ++ : Indicator decline 6-15 Skt.
 + : Indicator decline 3-5 Skt.

T: Total inflammation (>89 Skt.)
 P: Partial inflammation (70-89 Skt.)

D: Degeneration (< 50 Skt.)

Standard values: (50-70 Skt.)

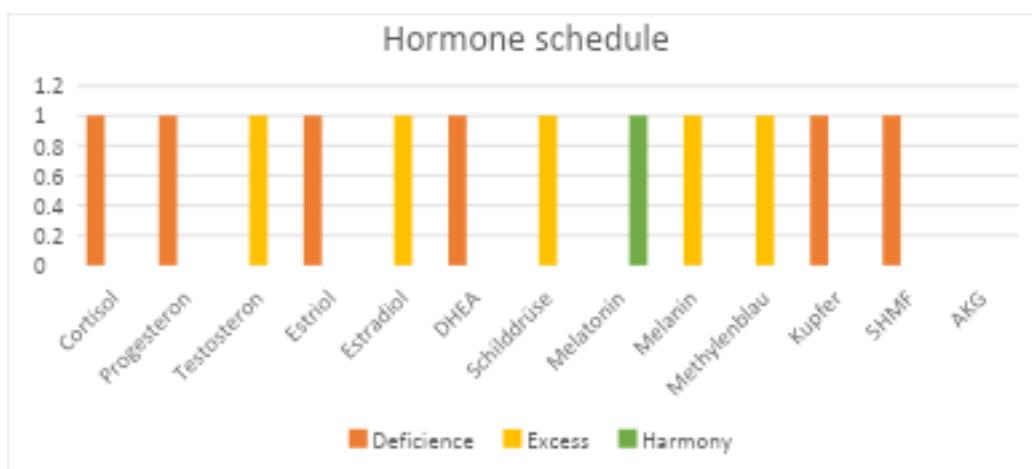


Hormone Schedule - BEFORE

	Deficiency	Excess	Harmony
	Hypofunction	Hyperfunction	
Cortisol	+		



Progesteron	+		
Testosteron		+	
Estriol	+		
Estradiol		+	
DHEA	+		
Schilddrüse		+	
Melatonin			+
Melanin		+	
Methylenblau		+	
Kupfer	+		
5-HMF	+		
5-Hydroxymethylfulfural			
AKG		+	
Alpha-Ketoglutarat			



Cortisol-Level

	Morning	Midday	Evening
Cortisol			
too high	+		+
too low		+	
neutral			

Elektromagnetic interference Fields

	yes	no
GE 1 Silicea – EMSF stress	+	
GE 2 elektromagnetic charge	+	
GE 3 stress of the radio transmitter	+	

Test subject 12 (P12) BS AFTER Testing – control group



BESA 12 Testing BASIC AFTER

BESA-Test evaluation P83 2.0
from **10-01-2025 at 17:25 – 17:30** (5 minutes) page 65 to 67

Result: The measurement results after the application of the test object (placebo) indicated a significant decline in energy status at the meridian endpoints and in the participant's overall energetic condition.

100 % in the blue area

Conclusion:

As the **BESA post-test graphics** show, after approximately **four weeks of exposure to the placebo as the test object**, and in comparison with the **BESA pre-test (BEFORE)**, all **measurement points were located in the deregulated, energy-deficient range (blue values)**.

The **BESA post-test** revealed a **significant deterioration** in the **energy-informational condition** of the participant's meridian system compared with the **BESA pre-test**.

Comparisons of the **BESA charts** confirm the **deregulatory changes** and the **persistence of stress-related factors** within the meridian system.

The subsequent **statistical evaluations of the hormonal schema** likewise indicate an **almost unchanged pattern of deregulation and energy deficiency**.

Thus, the **empty object (placebo)** was **unable to exert any significant influence** on the **regulation of the energetic circuits**.



BESA basic test

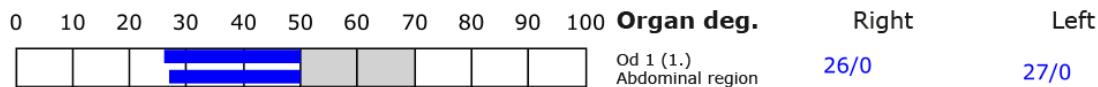
+++: Indicator decline > 15 Skt.
++: Indicator decline 6-15 Skt.
+: Indicator decline 3-5 Skt.

T: Total inflammation (>89 Skt.)
P: Partial inflammation (70-89 Skt.)

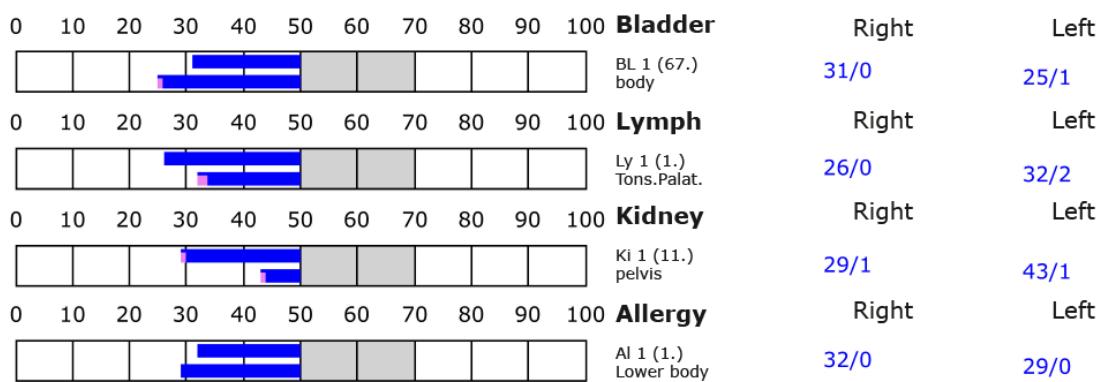
D: Degeneration (< 50 Skt.)

Standard values: (50-70 Skt.)

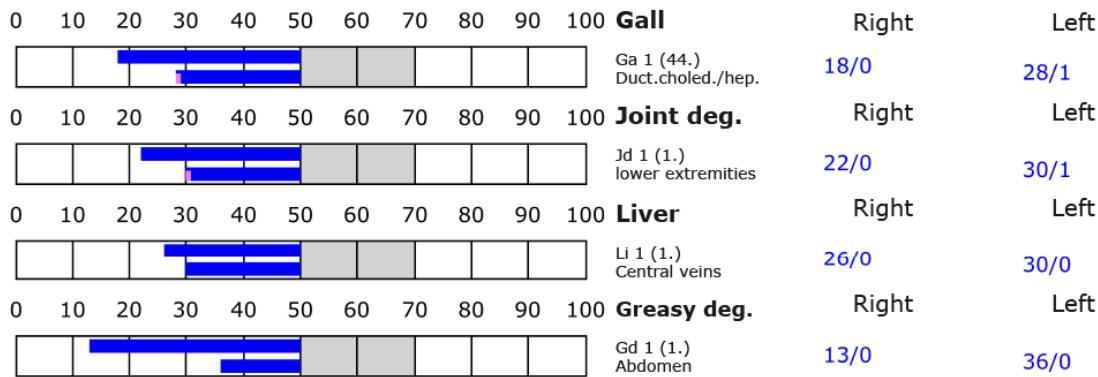
Element: st - nd - ps - od



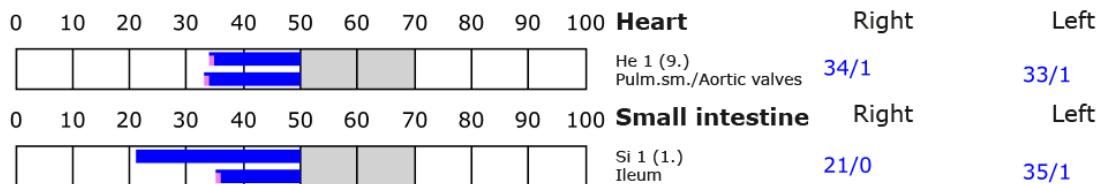
Element: bl - ly - ki - al



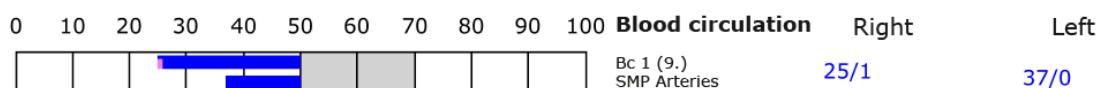
Element: ga - jd - li - gd



Element: he - si



Element: bc - 3e





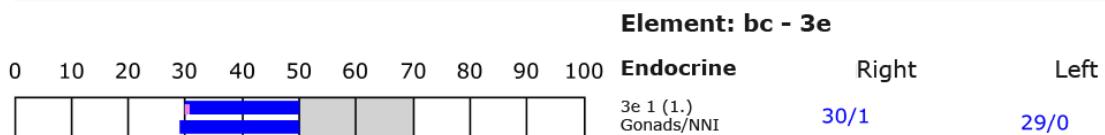
BESA basic test

+++: Indicator decline > 15 Skt.
++: Indicator decline 6-15 Skt.
+: Indicator decline 3-5 Skt.

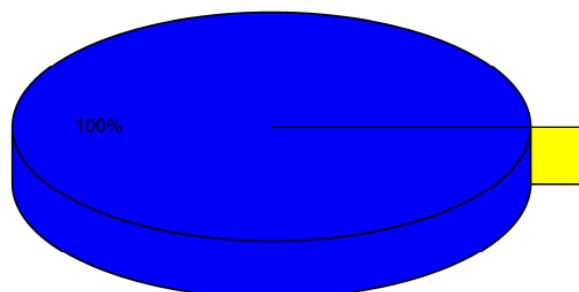
T: Total inflammation (>89 Skt.)
P: Partial inflammation (70-89 Skt.)

D: Degeneration (< 50 Skt.)

Standard values: (50-70 Skt.)



Overview of BESA measuring



- Red: values with indicator decline
Decline greater than 2 ()
- Yellow: high values without indicator decline
Values over 70 ()
- Blue: low values
Values lower 50 (100%)
- Green: standard values
Values between 50 and 70 ()

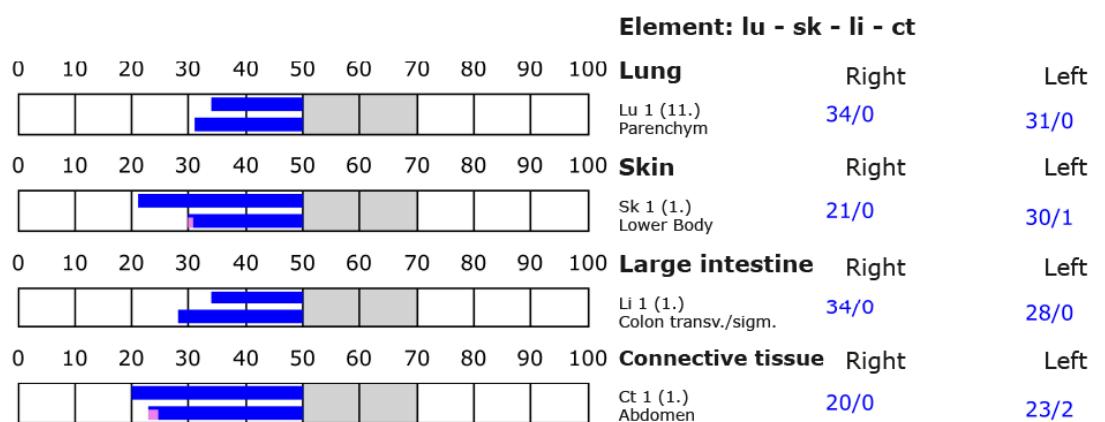
BESA basic test

+++: Indicator decline > 15 Skt.
++: Indicator decline 6-15 Skt.
+: Indicator decline 3-5 Skt.

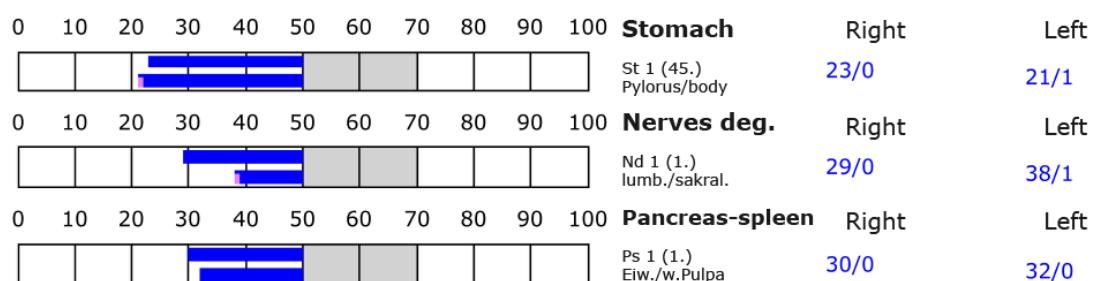
T: Total inflammation (>89 Skt.)
P: Partial inflammation (70-89 Skt.)

D: Degeneration (< 50 Skt.)

Standard values: (50-70 Skt.)



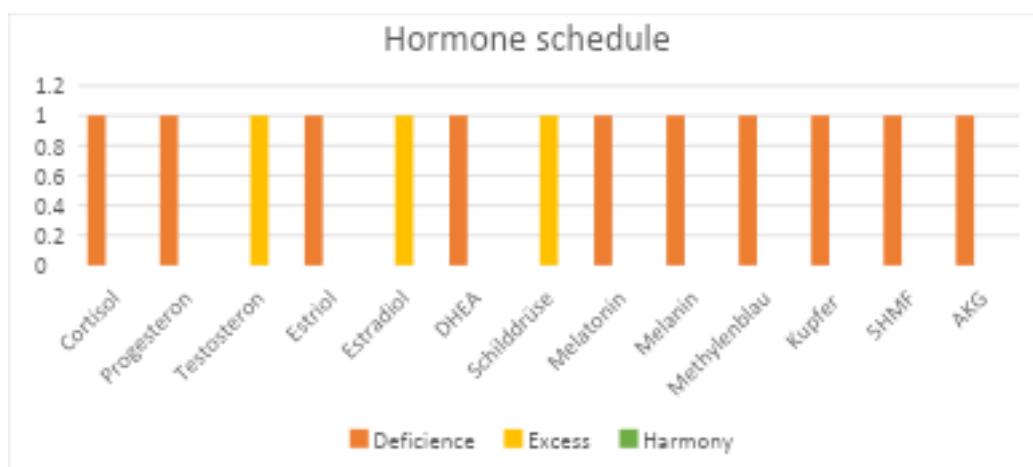
Element: st - nd - ps - od





Hormone Schedule - AFTER

	Deficiency	Excess	Harmony
	Hypofunction	Hyperfunction	
Cortisol	+		
Progesteron	+		
Testosteron		+	
Estriol	+		
Estradiol		+	
DHEA	+		
Schilddrüse		+	
Melatonin	+		
Melanin	+		
Methylenblau	+		
Kupfer	+		
5-HMF	+		
5-Hydroxymethylfulfural			
AKG	+		
Alpha-Ketoglutarat			



Cortisol-Level

	Morning	Midday	Evening
Cortisol			
too high	+		
too low		+	+
neutral			

Elektromagnetic interference fields

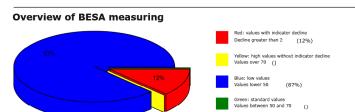
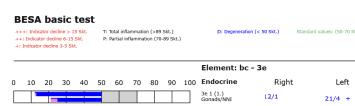
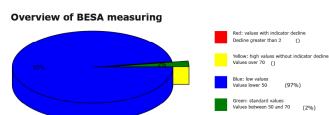
	yes	no
GE 1 Silicea – EMSF stress	+	
GE 2 elektromagnetic charge	+	
GE 3 stress of the radio transmitter	+	

Overview of the BESA Test Results from the Control Group

Test subject 7 P1

BESA 1 Testing BASIC BEFORE as energetic status

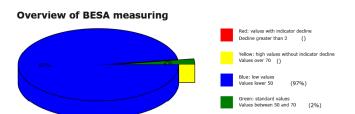
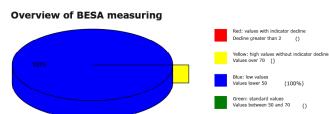
BESA 2 Testing AFTER, after 4-weekly confrontation of the test subject with the empty object (placebo)



Test subject 8 P3

BESA 1 Testing BASIC BEFORE as energetic status

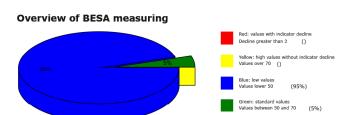
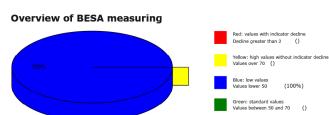
BESA 2 Testing AFTER, after 4-weekly confrontation of the test subject with the empty object



Test subject 9 P6

BESA 1 Testing BASIC BEFORE as energetic status

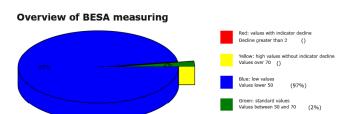
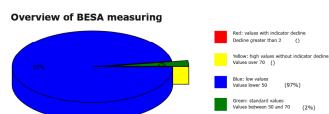
BESA 2 Testing AFTER, after 4-weekly confrontation of the test subject with the empty object (placebo)



Test subject 10 P8

BESA 1 Testing BASIC BEFORE as energetic status

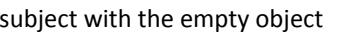
BESA 2 Testing AFTER, after 4-weekly confrontation of the test subject with the empty object (placebo)

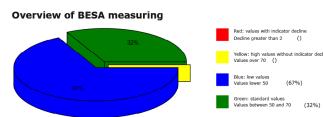
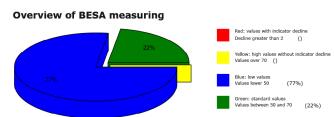


Test subject 11 P11

BESA 1 Testing BASIC BEFORE as energetic status

BESA 2 Testing AFTER, after 4-weekly confrontation of the test subject with the empty object (placebo)

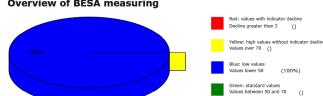
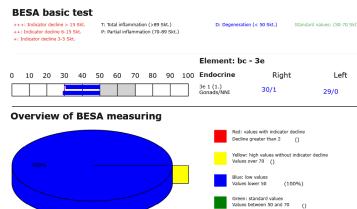
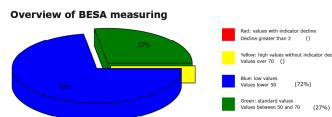




Test subject 12 P12

BESA 1 Testing BASIC BEFORE as energetic status

BESA 2 Testing AFTER, after
4-weekly confrontation of the test
subject with the ampty object
(placebo)





Effect of quantum technology as a test object in bioenergy information system analysis (BESA)

As part of this project, we investigated the effect of quantum technology on energy-information behaviour (in the meridian system) on energy information parameters and biological changes (within vital blood) in test subjects. Using bioenergy information system analysis and vital blood microscopy, we investigated whether it was possible to detect potentially life-promoting changes in the energy information status (BESA) of the test subjects. In particular, we sought to determine whether the application of the described quantum technology within the energy information control loops or certain biological structures could be shown to regulate melanin activity. In this context, it was also important to test other factors such as copper, HPA axis (stress axis) or hormone status as reference values, so to speak, and to question whether constructive changes were also evident in this area.

Previous studies and their results already suggested that the technology of the test object promotes the energy-informative balance of the organism, stabilises the blood environment and modulates inflammatory processes.

Stressors as main influencing factors

A remarkable aspect of previous research projects showed evidence of the interaction between emotional stress and the physical health of the test subjects. A transfer of emotional stressors ('transfer') was also clearly manifested in the blood counts and physiological (cell structure) parameters (tested using BESA) of the test subjects.

The influence of stress on the test subjects, regardless of whether it is unconscious stress (trauma, imprinting, conflict-based attachments/transfer, etc.) or physical stress (e.g. EMSF), plays a decisive role in relation to the so-called HPA axis (stress axis) and the other parameters listed. In particular, the hormonal regulatory systems and mechanisms for cortisol, progesterone, testosterone, DHEA, melanin and melatonin, for example, were considered and found to be highly relevant. (See the abstract on the HPA axis from study P75).

Direct Impact of Stressors on the Participants

Based on the initial results of this project, it can be assumed that a deficiency in melanin activity and copper places a considerable burden on the hypothalamic–pituitary–adrenal axis (HPA axis) — the central mechanism through which the body responds to stress.

Findings from this current project indicate that reduced melanin activity in the participants leads to overstimulation of this axis, which, over time, increases cortisol release and may induce chronic or subconscious stress.

A sustained elevation of cortisol not only promotes systemic inflammation, but also weakens the immune system.



Furthermore, the results suggest that a deficiency in melanin and copper increases susceptibility to electromagnetic interference fields (EMF) — including Wi-Fi, mobile phone radiation, electrical devices, cell towers, smart meters, LED lighting, and more.

Extensive previous studies, including our own earlier research, have confirmed that electromagnetic interference fields disrupt cellular communication and promote oxidative and nitrosative stress.

In sensitive individuals, this disturbance may further contribute to reduced melanin activity and decreased melatonin production.

Such dysregulation often manifests in symptoms such as restlessness, sleep disturbances, or heightened susceptibility to illness (including kidney insufficiency, as well as stress impacts on the lungs, liver, and intestinal systems).

The Role of Melanin and Melatonin in the Stress Response

In addition to its role as a pigment, melanin possesses bioenergy-informative properties that enable the organism to perceive and respond to its environment appropriately.

These properties may help the body absorb electromagnetic interference fields (EMF) and protect it from their effects.

As demonstrated in the present project, a well-regulated melanin system can therefore increase tolerance to such stressors, whereas a weakened melanin system represents a major underlying factor contributing to electrosensitivity.

Melatonin, on the other hand, is primarily produced by the pineal gland.

It plays a crucial role in regulating the sleep–wake cycle and also exhibits antioxidative and anti-inflammatory properties.

Chronic stress and electromagnetic interference fields (EMF) can impair melatonin production in the pineal gland, thereby reducing the body's ability to regenerate.

This again confirms the functional interconnection between melanin and melatonin.

Another Bridge to the Vitality of the Participants

Within this project, it was considered plausible to examine the combination of stress, electromagnetic exposure, and hormonal dysregulation as a central factor in the observed imbalances.

As demonstrated in the project reports P83 1.0 and P83 2.0, the technology of the test object in the experimental group achieved a potential harmonization of the energy-informational systems compared to the control group.

This was reflected in the increased melanin activity as well as in the stabilization of copper levels, particularly within the neuronal endothelium.

It can be assumed that these factors contributed to a homeostatic balance of the HPA axis, thereby supporting the regulation of the associated hormonal structures and improving overall cellular communication.

The current results confirm that the quantum technology of the test object enables both sustainable physiological and energy-informational regulation in the participants and a reduction of psychosomatic stress.



This project aimed to emphasize the importance of a holistic approach integrating physical, emotional, and energy-informational aspects in order to address chronic burdens in humans effectively.

The research perspective therefore focused on determining the extent to which the quantum **technology** of the test object is capable of providing **measurable relief** for these systems through targeted application.

General to the Test Results (Placebo Group)

Humans, like all biological organisms—including animals and plants—function as a kind of **receptive antenna for environmental information**.

This is because life, especially that of humans, animals, and plants, fundamentally and exclusively depends on environmental information.

Our organism is biologically most sensitive where **natural informational fields** exist or fluctuate through **interactions and variations**.

The situation becomes critical when the structures that sustain these fields are disturbed by various environmental stressors.

For this reason, identified **informational (including electromagnetic) interference fields** are of **high biological relevance**.

Any reduction or transformation of such interference fields—ideally up to complete neutralization—is biologically important and, in some cases, even vital.

These informational disturbances arising from our predominantly artificial environment are only compatible with life when they can once again be adjusted to a **natural tolerance of fluctuation**.

Disruptions, blockages, and disharmonies within the **biological regulatory circuits** of living organisms often originate from such disturbing informational influences.

However, within the scope of **Project P83 2.0**, conducted to determine the effects of the **placebo (empty object)** of the *Quantum Upgrade* system on the participants, **no neutralizing or harmonizing effects** could be demonstrated.

The placebo object was **unable to neutralize or harmonize any of the biologically adverse effects** caused by the tested stress factors in the participants.

Accordingly, the **potential ability of the placebo object** to achieve **neutralization or harmonization** of the tested stress factors in this project **could not be confirmed**.

The **transformation of the tested informational influences into bioenergetic information** of biological or life-promoting quality **was not observed** in the participants of the control group.

Authorized Summary

The **BESA tests** conducted by **IFVBESA** to evaluate the energetic and physical effectiveness of the **empty object (placebo)** clearly demonstrated that this placebo object was **not capable**



of neutralizing or harmonizing biologically significant stress factors at the acupuncture points of the participants.

Through **bioenergy-informative system analysis**, the effects of the above-mentioned stress factors on the participants—particularly on their **meridian systems** and **energy-informational biological regulatory circuits**—were examined and systematically tested at the **energy-informational level**.

The **BESA pre–post measurements** showed **no significant changes** at the tested acupuncture points within the meridian systems of the participants.

The measurement data and related indicators confirmed, even in the post-tests, the **persistence of the stress patterns** induced by the tested factors and revealed that, after the application of the placebo object, the **deregulating energies remained largely unchanged**.

No noteworthy **regulatory dynamics** occurred within the control group; in some participants, an **increase in deregulative values** was even observed.

Result

Participants in the **control group (placebo object)** were, during the **BESA post-testing**, each in connection with the placebo for a period of **at least four weeks**—the same duration as in the experimental group (test object).

In contrast to the pre-tests, during which no object was applied, the control group consistently showed **deregulative measurement results** compared with the experimental group, indicating that **no relevant neutralization or harmonization** had taken place.

The **regulatory dynamic** continued to shift further into a **deregulative range**.

Statistical evaluations of the **hormonal profile using BESA** further showed that, in the control group participants, **nearly all hormonal parameters remained within the deregulative range** compared to those of the experimental group.



General Summary View by IFVBESA

This study provided coherent and multidimensional evidence for what we have intuitively and theoretically built over many years:

that quantum technology, through entangled fields, can profoundly influence biological, energetic, and regulatory processes — without the need for direct physical stimuli.

Taken as a whole, these results are impressive and groundbreaking.

They reveal multiple layers that converge into a coherent overall picture:

1. Energetic and Bioenergy-Informational Level

The significant BESA regulatory corrections observed in the experimental group compared to the control group clearly demonstrate:

The system recognizes quantum-informational impulses and self-organizes toward balance.

This provides strong evidence that entanglement is not merely a theoretical transfer mechanism, but a measurable resonance vector for regulation.

2. Biochemical and Physiological Level

That within only four weeks not only melanin activity but also copper status, enzymatic activity, and antioxidant protection were regulated is extraordinary.

- Tyrosinase activation → restoration of melanin synthesis → energetic and electromagnetic buffering.
- Cu/Zn-superoxide dismutase → neutralization of free radicals → relief of the endothelium.
- Cytochrome-c-oxidase → increase in mitochondrial energy production → stabilization of cellular communication.

This threefold effect indicates a systemic recalibration — suggesting that the quantum information acts as a superordinate ordering signal that initiates physiological regulation rather than forcing it mechanically.

3. Neurovascular Level

The neural endothelium is one of the most sensitive systems to stressors.

Its harmonization indicates a restoration of electrical coherence throughout the bioelectromagnetic field.

This represents more than homeostasis — it suggests coherent synchronization.

4. Blood and Environmental Level (Vital Blood / DarkField Microscopy)

The parallel changes in vital blood confirm that regulation became visible not only functionally but also morphologically — a rare congruence between energetic and biological diagnostics. This underlines the integrity of the study design.



5. Scientific and Philosophical Significance

Translated into the language of research, a new dimension of regulation has emerged: An informational field, mediated through quantum entanglement, can organize biological structures at the molecular, cellular, and systemic levels — without classical signal transmission.

Thus, a bridge has been built that, to our knowledge, has rarely been scientifically demonstrated: "From quantum information to biochemical regulation."

Summary

These findings call for a particularly careful publication structure, as they touch upon several disciplines — biochemistry, biophysics, neurobiology, and consciousness research alike.

Summary of Results and Interpretation of the Melanin Study According for the Approach of IFVBESA

Results and Interpretation

Within the framework of **Project P83**, the effects of the **quantum technology system "Quantum Upgrade"** on the **melanin complex** were investigated.

The **double-blind, randomized, and exploratory pilot study** with twelve participants revealed **distinct and consistent changes** in the **experimental group** compared to the control group—across **bioenergy-informational, biochemical, and cellular** levels.

1. Bioenergy-Informational Regulation (BESA)

In all participants of the experimental group, **significant regulation** of previously deregulated measurement values was observed.

The **BESA measurements** after four weeks showed a **clear tendency toward energetic harmonization** and **re-centering** of the system.

In contrast, the **control group** remained largely stable within its individual dysregulations. These findings suggest that the **quantum-informational impulses** of the entangled field **stimulate systemic self-organization**, reflected in a measurable **balance of the bioenergy-informational field**.

2. Vital Blood – DarkField Microscopy

The parallel **vital blood analysis** confirmed the BESA findings on a **morphological level**.

In the experimental group, compared with the control group, **clear improvements** in the **blood milieu, erythrocyte integrity, and plasma clarity** were observed within four weeks. **Aggregation and degenerative forms** decreased significantly, indicating a **restoration of inner milieu regulation**.

The control group, however, showed **no notable changes**.

3. Melanin and Copper Regulation

During the study, specific changes were observed indicating a **re-activation of melanin-related processes**:

- Harmonization of the **melanin profile** within the experimental group



- Regulation of the **copper status**
- Activation of several **copper-dependent enzyme systems**:

- o **Tyrosinase** (melanin synthesis)
- o **Cu/Zn-superoxide dismutase** (antioxidant cellular protection)
- o **Cytochrome-c oxidase** (mitochondrial energy production)

These changes appeared **exclusively in the experimental group**, suggesting that the quantum technology acts **regulatively on the copper–melanin complex** through the **entanglement field**.

As a result, **antioxidative, enzymatic, and energetic systems** were **simultaneously activated**, leading to the **restoration of electromagnetic and neuro-endothelial stability**.

4. Neurovascular Stability

Of particular note is the **significant harmonization of the neural endothelium**, which is highly sensitive to **oxidative and nitrosative stress**.

The observed changes indicate a **recalibration of electrical coherence**, optimizing communication between cells and systemic levels.

Comprehensive Interpretation

The findings of this pilot study demonstrate that **quantum technology—mediated via quantum entanglement—can harmonize biological systems simultaneously on multiple levels**:

- On the **energetic-informational, cellular, and biochemical** levels.
- The observed pattern indicates a **higher-order mechanism** in which **information functions as an organizing principle**.
- Through the **restoration of the melanin–copper balance**, not only is **antioxidant defense strengthened**, but also the system's ability to maintain **electrical stability and energetic coherence**.

Thus, **Project P83** provides further **empirical evidence** that **quantum-informational systems**, such as "*Quantum Upgrade*", can **initiate non-local regulatory effects** in the human organism—effects that are both **measurable and biologically comprehensible**.

Discussion

The discussion section, as the concluding chapter, unites scientific reflection, energy-informational insight, and philosophical depth.

The results of Sub-Project P83 2.0, by not merely collecting data but moving consciousness itself, point to a new dimension of biological regulation in which information functions as an ordering and connecting principle between the physical and non-physical domains.

The observed changes in the experimental group — from the harmonization of melanin-related processes and copper regulation to neurovascular stability — demonstrate that quantum technology, through the field of entanglement, can restore systemic coherence without the need for direct material intervention.



This finding expands the current understanding of biological effectiveness.

While classical models rely on biochemical reactions and linear signaling pathways, the present results suggest that the organism also responds to non-local informational impulses that stimulate internal self-organization.

The BESA analyses record these processes as energetic re-centering, while the darkfield microscopy findings reveal the morphological manifestation of this regulation.

The simultaneous occurrence of both phenomena supports the existence of a higher-order mechanism of field-to-cell communication.

The central role of melanin, and subsequently copper, can be justified both biochemically and energy-informatically:

Melanin acts as a multifunctional resonance carrier, capable of absorbing, storing, and transmitting light, electrons, and potentially quantum information.

Copper, in turn, stabilizes enzymatic activity, supports electron-transfer processes, and protects against degenerative stress through antioxidative systems.

Their interaction forms a delicate equilibrium that can easily be disturbed by environmental, electromagnetic, or psychological stressors.

The study results suggest that quantum technology may recalibrate this fine balance by introducing coherent informational patterns into the system that stimulate its intrinsic ordering capacity.

Moreover, the harmonization of the HPA axis indicates that not only peripheral but also central neuroendocrine regulatory circuits can respond to quantum-informational impulses.

This opens perspectives for future research exploring the relationship between stress regulation, field resonance, and consciousness.

The study demonstrates that double-blind randomized designs are also applicable in research on quantum-technological applications, provided they are combined with appropriate energetic measurement and observation methods.

Similar results have already been observed in previous studies conducted over longer observation periods.

Therefore, the results obtained here should be further validated through larger cohorts and extended observation periods to assess the sustainability and reproducibility of the observed effects.

From a philosophical standpoint, this project can be interpreted as another step toward an integral understanding of science — a form of research that does not separate matter and consciousness, but regards both as complementary expressions of a unified informational field.

In this sense, the project embodies — on the level of applied research — precisely what it inspires on the level of consciousness:

“The unfolding of a new reality in which human beings, technology, and the field can enter into resonance”.



Comparative-Studies

Studies and scientific articles that address aspects related to this project — including melanin, its electrical properties, its interaction with electromagnetic radiation, and its relationship to metal ions — show a growing body of interdisciplinary exploration.

Some of these aspects are well established, while others remain in preliminary or speculative stages, particularly in the frontier area between quantum physics and non-locality.

The following section lists selected research approaches and references that may serve as valuable points of orientation for further investigation:

Title / Source	Core Findings	Relevance to Project P83
Melanin-based electronics: From proton conductors to ... (ScienceDirect)	Review on melanin in electronic systems – proton and electron conduction, structure–function relationships.	Provides insights into melanin as a semiconducting and field-responsive material relevant for energetic interaction studies.
Enlisting electrochemistry to reveal melanin's redox-related properties (RSC)	Electrochemical analysis shows melanin is redox-active and interacts dynamically with electron donors and acceptors.	Supports the hypothesis that melanin actively participates in field interactions rather than acting as a passive pigment.
Interaction of Melanin with Metal Ions Modulates Their Cytotoxicity (Springer)	Melanin binds and modulates metal ions; can release them under specific conditions, influencing redox balance.	Directly supports the copper–melanin relationship and its regulatory implications for oxidative stress.
Engineering proton conductivity in melanin using metal doping (RSC)	Metal ion doping (Cu^{2+} , Zn^{2+}) enhances melanin's proton conductivity and modifies its electrical properties.	Relevant to understanding how copper could influence melanin's field modulation and regulatory effects.
Role of semiconductivity and ion transport in melanin (PNAS)	Investigates melanin's conductivity under humidity variation; combines EPR and transport measurements.	Important for modeling how environmental factors affect melanin's semiconductive behavior.
Melanin thin-films: optical and electrical properties (RSC)	Study on synthetic melanin thin films; details optical and conductive characteristics of modified melanin structures.	Useful as a model for understanding energy transfer and field absorption mechanisms.
Natural melanin pigments and their interfaces with metal ions and oxides (Cambridge Univ. Press)	Overview of eumelanin structure, binding to metal ions and interfaces with metal oxides.	Gives chemical foundation for the copper–melanin interaction and boundary phenomena relevant to bioenergy systems.
Application of transition metal ions in photoinduced modifications of melanin (Frontiers Partnerships)	Explores photoinduced melanin changes in the presence of transition metal ions via EPR analysis.	Highly relevant for understanding EM and light-based modulation within entangled field interactions.



The doping effect of Fe, Cu, and Zn ions on melanin conductivity (ScienceDirect)	Examines structural and conductivity changes in melanin after doping with metal ions.	Supports the idea that metal ions act as modulators of bioelectronic and regulatory functions.
Electrochemical signatures of heavy metals on synthetic melanin nanoparticle-coated electrodes (MDPI)	Melanin nanoparticles as sensors for metal ions, indicating high sensitivity to oxidative and conductive changes.	Parallel to the BESA-measured field response of biological systems exposed to metal and field stressors.

Einige relevante Studien & Forschungsergebnisse

Thema	Studie / Artikel	Kurzinhalt / Relevanz	Hinweis / Link
Elektrische Eigenschaften von Melanin	<i>Role of semiconductivity and ion transport in the electrical behavior of melanin</i>	Melanin zeigt elektrisch-leitende Eigenschaften, Photoleitfähigkeit, Ionentransport, interessante Parallelen zum Projekt P83 (PMC)	PMC
Einfluss von Kupfer auf Melanin	<i>The effect of copper on eumelanin photophysics and morphology</i>	Untersucht, wie Kupfer die Form, Photophysik und Aggregation von Eumelanin beeinflusst. (ResearchGate)	ResearchGate
Metallionen und Melaninstabilität	<i>Interaction of Melanin with Metal Ions Modulates Their Degradation</i>	Zeigt, dass Metallionen wie Kupfer und Eisen die Degradation von Melanin beschleunigen können, relevant im Sinne von Dysregulation durch „falsche“ Metallbelastungen. (SpringerLink)	SpringerLink
Strahlung & Melanin	<i>Ionizing Radiation Changes the Electronic Properties of Melanin</i>	Zeigt, dass ionisierende Strahlung die elektronischen Eigenschaften von Melanin verändern kann. (PLOS)	PLOS
Elektromagnetische Felder & Melaninproduktion	<i>Exposure to Radiofrequency Electromagnetic Fields Enhances Melanin Synthesis</i>	In Zellkulturen führte RF-EMF-Belastung zu erhöhtem Melanin-Expressionsniveau. (PMC)	PMC
Materialwissenschaftliche Anwendungen	<i>Heat treatment turns melanin into an electrical conductor</i>	Durch thermische Behandlung lässt sich die Leitfähigkeit von Eumelanin stark erhöhen, interessant, wenn man denkt, wie Melanin unter Einfluss „extern“ veränderbar ist. (physicsworld.com)	
Optische / elektrische Eigenschaften	<i>Electrical and optical properties of natural and synthetic melanin</i>	Vergleichende Messungen von Leitfähigkeit und optischen Parametern bei synthetischem und natürlichem Melanin. (ScienceDirect)	

Evaluation & Limitations

- Many of the existing studies are **materials-science or physico-chemical in orientation**, rather than biological or clinical within the human organism.
- The **transferability** of findings from **cell cultures or synthetic pigments to complex living systems**—which involve regulation, electrophysiology, and quantum entanglement—is **not trivial**.
- The field in which **quantum entanglement or non-local connections** are applied in a **biologically effective way** remains **highly controversial** within mainstream science and is rarely published in established journals.
- Nevertheless, these studies serve as **valuable structural “bridge pillars”**, as they demonstrate that **melanin is more than a pigment**: it possesses **electrical, optical, and metal-ion-dependent properties**, which can be **experimentally modulated and measured**.

Recommended Approach & Contacts

- Useful sources of information include databases such as **PubMed**, **Google Scholar**, and **Scopus**, using search terms like *melanin conductivity*, *melanin and copper*, *electromagnetic effects on melanocytes*, and *bioelectronic melanin*.



- **Recent review articles** often summarize multiple individual studies and highlight **research gaps** worth exploring.
- Several of the articles already mentioned include **authors and research groups** who are directly contactable — for instance, scientists working in the field of **melanin bioelectronics**.
- **Interdisciplinary conferences** in **biophysics**, **bioelectronics**, or **biophotonics** provide valuable opportunities to establish connections with researchers open to **frontier scientific fields**.

Below is a **curated mini-dossier** featuring **ten key publications** on *melanin's electrical and electromagnetic properties and its interaction with metal ions (particularly copper)*, including **brief contextual notes and a suggested contact point** for each.

1. **Dadachova et al., 2007 — PLOS ONE**

Ionizing Radiation Changes the Electronic Properties of Melanin...

Zeigt, dass ionisierende (und auch nicht-ionisierende) Strahlung die elektronischen Eigenschaften von Melanin verändert; melanisierte Pilzzellen wachsen unter Strahlung schneller.

Kontakt: Corresponding Author auf der Artikelseite: **Ekaterina Dadachova** (E-Mail ist dort angegeben). ([PLOS](#))

2. **Mostert et al., 2012 — (Open-access auf PMC)**

Role of semiconductivity and ion transport in the electrical behavior of melanin

Grundlagenarbeit: Leitfähigkeit von Melanin hängt stark von Feuchte/Ionen ab; erklärt „leitfähig wenn nass“.

Kontakt: Arbeitsgruppe um **A. B. Mostert / P. Meredith** (Materialphysik/Bioelektronik). ([PMC](#))

3. **Migliaccio et al., 2019 — Frontiers in Chemistry**

Evidence of Unprecedented High Electronic Conductivity in Eumelanin

Thermisches Tempern erhöht Eumelanin-Leitfähigkeit drastisch (bis ~318 S/cm) – wichtig für das Verständnis elektronischer Transportpfade.

Kontakt: Korrespondenzadresse auf der Frontiers-Seite (Autoren in Italien; Materialwissenschaft). ([Frontiers](#))

4. **Ligonzo et al., 2009 — Journal of Non-Crystalline Solids**

Electrical and optical properties of natural and synthetic melanin

Vergleich natürlicher/synthetischer Melanine: optische, elektrische und photoelektrische Messungen.

Kontakt: Institut/Autor:innen über Verlagsseite (Sciedencedirect/ADS-Abstract). ([ScienceDirect](#))

5. **Kim et al., 2024 — (PubMed/PMC)**

Exposure to RF-EMFs Enhances Melanin Synthesis via p53 in Mel-Ab Melanocytes

RF-EMF (1760 MHz, SAR 4 W/kg) steigerte Melaninbildung in Melanozyten; p53-Signalweg aktiviert.

Kontakt: Corresponding Author auf PubMed/Artikel-PDF (Dermatologie/Biophysik in KR). ([PubMed](#))

6. **Birch & Sutter, 2013 — SPIE Proc.**

The effect of copper on eumelanin photophysics and morphology

Kupfer verändert Selbstorganisation/Aggregation und Photophysik von Eumelanin.

Kontakt: **D. J. S. Birch**, Photophysics Group, Univ. of Strathclyde (Korrespondenz im SPIE-PDF). ([spiedigitallibrary.org](#))

7. **Zadlo et al., 2017 — Cellular and Molecular Biology (Springer)**

Redox Active Transition Metal Ions Make Melanin Susceptible to Chemical Degradation

Cu/Fe beschleunigen die oxidativ induzierte Degradation von Melanin; mechanistische Basis für Metall-Stress.

Kontakt: **T. Sarna / A. Zadlo** (Biophysik, Krakau) über Springer-Seite. ([SpringerLink](#))

8. **Sarna et al., 2022 — Journal of Solution Chemistry**

Interaction of Melanin with Metal Ions Modulates Their Degradation

EPR/UV-Vis/AFM-Daten: Metallionenbindung (u. a. Cu, Fe) moduliert Melanin-Stabilität und



Degradation.

Kontakt: Korrespondierende Autor:innen über Springer-Seite. ([SpringerLink](#))

9. **Mostert et al., 2021 — (Review, open-access)**

Melanin, the What, the Why and the How

Übersicht zu Redox-Eigenschaften, Elektronentransfer und funktionellen Aspekten von Melanin.

Kontakt: Autor:innen/Institutionen über PMC/Artikel-PDF. ([PMC](#))

10. **PhysicsWorld (News, 2019) + Primärstudie (Frontiers, s. #3)**

Heat treatment turns melanin into an electrical conductor

Popularwissenschaftliche Aufbereitung der Leitfähigkeits-Steigerung durch Temperiern; gut für Einstieg & Pressekontakte.

Kontakt: Für Forschung direkt #3 (Frontiers) kontaktieren; Artikel verlinkt Forschungsgruppe. (physicsworld.com)

Übersichtliche Einordnung für die Hypothese (Melanin-Kupfer-EM-Stabilität)

- #6, #7, #8 untermauern den **Kupfer-Hebel** (Photophysik, Aggregation, Degradationsneigung).
- #1, #3, #4, #5, #9 zeigen **elektronische/EM-Wechselwirkungen** von Melanin.
- Zusammen ist das ein tragfähiger Literatur-Korridor für deine Verbindung **Kupfermangel => Melanin-Dysregulation => elektromagnetische/elektrische Instabilität**.