

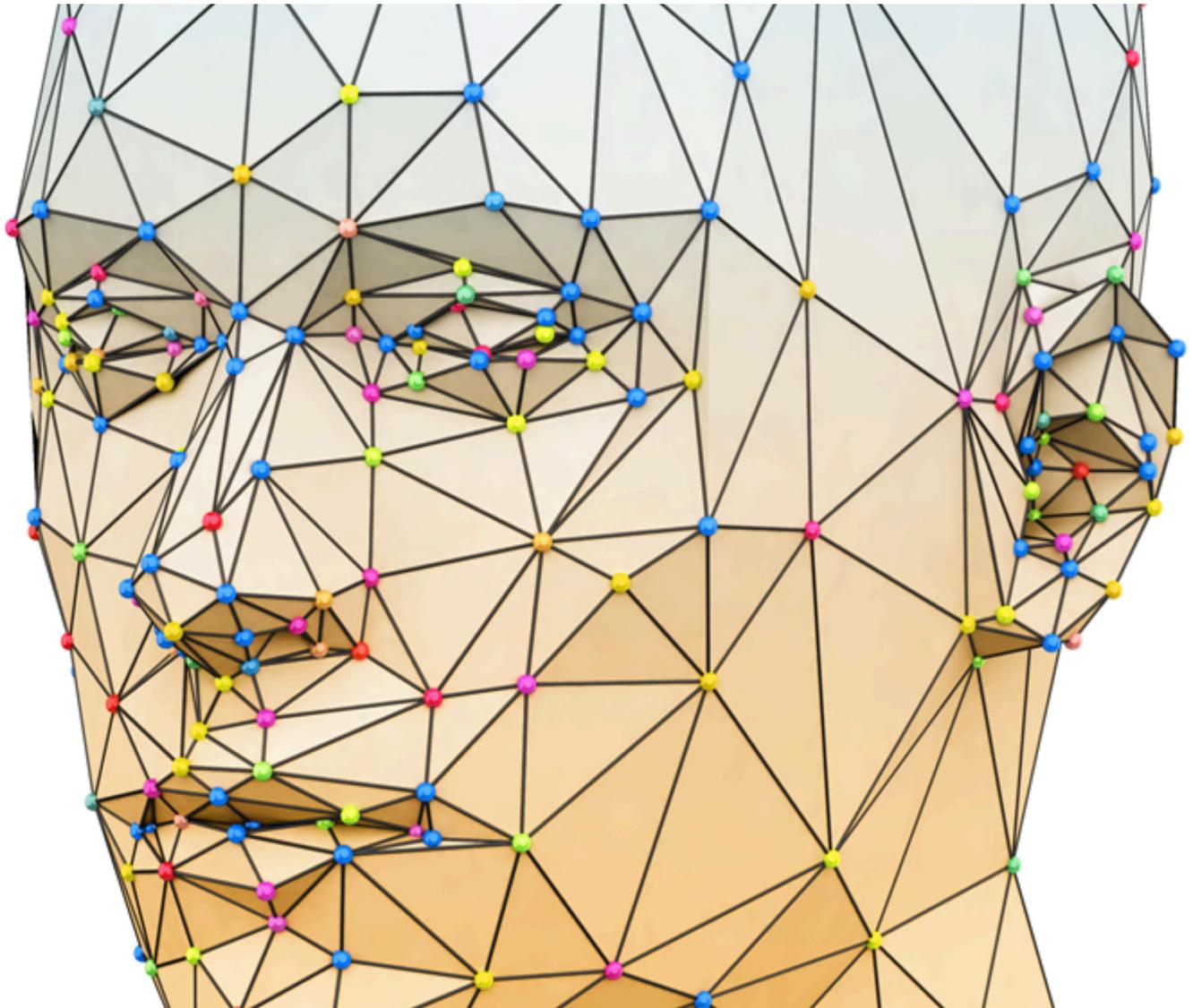


Internationaler Fachverband für BESA | ZVR Nr. 975047937  
Jeritzstraße 1, A-4866 Unterach am Attersee | Austria  
Tel.: +43-664-73152899 | E-Mail: [office@ifvbesa.at](mailto:office@ifvbesa.at)



# IFVBESA

Information is crucial



## Benzene in Focus

Study on the Effects of the Quantum Upgrade

# P82 1.0 BESA-Detailed-Project



# Project P82 on BESA Expert Opinion

as part of a BESA Seal of Quality  
on the efficacy of the product  
Quantum Upgrade  
in connection with benzene

"An exploratory study in the context of  
quantum technological application and regulation"



**Client:**

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

**Project Participants:**

**Project Management:** Wolfgang Hans Albrecht, President and Project Director of the IFVBESA

**Projekt Execution:** Eva Schmidt, President and Deputy Project Director of the IFVBESA

**Test Subject (Proband):** 6 (3/3) Subjects with correspondingly different age- and health status in a double-blind quantum entanglement study.

**Subjects:**

**P82 1.0:** 3 Subjects from P1 to P3

**P82 1.1:** 3 Subjects from P4 to P6

**Project Location:** Site 1: International Professional Association for BESA (IFVBESA)  
Hauptstraße 1-2  
A-4861 Kammer/Schörfling am Attersee

**Date:** from 29.11.2024 to 21.10.2025

**Project Duration:** 297 Days



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## 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 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 of 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:

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



## Basics of research project creation P82

The International Association for Bioenergy-Informational Systems Analysis was commissioned by Leela Quantum Tech, LLC, to test the effectiveness of the test object, Quantum Upgrade, using bioenergy-informational systems analysis (BESA) on the relevant test subjects, and to demonstrate its effectiveness on the test subjects. The testing was conducted independently of the subjective perception of all test subjects. According to the contracting 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 other one- 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, empathetic 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 project with a total of six participants. Three participants each participated in the detailed project P82 1.0 and three participants in the detailed project P82 1.1. The goal was to gain initial insights into the possible influences of the test object or the Quantum Upgrade technology on the potentially toxic effects of benzene (internationally known as benzol or benzene). The study follows a double-blind, exploratory design that combines scientific objectivity with an open research dynamic. The exploratory approach was deliberately chosen to go beyond the scope of classical hypothesis formation and also capture subtle, previously little-described interactions and mechanisms of action between bioenergy-informational regulation, consciousness influences, and quantum-field-based processes.

Due to the double-blind study design, neither the participants nor the test administrators knew the background of the test. This approach ensures the greatest possible neutrality and excludes the influence of expectations.

### **On the IFVBESA's Exploratory Research Approach**

New knowledge, new insights, and new ideas are the breeding ground on which the science and technologies of the future thrive. The exploratory approach is of particular importance in the context of most of our research projects and is the seedbed for information medicine and the quantum technology of tomorrow. In the exploratory study design, we present a methodical research approach that investigates research areas and research questions that have not yet been investigated. This demonstrates, on the one hand, the development and, on the other hand, the potential of novel approaches for research into future technologies.

The exploratory approach is particularly ideal for new research fields, such as the effects of quantum technology on bioenergy-informational and biological processes and melanin, because:

- On the one hand, new territory is being entered where no established models yet exist
- Observations are being collected to identify patterns and causal relationships
- Avenues are being opened up on which subsequent, verifying studies can be based



### **On Benzene:**

The hydrocarbon compound benzene (chemical formula  $C_6H_6$ ) was previously digitised as a nosode (toxicological test agent).

### **In summary:**

Our approach to the exploratory study 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 discourages companies and research institutes from engaging with topics at a very early stage of development.

### **On quantum entanglement:**

Quantum entanglement is not a physical connection between particles, but 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 conscious interaction. For the current test subject, this means: Each test subject receives an energy-informational signature via virtually defined coordinates. This signature represents an energetic-informational imprint in the quantum field and exists as a constant reality in every moment of movement. It stores the frequency and essence of what is represented via the coordinates and remains stable in the universal information network as a real excerpt from the space of consciousness. This creates an energy-informational bridge between the original moment and the current space of consciousness, which remembers and acts independently of space and time.

## **Subjects**

In addition to the previously described technology of the test object, this research project will involve at least six test subjects. The test subjects will be informed in advance about the general procedures of this project and their role as representatives (see relevant documents). This means that neither the test subjects nor the test persons know the background of the series of measurements. This type of blinding aims to obtain the most objective evaluation of the results possible in order to exclude so-called placebo effects.

The BESA tests will be conducted on each test subject as follows:

1. at the beginning of the project, to establish a so-called status (current situation).
2. after the test subjects have been exposed to the nosode Benzene in digital form.
3. in the final part of the project, after at least two days of exposure to the test object.

## **Abstract Towards an interdisciplinary perspective**

### **Hypothesis**

It is assumed that health dysregulations, particularly in the area of neurovascular and electromagnetic stability of the organism or its cellular structures, are directly related to a



toxicological disruption of the blood-brain barrier (endothelium/nervous system), the hypothalamic-pituitary-adrenal axis (HPA axis). Benzene (also known as benzene or benzol) is an aromatic, ring-shaped hydrocarbon compound ( $C_6H_6$ ) and is considered one of the most critical industrial chemicals due to its carcinogenic effects. In aviation, benzene can be produced by the incomplete combustion of kerosene or lubricants and can enter the cabin via the bleed air system in so-called fume events. Such exposures pose acute and chronic health risks for crew and passengers, including irritation, dizziness, and, in the long term, leukemia and nerve damage.

This project, part of the IFVBESA study, investigated the extent to which quantum technological fields can influence the potentially harmful energetic and biological effects of benzene on the human organism. The hydrocarbon benzene (chemical formula  $C_6H_6$ ) was digitized and its effects recorded using bio-energy-informative system analysis (BESA). Both changes in the subjects' bio-energy-informative field and physiological reactions were analyzed.

Initial results indicate that the tested quantum technology can exert a harmonizing effect on benzene-induced stress. In addition, the role of hormonal and metabolic markers was considered as potential reference parameters.

The goal of this research is to investigate and further develop novel technologies and their mechanisms of action at the energy-informational and biological levels. This will lead to the development of processes that address both physicochemical toxicity and subtle energetic disturbances. The results could open up groundbreaking applications in aviation and other contaminated environments.

### **Research questions flowing into this current project**

In this current study, we are investigating the effect of an innovative test object on the general health parameters of the subjects. Bioenergy-Informational System Analysis (BESA) is used to detect possible changes in the subjects' energy-informational status. Initial results indicate that quantum technology at least stabilizes the status of the energy-informational system, opens blocked regulatory circuits, modulates inflammatory processes, and promotes sustainable balance in the organism. The first results of BESA tests show a clear regulation of the energy-informational parameters toward regulatory behavior. Particularly noteworthy is the observed interaction between the subjects' emotional stress and their vitality.

The research questions primarily concern coherent and multidimensional evidence for what the IFVBESA has been building and testing intuitively, theoretically, and through research projects for years in connection with all projects related to this quantum technology. Is it possible that this quantum technology can intervene deeply in biological, energy-informational, and regulatory processes via entangled fields without directly applying physically applied stimuli?

### **This project will examine the following hypotheses at various levels**

#### **Energetic and bioinformatic levels**



To what extent can bioenergy-informative systems analysis (BESA) demonstrate sustainable regulatory changes in subjects through applied quantum technology? What influence or reorganization can quantum-informative impulses have on the tested markers as reference values, such as the HPA axis (stress axis), and on oxidative and nitrosative processes, among others? Does so-called quantum entanglement merely represent a theoretical transmission mechanism, or is it an indication of practically measurable resonance behavior toward regulation? (see page 81; summary of results and interpretation of the study, in line with the IFVBESA approach)

## Benzene (int. Benzol) At the interface between toxicology and the neuroendocrine system

### 1. Toxicological profile of benzene

Benzene is a lipophilic aromatic hydrocarbon (C<sub>6</sub>H<sub>6</sub>). Its toxicity is not primarily due to benzene itself, but rather to reactive metabolites formed in the liver and, to some extent, in the lungs and bone marrow.

The central metabolic pathways involve the cytochrome P450 system (primarily CYP2E1, CYP2B1, and CYP2F1). This produces intermediates such as:

- Benzoloxid,
- Phenol,
- Hydrochinon,
- Benzochinon and
- Muconesäure-Derivate.

These reactive metabolites bind covalently to macromolecules, especially DNA, proteins and membrane lipids, thereby generating oxidative stress and nitrosative dysregulation.

### 2. The Actual Point of Attack – "Where Does the Poison Work?"

The toxicological interfaces can be concentrated in three main areas:

#### a) Endothelium and Nervous System (Blood-Brain Barrier and Nerve Endothelium)

Benzene and its metabolites are highly lipophilic and can easily cross the blood-brain barrier (BBB). In the endothelium of capillaries (especially in the CNS and peripheral nerves), peroxidation of membrane lipids occurs.

This leads to:

- Loss of tight junctions between endothelial cells,
- Increased permeability,
- and microglial activation in the CNS (neuroinflammation).

Thus, benzene directly influences neuronal homeostasis and enhances sympathoadrenergic stress responses.

One could say: it opens the "energetic floodgates" at the interface between blood and nerves – the place where stress, the immune system, and the brain meet..



### **b) Hypothalamic-pituitary-adrenal axis (HPA axis)**

Benzene is linked to the stress axis.

Its metabolites lead to oxidative stress in the glucocorticoid receptor cells of the adrenal cortex (zona fasciculata).

=> This means: The cells that actually regulate cortisol become overwhelmed and biochemically exhausted. At the same time, benzene increases the expression of CRH (corticotropin-releasing hormone) and ACTH in the hypothalamus, causing a sharp, short-term rise in cortisol – exactly the effect you describe.

However: chronic exposure causes the regulatory circuit to become dysfunctional – the receptors "miss" the signal.

This leads to HPA axis dysregulation, a state of permanent alarm with simultaneous energy deficiency – in other words, a state of neuroendocrine exhaustion.

### **c) Bone marrow & hematopoietic stem cells**

This is where the classic benzene toxicity lies:

The reactive metabolites destroy stem cells in the bone marrow, leading to apoptosis, chromosome breaks, and malrepair (risk of leukemia).

But this is not independent of the HPA axis—cytokine release (IL-6, TNF- $\alpha$ ) creates persistent systemic inflammation, which in turn affects the hypothalamus and adrenal glands.

## **3. Connection between cortisol, the sympathetic nervous system, and benzene**

Benzene induces oxidative stress in mitochondria – also in neurons and endothelial cells. However, mitochondria are also the main source of steroid biosynthesis (cortisol, aldosterone, sex hormones). When reactive oxygen species (ROS) are produced here by benzene, it:

- initially overstimulates cortisol production
- then blocks it due to mitochondrial dysfunction

This creates the paradoxical situation: => "high stress impulse – low energy response." The system drives itself into exhaustion – a biochemical reflection of chronic stress.

## **4. Symbolically and energetically informative**

Translating this mechanism to your research level, benzene acts like an "energetic short-circuiting agent":

It interrupts the flow of information between the body, nerves, and consciousness – precisely where light (information) and life (energy) are normally synchronized.

In the nerve endothelium, this would be the interface between:

- *electrical conduction (neuron)*
- *chemical signaling (synapse), and*
- *energetic regulation (ATP/mitochondrion)*



This is the point at which quantum technological fields (such as those you are researching in the IFVBESA context) could actually intervene in a modulating way – by restoring coherent cellular communication.

## 5. Brief Summary

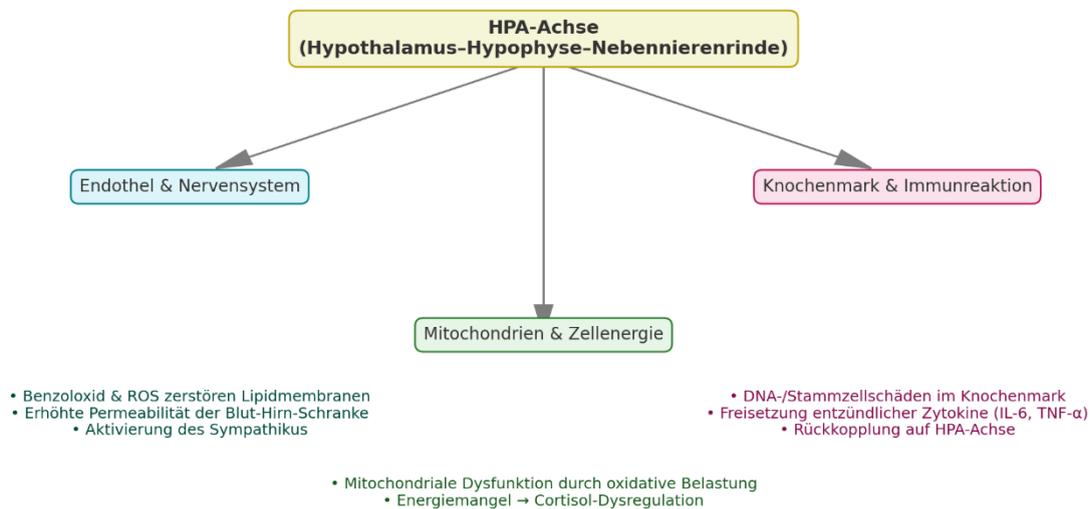
System Level	Target	Consequence
Endothelium / Nerves	Lipid peroxidation, ROS, barrier dysfunction	Neuroinflammation, sympathetic activation
HPA-Axis	Oxidative Dysfunction in adrenal cells	Dysregulated cortisol fatigue
Bone marrow	DNA-damage, cytokine release	Inflammation, leukemia risk
Mitochondria	ROS, ATP-deficiency	Energy deficiency, cellular stress

## 6. Graphic representation of an integrative benzene-stress axis

*Scheme of the toxicological-neuroendocrine interfaces with the HPA axis, endothelium, and mitochondria as the hub.*

### Integrative action model: Benzene, stress and the HPA axis

Integratives Wirkmodell: Benzol, Stress und die HPA-Achse





## Research Funding Services of the IFVBESA – BESA Reference Tests

Project P82 specifically focuses on demonstrating the effectiveness of the test object's technology on subjects 1-6.

The test object will be tested according to the client's request within the framework of the applicable IFVBESA conditions for awarding quality seals. Quality seals are generally awarded in three categories depending on the significance of the test results, taking into account all tests within a project. The aim of the test object is to determine whether its application can harmonize and neutralize the aforementioned stressors from typical environmental influences and the resulting disturbances, problems, blockages, and disharmonies in the subjects' energy systems, thus replacing negative pathological conditions with positive ones. This will be examined in the following commissioned tests of this project.

### Research Project Description

The purpose of this test is to demonstrate the functionality of the test object based on objectively verifiable measurement results. For this purpose, the test subjects were first subjected to a BESA baseline test (before measurement) to determine their initial energetic and 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 were taken without the test object
- The AFTER measurements were taken with the test object

**The question** for every AFTER measurement is: "Is the test object suitable and capable of harmonizing or neutralizing the perceived stressful effects on the subjects' energy-informational system 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 conducted using the test object. The client's concern is to determine whether the test object, as stated in the product description, is suitable for harmonizing the disturbances, problems, blockages, and disharmonies in the subjects' meridian system resulting from the BEFORE measurements.

#### **General Information on the Test Object's Information Transfer**

Information transfer occurs from the test object's hyperspace to the hyperspace of biological objects (humans, animals, plants). From there, the information is transmitted via so-called interaction channels into the reference space or energy space. This is a fusion of, among other things, all organs and energy forms within the biological object. There, the program's information can be dynamically realized and thus change current states. These changes can manifest themselves in the form of neutralization or harmonization of disturbances, the resolution of problems, blockages, and disharmonies.

#### **Conditions:**



The corresponding measurements are carried out on the IFVBESA premises under laboratory conditions, at room temperature of 20°C, on natural wood flooring. Prior to the measurements, the test subjects are generally de-switched (made ready for testing) or their ability to take the test is questioned.

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

- Pos.1** BESA 1 Basic Testing (bioenergetic status) on the test subjects
- Pos.2** BESA testing after immediate exposure of the test subjects to the nosode Benzene in digital form
- Pos.3** BESA testing after 2 days of exposure of the test subjects to the test object and the nosode Benzene in digital form
- Pos.4** Evaluation of the results in the project and summary in a corresponding report according to the template

### **Procedure and specifications for implementation**

1. **BESA measurements** of the test subjects at all previously determined measurement points (TING points) serve to determine the current state. The results are determined precisely according to the BESA specifications and documented using the BESA graphics.
2. **BESA baseline measurements** of the test subjects after immediate exposure to the nosode BENZENE are taken in digital form at all previously determined measurement points (TING points). The results are again determined precisely according to the BESA specifications and documented using the BESA graphics.
3. **Activation of the test object**
  - 3.1. When activating the test object, it is applied or activated according to the client's specifications.
  - 3.2. The test subjects are brought into contact with the test object (blank object placebo) via quantum entanglement. The measurement points mentioned under point 1 are measured in the same order and for the same duration to determine the current energy state. The results are determined exactly according to the BESA specifications and documented using the BESA graphics.

## **Test procedure**

### **BESA 1 BASIC BEFORE Testing as Status**

In the first step, a basic bioenergetic test (bioenergetic status) is performed at the subjects' meridian endpoints (TING points). The corresponding markers are also tested as reference values.

Goal: To create a basic test (status) to represent the energetic starting point for all subsequent BESA tests.



## **BESA 2 Testing BEFORE, after exposure of the subject to the nosode Benzene**

In the second series of tests, the subjects are brought into contact with the nosode Benzene via the measuring circuit. The corresponding markers are also tested as reference values. The question now is: How does the subject's meridian system react after exposure to the nosode Benzene? How do the corresponding markers react?

## **BESA 3 Testing AFTER, after the subject has been exposed to the nosode Benzene and the test object**

In the final series of tests, the subjects are connected to the test object for two days beforehand via quantum entanglement, or in this way, the test object is activated via the measuring circuit in relation to the nosode and the respective subjects. Furthermore, the corresponding markers are tested again as reference values.

Now the question is: How does the subject's meridian system react within the range of action of the test object in conjunction with the nosode Benzene? How do the corresponding markers react?

## **Testing procedures for reference values as markers**

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

Bioenergy Informational Systems Analysis (BESA) goes far beyond conventional, material-based testing procedures. It captures regulatory processes at the energy-informational level, thus integrating the quantum-physical reality of the body.

### **Energy-informational regulation is primary, not secondary**

Modern scientific fields such as quantum biology, epigenetics, and informational medicine are increasingly demonstrating that biological systems are not only controlled by biochemical processes, but are significantly influenced by consciousness and, consequently, by electromagnetic signals, quantum coherence, and bioenergetic fields. Hormones are far more than biochemical substances – they are also carriers of information at the energy-informational level. They act as mediators between consciousness, body, and environment. Thus, bioenergy-informational regulation determines the biochemical reaction, not the other way around. An abnormal hormone field at the energy-informational level can signal a biochemical imbalance even before it is measurable on the physical level. Studies and empirical data, including 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 demonstrated that biological systems respond 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. BESA can provide objective answers to subjective questions, with repeatable, meaningful, and correlated results. Experience reports, case studies, and scientific findings demonstrate that



BESA represents an essential complement to conventional diagnostics, often even the decisive key to a holistic approach.

## 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 oestriol (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-informational 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 or 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.



## Subject 1 HL BEFORE Testing

### BESA 1 Testing BASIC BEFORE

Eva Schmidt performs a baseline BESA measurement on all subjects. 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-informational starting point for all subsequent BESA tests.

BESA-Test evaluation P82 1.0

from **29-12-2024 at 16:55 – 17:00** (5 minutes) page 21 to 23

**Result:** The measurement results indicated deep energetic stress at the meridian endpoints and, subsequently, the subject's subordinate metabolic status.

**100 % in the blue area**

**Conclusion:** As the graphs show, all measurement points are in the deep degenerative blue zone (energy deficiency). These measurements indicate a very severe energy deficiency at the respective acupuncture points tested.

The comparisons of the BESA graphs confirm the stressful influences on the energy-informational processes in the subject's meridian system.

The following statistical results of the hormone scheme show a similar picture of deregulation and confirm the expression of the energy deficiency.



## BESA basic test

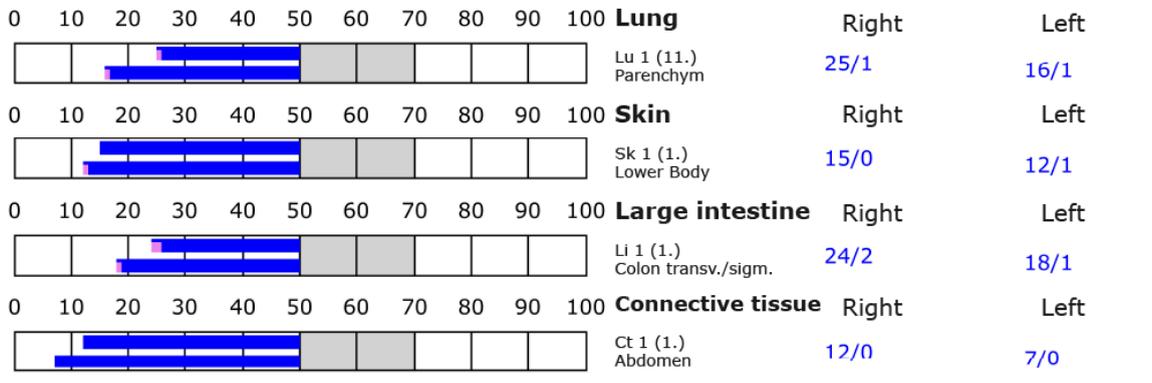
+++ : Indicator decline > 15 Skt.  
 ++ : Indicator decline 6-15 Skt.  
 + : Indicator decline 3-5 Skt.

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

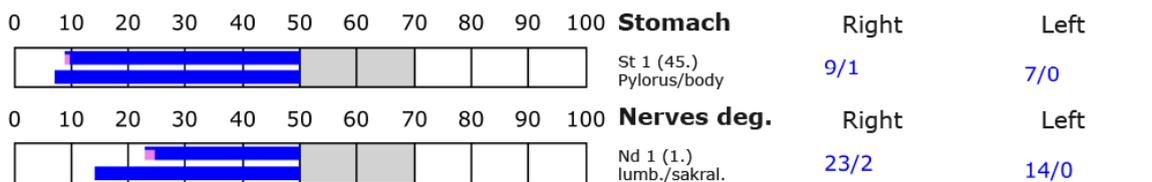
D: Degeneration (< 50 Skt.)

Standard values: (50-70 Skt.)

### Element: lu - sk - li - ct



### Element: st - nd - ps - od



## BESA basic test

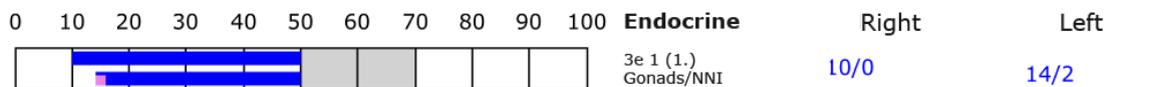
+++ : Indicator decline > 15 Skt.  
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 + : Indicator decline 3-5 Skt.

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

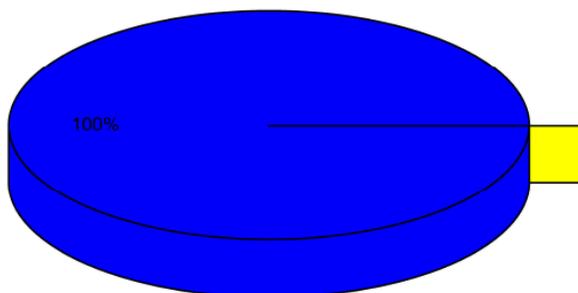
D: Degeneration (< 50 Skt.)

Standard values: (50-70 Skt.)

### Element: bc - 3e



## 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 ( )



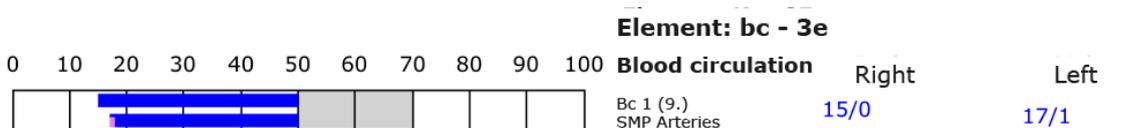
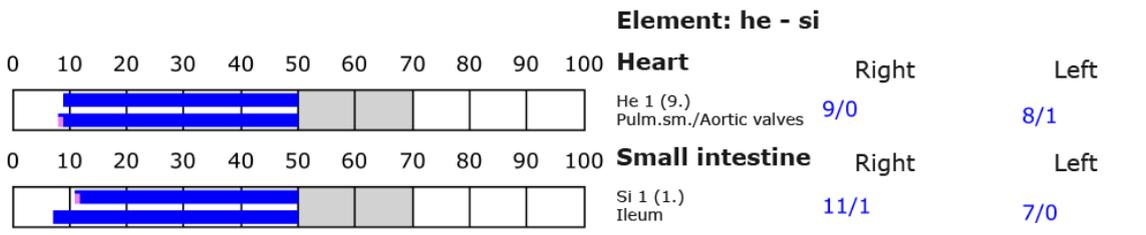
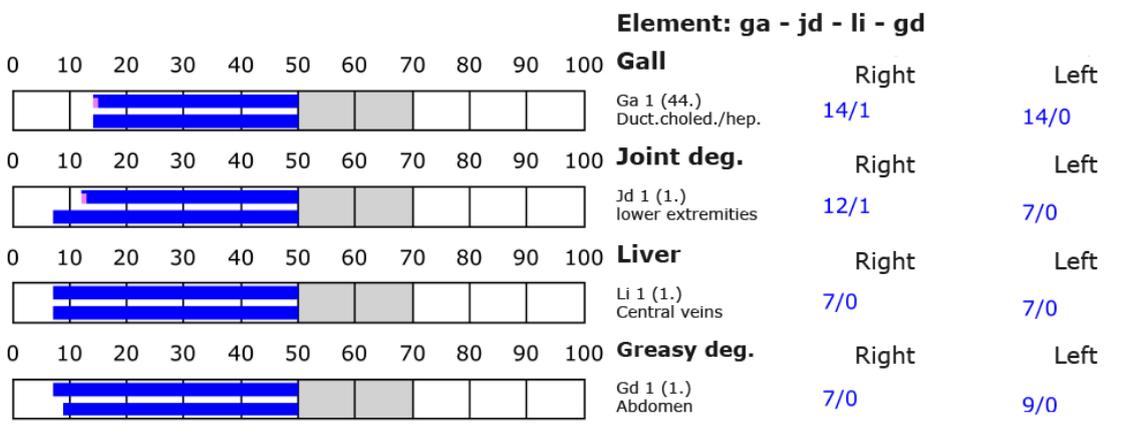
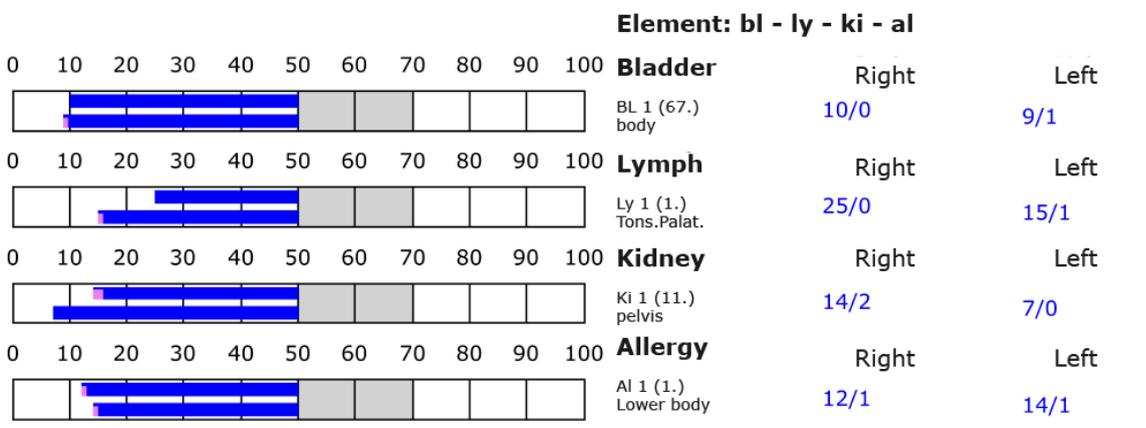
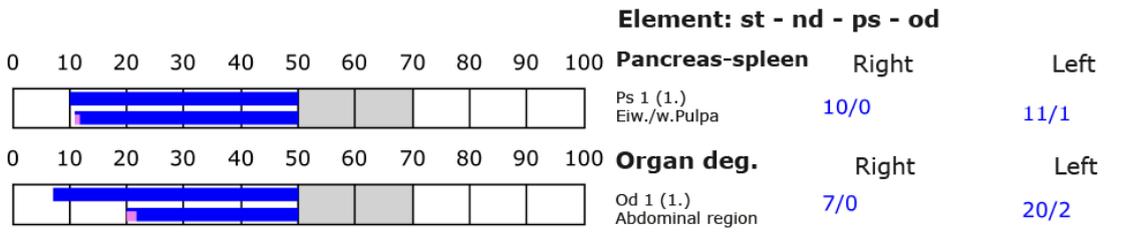
## BESA basic test

+++ : 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.)

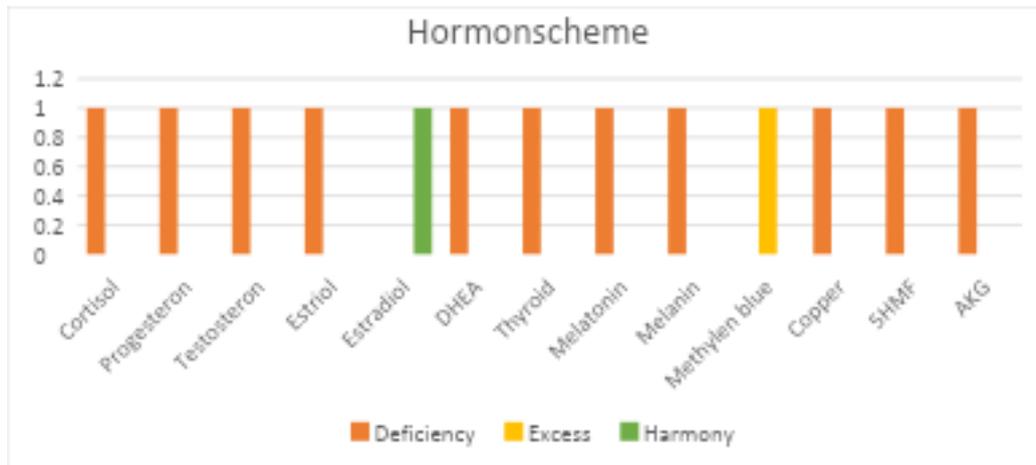
Standard values: (50-70 Skt.)





## Hormone Scheme - BEFORE

	Deficiency	Excess	Harmony
	Hypofunction	Hyperfunction	
Cortisol	+		
Progesteron	+		
Testosteron	+		
Estriol	+		
Estradiol			+
DHEA	+		
Throid	+		
Melatonin	+		
Melanin	+		
Methylen blue		+	
Copper	+		
5-HMF 5-Hydroxymethylfulfural	+		
AKG Alpha-Ketoglutarat	+		



### Cortisol-Level

	Moning	Midday	Evening
Cortisol			
zu high		+	+
zu low			
neutral	+		

### Elektromagnetic Interference fields BEFORE

	Yes	No
GE 1 Silicea – EMSF load	+	
GE 2 elektromagnetic charching	+	
GE 3 Radio transmitter load	+	



## Subject 1 HL BEFORE Testing 2

### BESA 2 Testing BEFORE, in Confrontation with the Test-Nosode Benzene

Eva Schmidt generally conducts a blinded BESA BEFORE 2 measurement on all subjects. The subjects are blinded to the test nosode Benzene. The nosode is placed in the measurement area on-site and thus brought into contact with the subject.

**Goal:** To create an effective measurement to depict the energy-informational development through exposure of the subject to the test nosode Benzene. The question is: What effect does the test nosode Benzene have on the subject's energy-informational behavior? How do the measured values compare to the BESA BEFORE testing?

BESA-Test evaluation P82 1.0

from **29-12-2024 at 17:30 – 17:45** (15 minutes) page 25 to 27

**Result:** The measurement results indicated severe energetic stress at the meridian endpoints and, subsequently, the subject's subordinate metabolic situation.

**87 % in the blue area**

**12 % in the red area**

**1 % in the yellow transition area**

**Conclusion:** As the graphs show, all measurement points are in the deeply degenerative zone. 87% of these are in the deep blue zone (energy deficiency). Another 12% are in the red zone, which corresponds to acute deregulation. To balance such measured values, a strong energy-informational impulse from outside is required! As these measured values show, after exposure to the test nosode BENZENE, the subject is in an even deeper energy deficiency than in the BESA 1 test BEFORE.

The comparisons of the BESA graphs confirm the stressful influences of the BENZENE nosode on the already degenerative, energy-informational processes in the subject's meridian system. The following statistical results of the hormone scheme also show a similar picture of deregulation. The degeneration, especially in the area of hormones, was already drastically evident in a state of deficiency.

However, compared to the BESA 1 test BEFORE, all cortisol levels had now also slipped into a deficiency. The graphs confirm the expression of energy deficiency and deregulation.



## BESA basic test

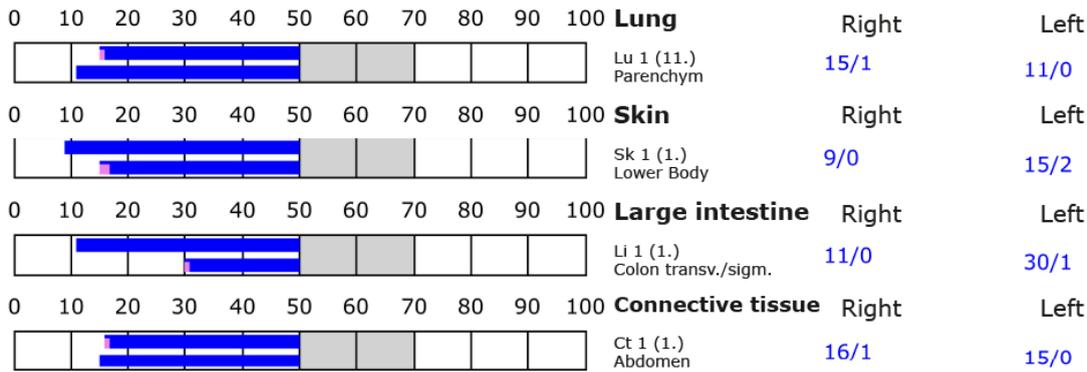
+++ : Indicator decline > 15 Skt.  
 ++ : Indicator decline 6-15 Skt.  
 + : Indicator decline 3-5 Skt.

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

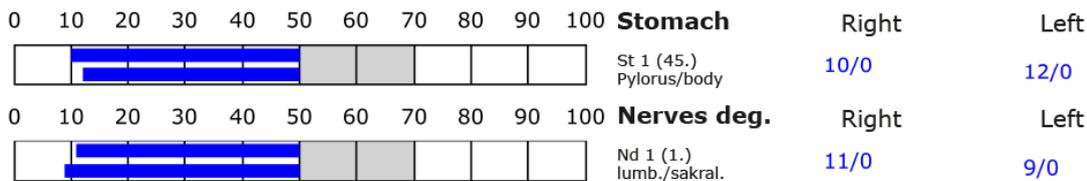
D: Degeneration (< 50 Skt.)

Standard values: (50-70 Skt.)

### Element: lu - sk - li - ct



### Element: st - nd - ps - od



## BESA basic test

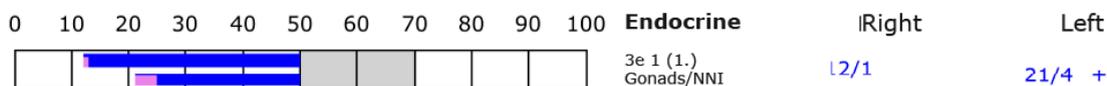
+++ : Indicator decline > 15 Skt.  
 ++ : Indicator decline 6-15 Skt.  
 + : Indicator decline 3-5 Skt.

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

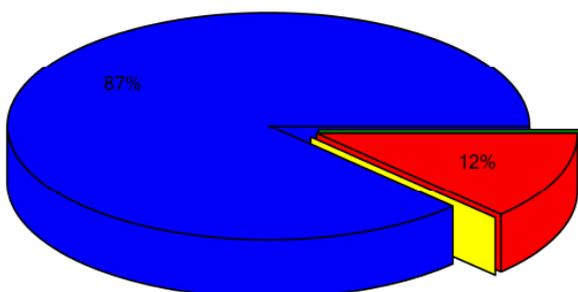
D: Degeneration (< 50 Skt.)

Standard values: (50-70 Skt.)

### Element: bc - 3e



## Overview of BESA measuring



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



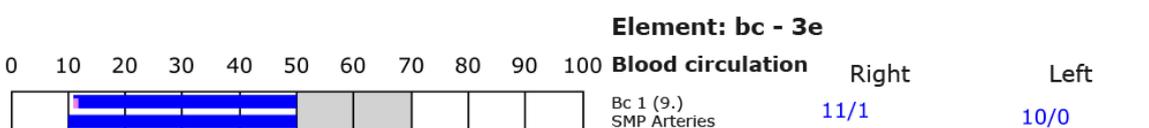
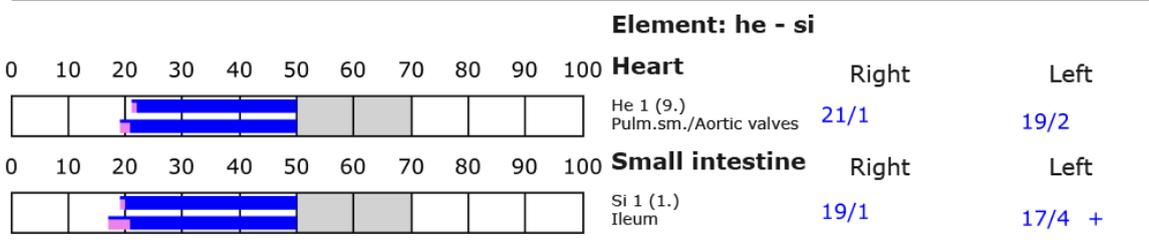
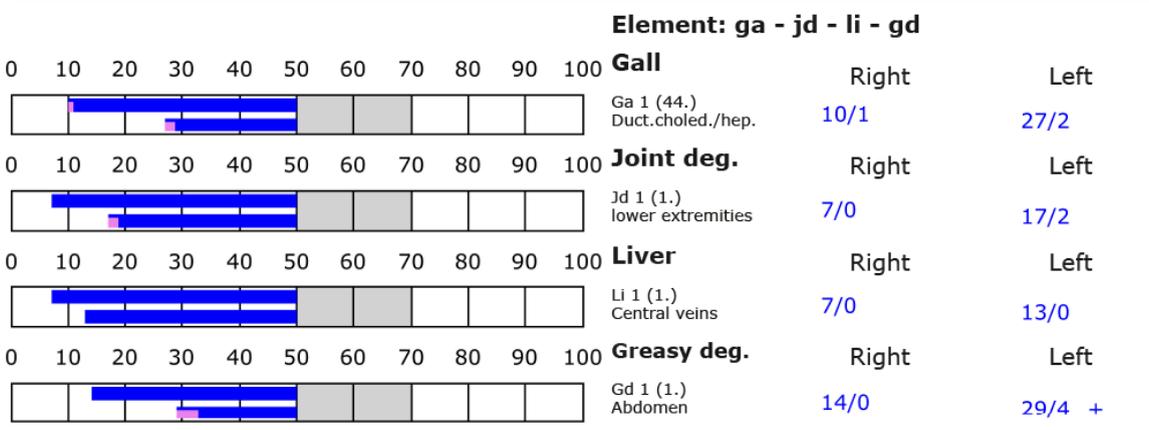
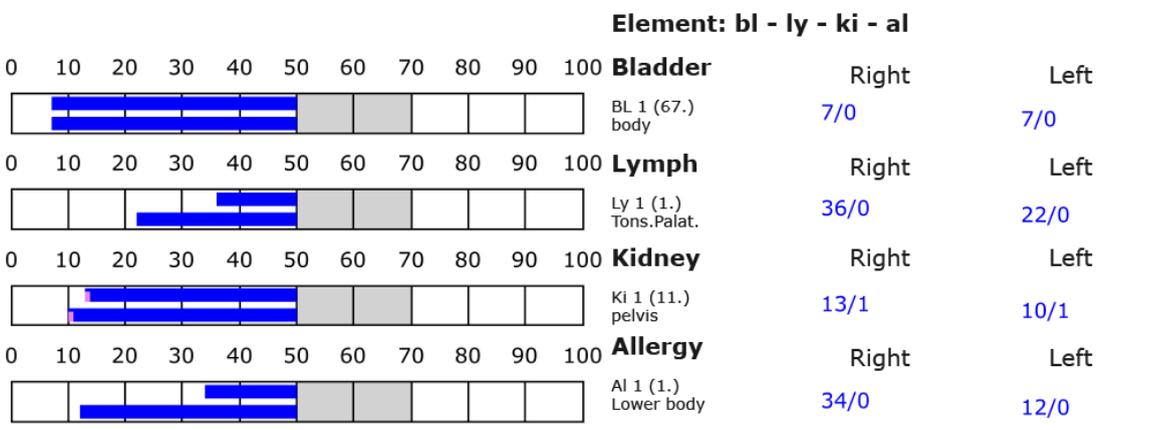
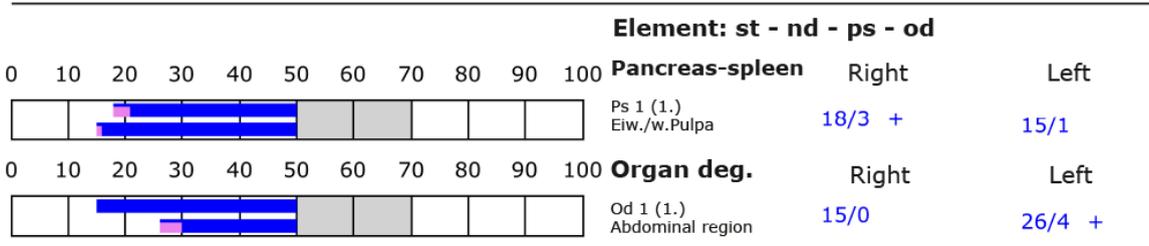
## BESA basic test

+++ : 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.)





## Hormone Scheme - BEFORE

	Deficiency	Excess	Harmony
	Hypofunction	Hyperfunction	
Cortisol	+		
Progesteron	+		
Testosteron	+		
Estriol	+		
Estradiol			+
DHEA	+		
Thyroid	+		
Melatonin	+		
Melanin	+		
Methylen blue		+	
Copper	+		
5-HMF 5-Hydroxymethylfulfural	+		
AKG Alpha-Ketoglutarat	+		

### Cortisol-level

	Morgning	Midday	Evening
Cortisol			
zu high			
zu low	+	+	+
neutral			

### Elektromagnetic Interference Fields BEFORE

	Yes	No
GE 1 Silicea – EMSF loads	+	
GE 2 elektromagnetic charger	+	
GE 3 Radio transmitter loads	+	



## Subject 1 HL AFTER Testing

### **BESA 3 Testing AFTER, after Confrontation on the subject with the test object and the test nosode Benzene**

Eva Schmidt generally performs a blinded BESA AFTER measurement on all subjects. Two days prior, the subjects are blindly connected to the test object. The nosode is then placed in the measurement area, thus bringing it into contact with the subject.

All BESA measurements are again performed at the TING points (40 nail fold endpoints on the fingers and toes).

**Goal:** To create an effective measurement to demonstrate the energy-informational development through the application of the test object while simultaneously confronting the subject with the test nosode benzene. The question is: Is the test object capable of counteracting the toxic levels of the previous tests?

BESA-Test evaluation P82 1.0  
from **02-12-2024 at 12:07 to 12:13** (6 minutes) page 29 to 32

**Result:** The measurement results show significant improvements at the meridian endpoints and the subject's energetic state after application of the test object.

**100 % in the green area**

**Conclusion:** As the graphs show, after approximately two days of exposure of the subject to the test object and the test nosode BENZENE, all measurement points are in the green, optimal, and harmonized zone (balanced energy system).

The BESA test results in a significant improvement in the energy situation in the subject's meridian system compared to the BESA 1 and 2 tests BEFORE.

All measurements were at or slightly above 50 Skt. It is evident that the test object is even capable of providing the necessary impetus for harmonization (neutralization) into the life-promoting zone for the red measurements and deep deregulations in the blue zone identified in the BESA 2 tests BEFORE.

Reference value markers, such as hormones and those that represent oxidative processes, also showed significant regulation. The ability of cortisol to regulate itself is also impressive, as shown in the graph.

Comparisons of the BESA graphs confirm the change and harmonization of stress factors in the meridian system.



## BESA basic test

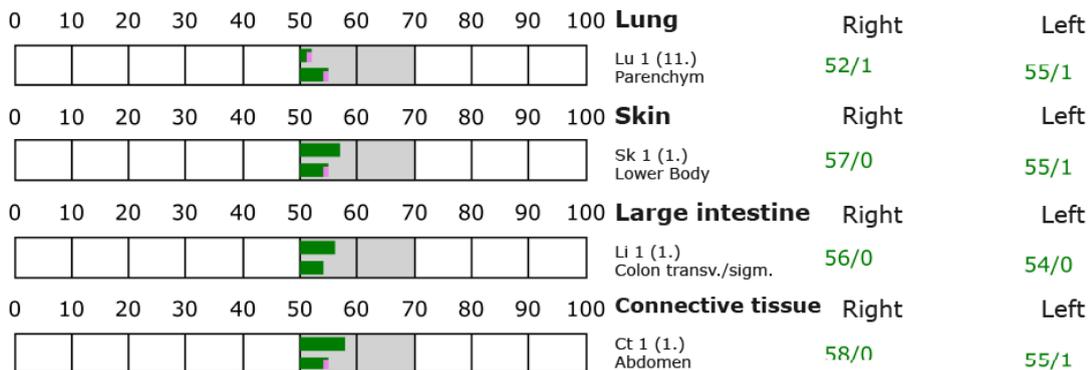
+++ : Indicator decline > 15 Skt.  
 ++ : Indicator decline 6-15 Skt.  
 + : Indicator decline 3-5 Skt.

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

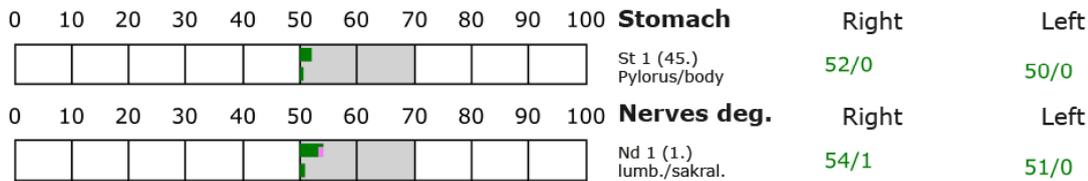
D: Degeneration (< 50 Skt.)

Standard values: (50-70 Skt.)

### Element: lu - sk - li - ct



### Element: st - nd - ps - od



## BESA basic test

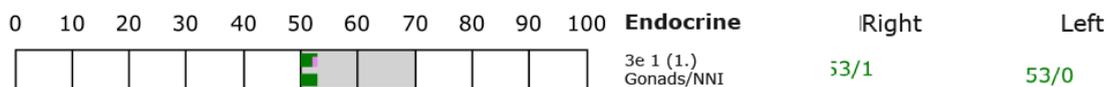
+++ : Indicator decline > 15 Skt.  
 ++ : Indicator decline 6-15 Skt.  
 + : Indicator decline 3-5 Skt.

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

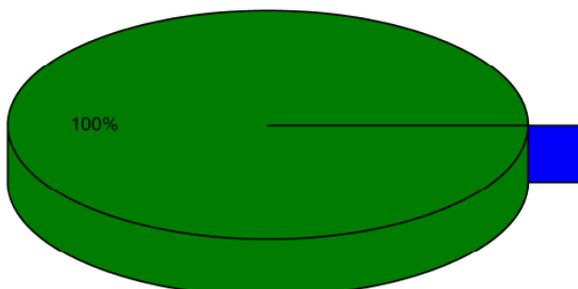
D: Degeneration (< 50 Skt.)

Standard values: (50-70 Skt.)

### Element: bc - 3e



## 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 ( )
- Green: standard values  
Values between 50 and 70 (100%)



Internationaler Fachverband für BESA ■ ZVR Nr. 975047937  
JeritzasträÙe 1, A-4866 Unterach am Attersee ■ Austria  
Tel.: +43-664-73152899 ■ E-Mail: [office@ifvbesa.at](mailto:office@ifvbesa.at)





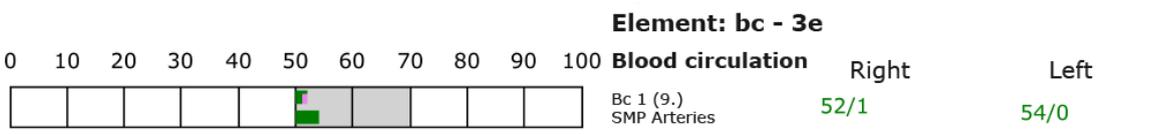
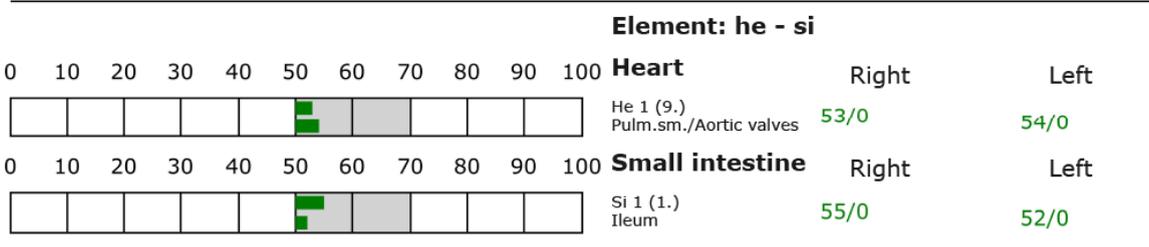
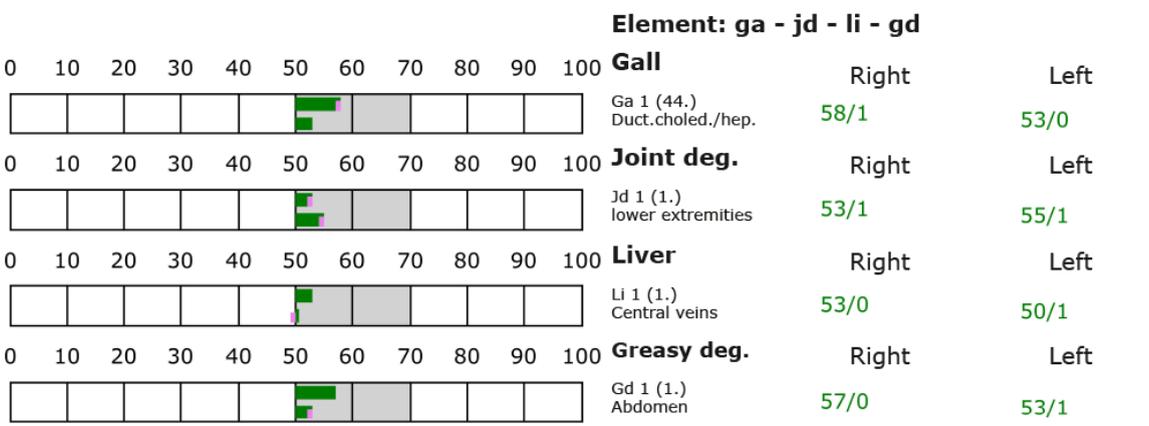
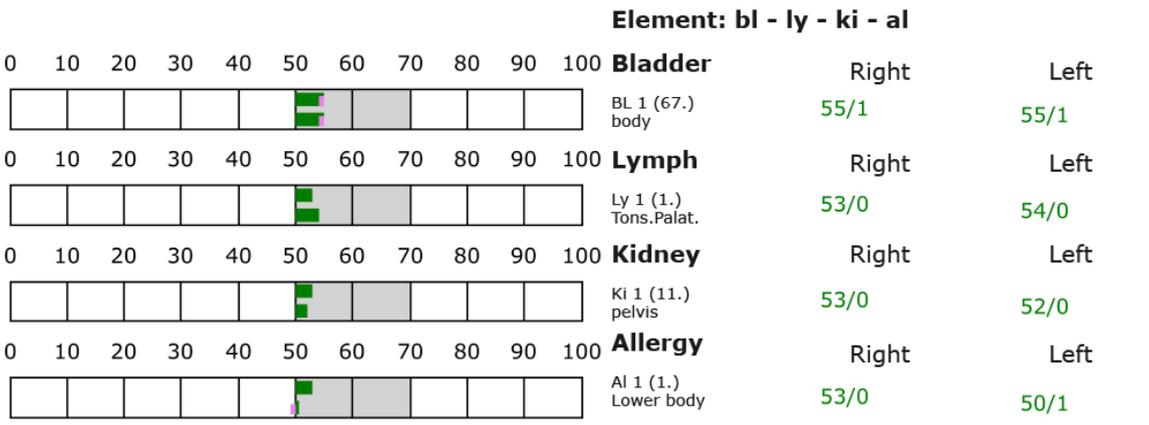
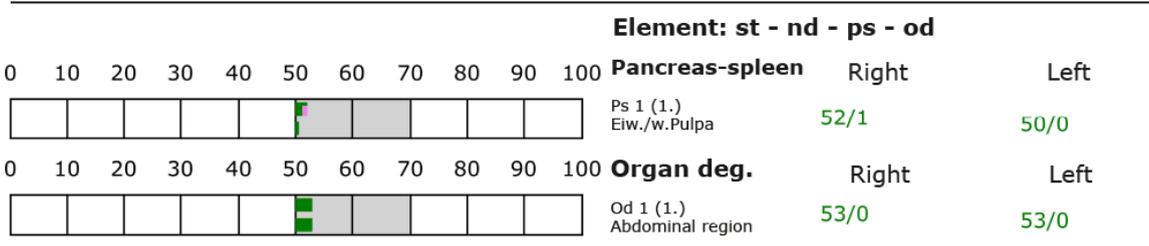
## BESA basic test

+++ : 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.)

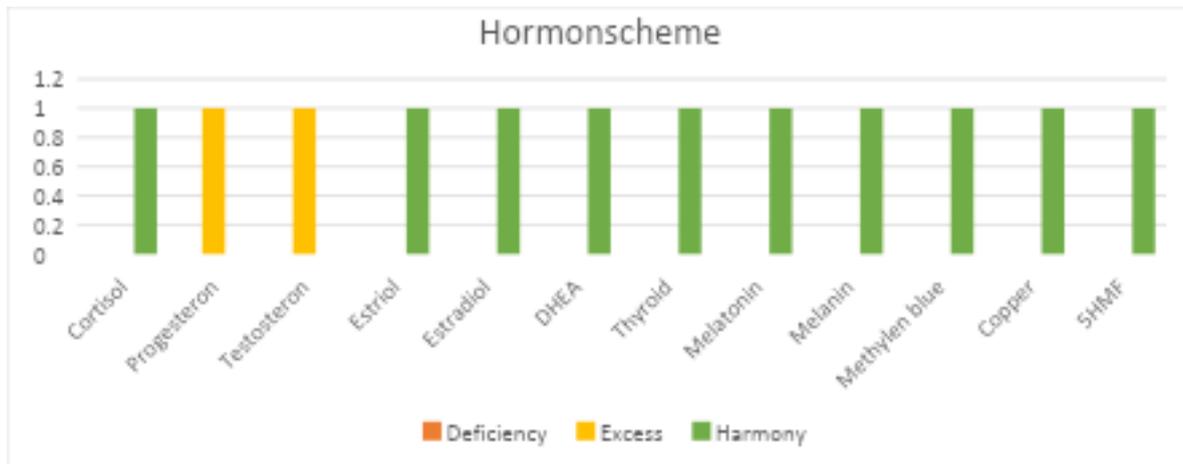


## Hormone Scheme - AFTER

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



	Hypofunction	Hyperfunction	
Cortisol			+
Progesteron		+	
Testosteron		+	
Estriol			+
Estradiol			+
DHEA			+
Thyroid			+
Melatonin			+
Melanin			+
Methylen blue			+
Copper			+
5-HMF 5-Hydroxymethylfulfural			+
AKG Alpha-Ketoglutarat		+	

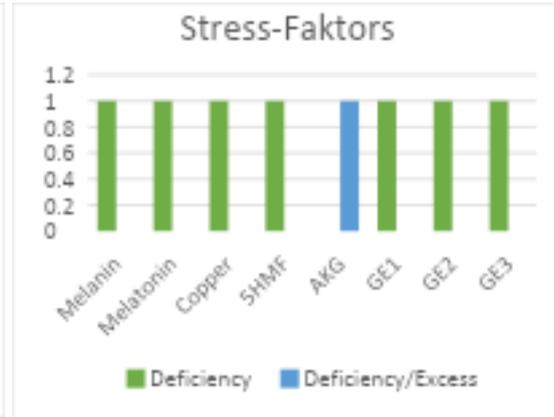
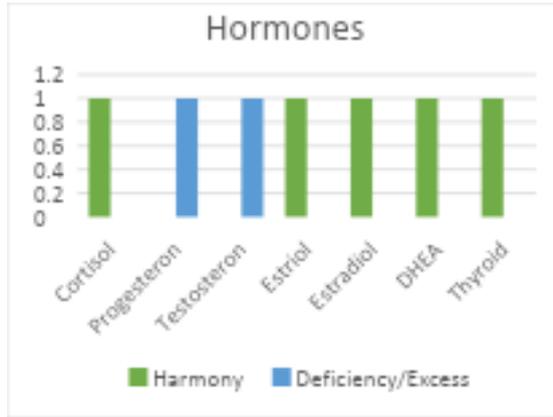


### Cortisol-Level

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

### Elektromagnetic Interference Filids AFTER

	Yes	No
GE 1 Silicea – EMSF load		+
GE 2 elektromagnetic charger		+
GE 3 Radio transmitter loads		+





## Subject 2 KK BEFORE Testing

### BESA 1 Testing BASIC BEFORE

BESA-Test evaluation P82 1.0  
from **29-11-2024 at 12:18 to 12:22** (4 minutes) page 34 to 36

**Result:** The measurement results indicated some severe energetic stress at the meridian endpoints and, subsequently, the subject's subordinate metabolic status.

**97 % in the blue area**

**2 % in the green area**

**1 % in the yellow transition area**

**Conclusion:** As the graphs show, almost all measurement points are located in the partially deeply degenerative blue zone (energy deficiency).

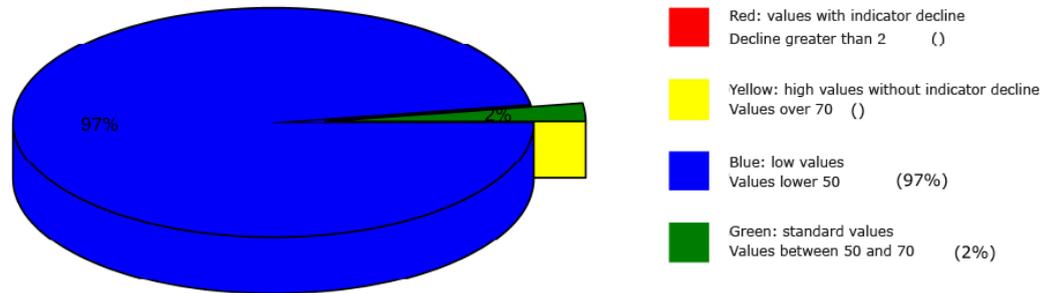
These measurements indicate a largely severe energy deficiency at the respective acupuncture points tested.

The comparisons of the BESA graphs confirm the stressful influences on the energy-informational processes in the subject's meridian system.

The following statistical results of the hormone scheme show a similar picture of deregulation and confirm the expression of energy deficiency. The values in the hormone scheme confirm partial inflammation at the corresponding measurement points.



## Overview of BESA measuring



## BESA basic test

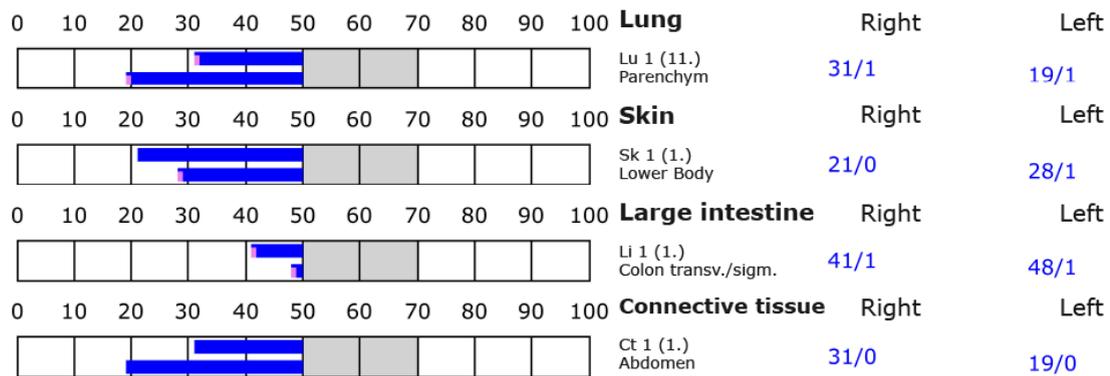
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 + : Indicator decline 3-5 Skt.

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

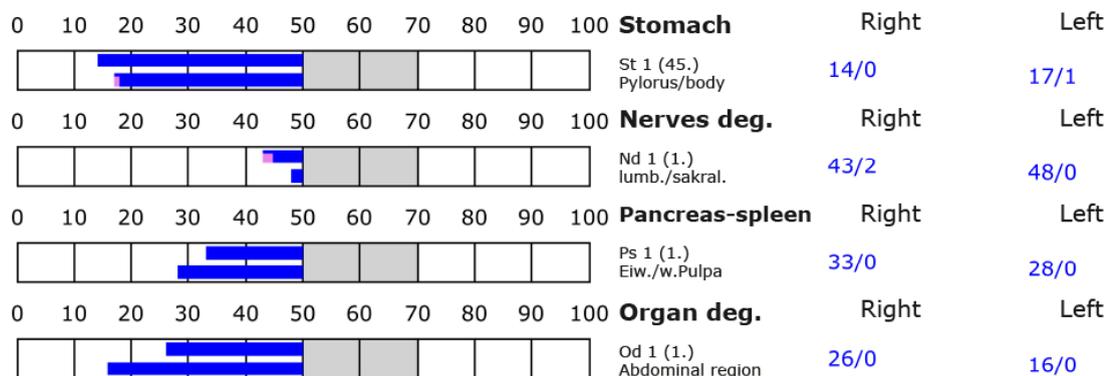
D: Degeneration (< 50 Skt.)

Standard values: (50-70 Skt.)

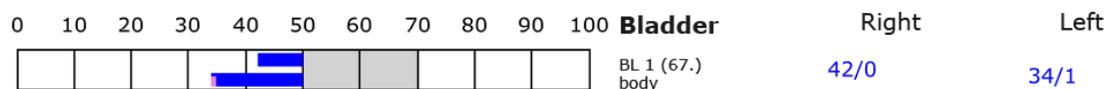
### Element: lu - sk - li - ct



### Element: st - nd - ps - od



### Element: bl - ly - ki - al





## BESA basic test

+++ : Indicator decline > 15 Skt.

++ : Indicator decline 6-15 Skt.

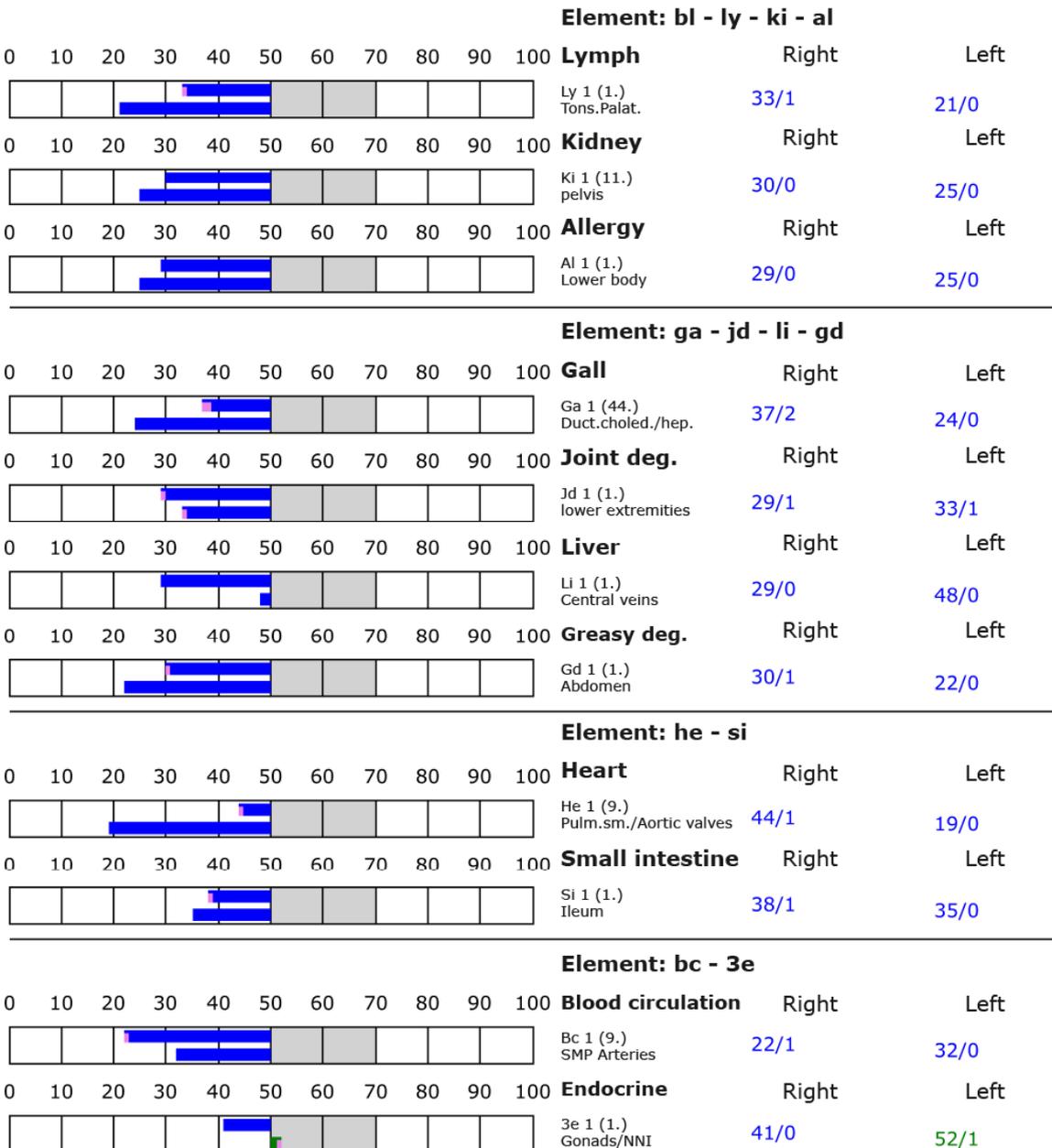
+ : Indicator decline 3-5 Skt.

T: Total inflammation (>89 Skt.)

P: Partial inflammation (70-89 Skt.)

D: Degeneration (< 50 Skt.)

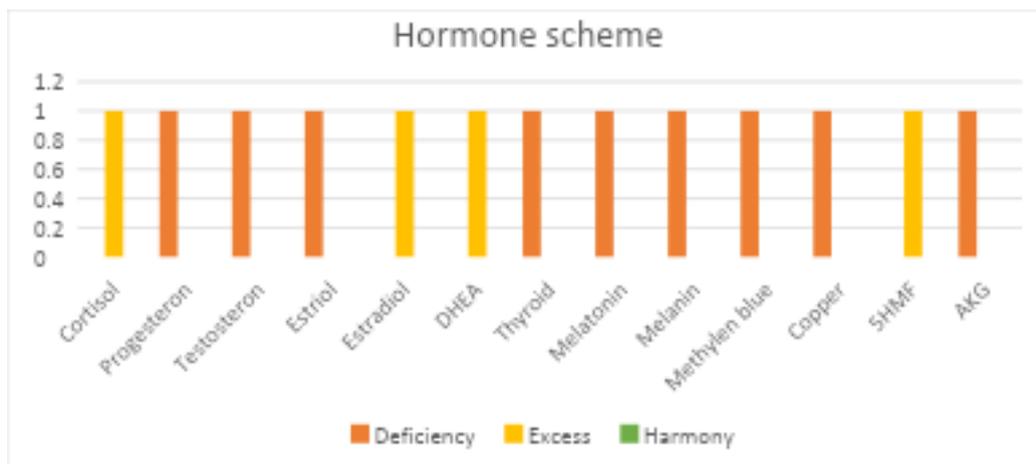
Standard values: (50-70 Skt.)





## Hormone Scheme - BEFORE

	Deficiency	Excess	Harmony
	Hypofunction	Hyperfunction	
Cortisol		+	
Progesteron	+		
Testosteron	+		
Estriol	+		
Estradiol		+	
DHEA		+	
Thyroid	+		
Melatonin	+		
Melanin	+		
Methylen blue	+		
Copper	+		
5-HMF 5-Hydroxymethylfulfural		+	
AKG Alpha-Ketoglutarat	+		



### Cortisol-Level

	Morgning	Midday	Evening
Cortisol			
zu high			+
zu low	+	+	
neutral			

### Elektromagnetic Interference Fields BEFORE

	Yes	No
GE1 Silicea – EMSF loads	+	
GE 2 elektromagnetic charger	+	
GE 3 Radio transmitter loads	+	



## Subject 2 KK BEFORE Testing 2

### BESA 2 Testing BEFORE in Confrontation with the Test-Nosode Benzene

BESA-Test evaluation P82 1.0

from **29-11-2024 at 12:40 – 12:44** (4 minutes) page 38to 40

**Result:** The measurement results largely indicated severe energetic stress at the meridian endpoints and, subsequently, the subject's subordinate metabolic situation.

**97 % in the blue area**

**2 % in the red area**

**1 % in the yellow transition area**

**Conclusion:** As the graphs show, all measurement points are largely in the deeply degenerative blue zone (energy deficiency).

2% of the measured values are even in the red zone, which corresponds to acute deregulation. To balance such measured values, a strong energy-informative impulse from outside is required!

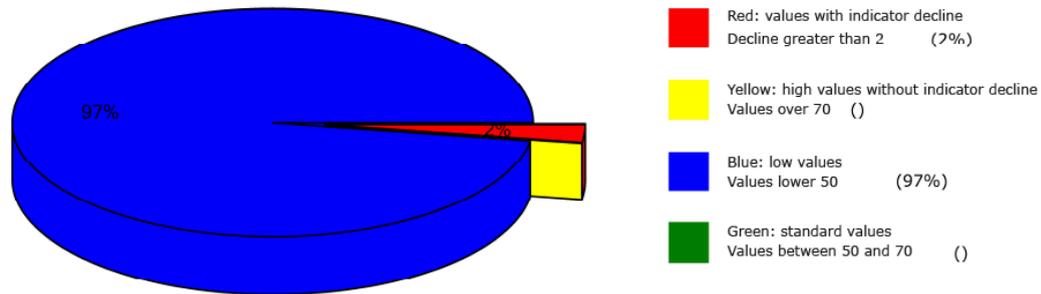
As these measured values show, after exposure to the test nosode BENZENE, the subject is in an even deeper energy deficiency than indicated PREVIOUSLY in the BESA 1 test.

The comparisons of the BESA graphs confirm the stressful influences of the BENZENE nosode on the already degenerative, energy-informative processes in the subject's meridian system.

The following statistical results of the hormone scheme also show a similar picture of deregulation. The degeneration of hormones already indicated a drastic deficiency in the BESA 1 test before. However, compared to the BESA 1 test before, all cortisol levels had now also slipped into a deficiency. The graphs confirm the expression of energy deficiency and deregulation.



## Overview of BESA measuring



## BESA basic test

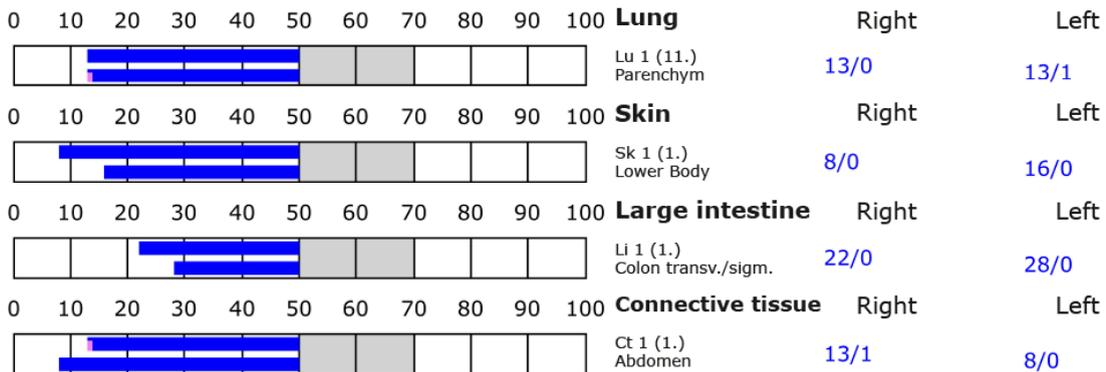
+++ : Indicator decline > 15 Skt.  
 ++ : Indicator decline 6-15 Skt.  
 + : Indicator decline 3-5 Skt.

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

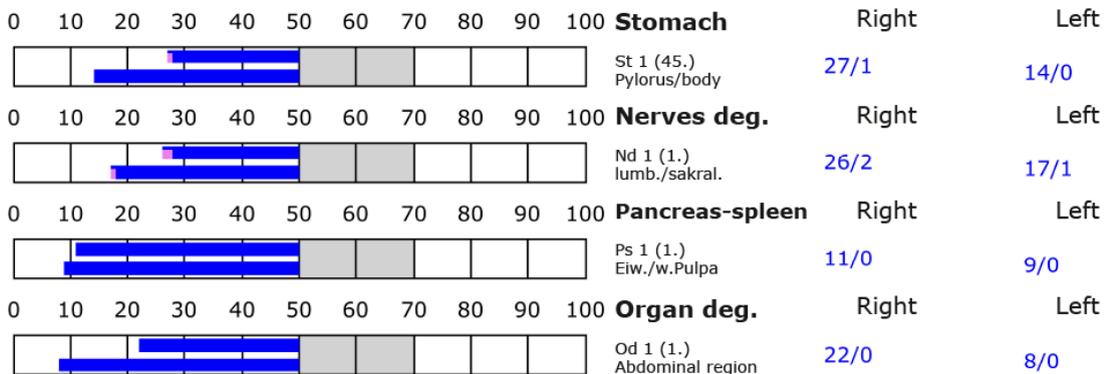
D: Degeneration (< 50 Skt.)

Standard values: (50-70 Skt.)

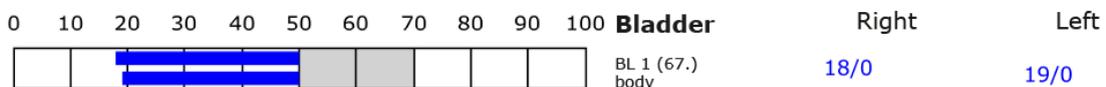
### Element: lu - sk - li - ct



### Element: st - nd - ps - od



### Element: bl - ly - ki - al





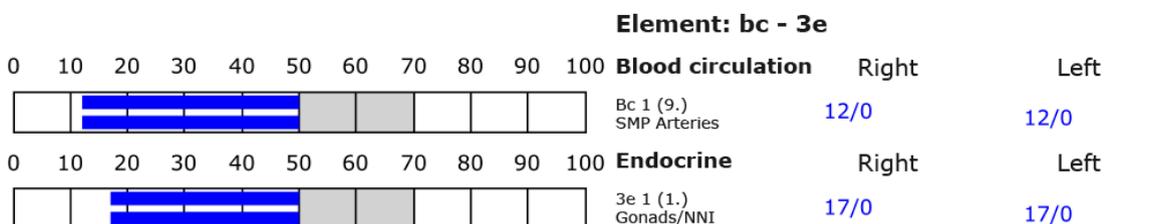
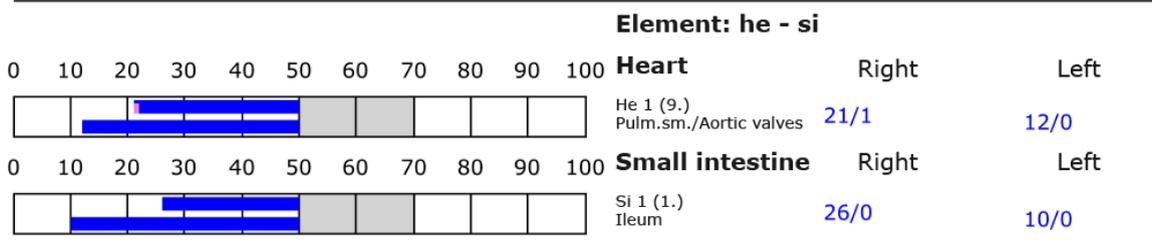
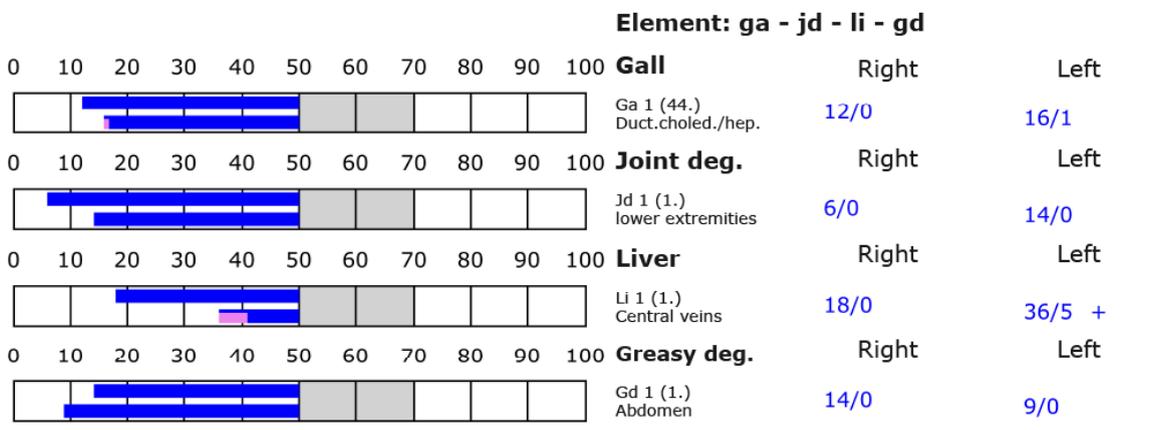
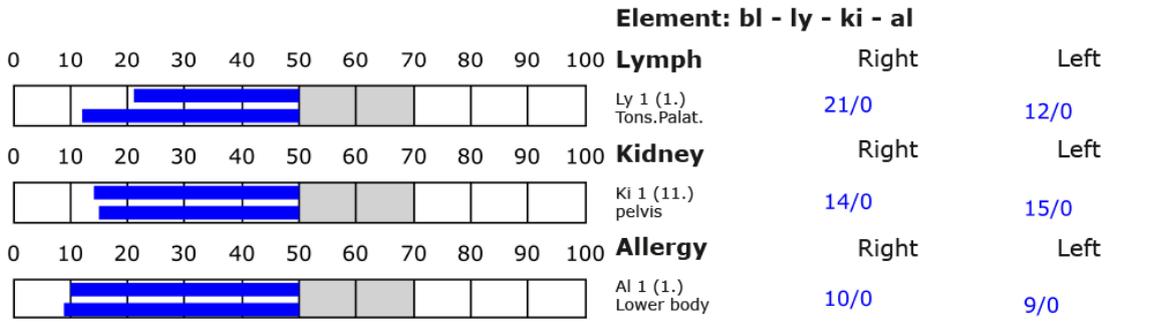
## BESA basic test

+++ : 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 Scheme - BEFORE

	Deficiency	Excess	Harmony
	Hypofunction	Hyperfunction	
Cortisol	+		
Progesteron	+		
Testosteron	+		
Estriol		+	
Estradiol		+	
DHEA	+		
Thyroid	+		
Melatonin		+	
Melanin	+		
Methylen blue		+	
Copper	+		
5-HMF 5-Hydroxymethylfulfural	+		
AKG Alpha-Ketoglutarat	+		

### Cortisol-Level

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

### Elektromagnetic Interference Fields BEFORE

	Yes	No
GE 1 Silicea – EMSF loads	+	
GE 2 elektromagnetic charger	+	
GE 3 Radio transmitter loads	+	



## Subject 2 KK AFTER Testing

### BESA 3 Testing AFTER, after Confrontation on the Subject with the Testobject and the Test-Nosode Benzene

BESA-Test evaluation P82 1.0  
from **02-12-2024 at 09:30 - 09:35** (5 minutes) page 42 to 45

**Result:** The measurement results show significant improvements at the meridian endpoints and the subject's energetic state after application of the test object.

**100 % in the green area**

**Conclusion:** As the graphs show, after at least three days of exposure of the subject to the test object and the test nosode BENZENE, all measurement points are in the green, optimal, and harmonized zone (balanced energy system).

The BESA test results in a significant improvement in the energy situation in the subject's meridian system compared to the BESA 1 and 2 tests before.

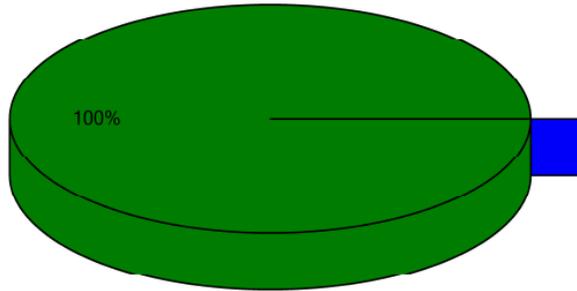
All measured values were at or slightly above 50 Skt. This shows that, despite the high toxicity of the test nosode BENZENE, the test object is capable of providing the necessary impetus for harmonization (neutralization) into the life-promoting zone for the deregulations identified in the BESA 2 tests before, including the acute energy deficiency in the corresponding areas (red measured values).

The graphs of the reference values as markers show a similarly significant picture. In particular, the inflammatory markers such as DHEA and 5-HMF were in the harmonious range.

The comparisons of the BESA graphs confirm the change and harmonization of the stress factors in the meridian system.



## 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 (%)
- Green: standard values  
Values between 50 and 70 (100%)



## BESA basic test

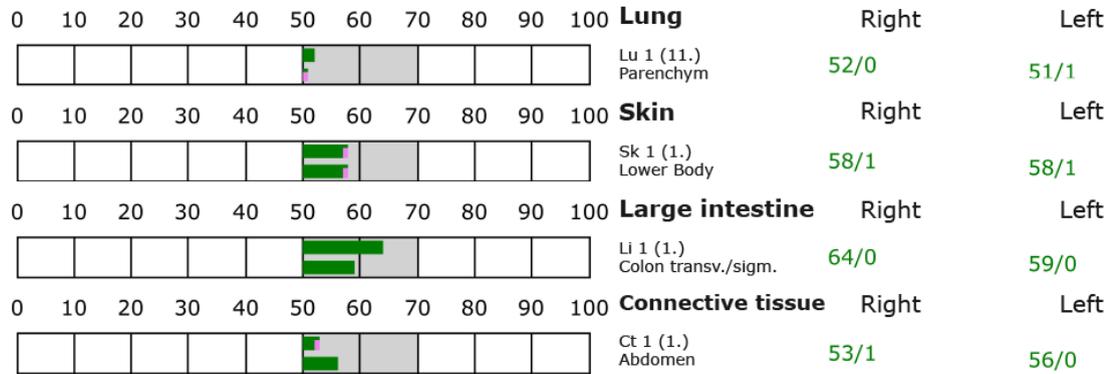
+++ : Indicator decline > 15 Skt.  
 ++ : Indicator decline 6-15 Skt.  
 + : Indicator decline 3-5 Skt.

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

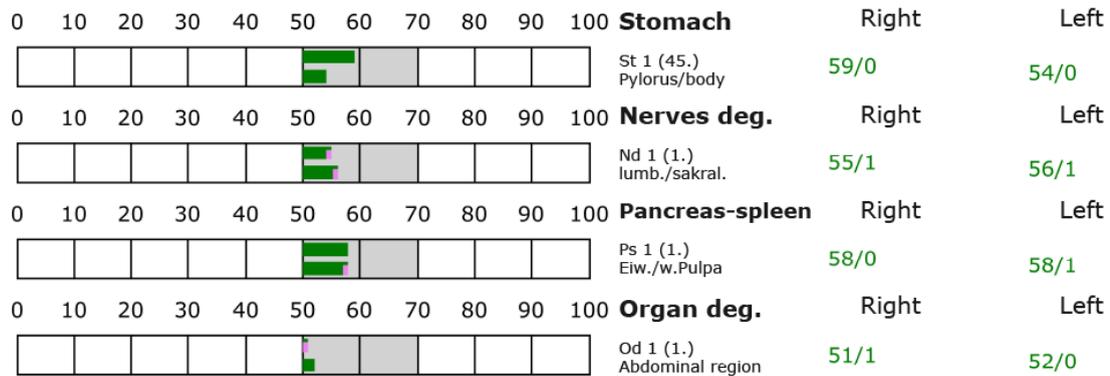
D: Degeneration (< 50 Skt.)

Standard values: (50-70 Skt.)

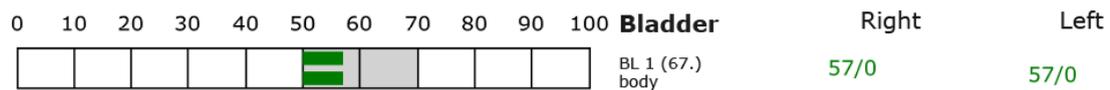
### Element: lu - sk - li - ct



### Element: st - nd - ps - od



### Element: bl - ly - ki - al





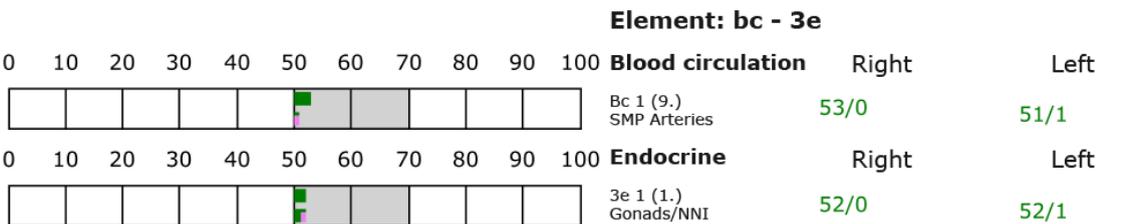
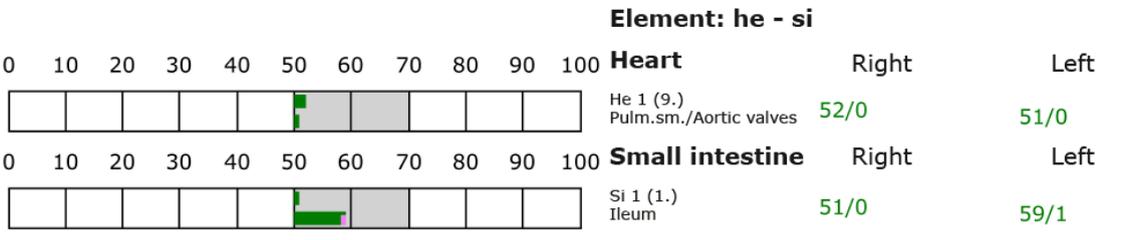
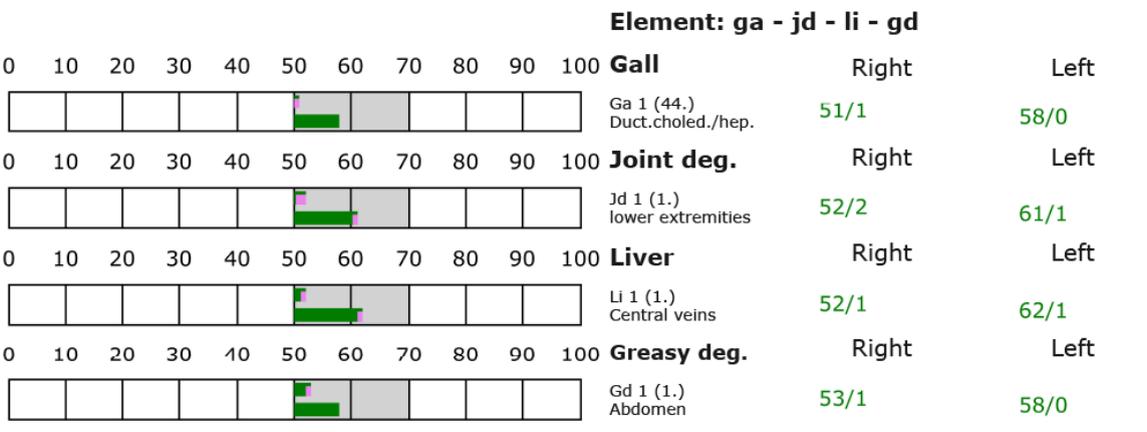
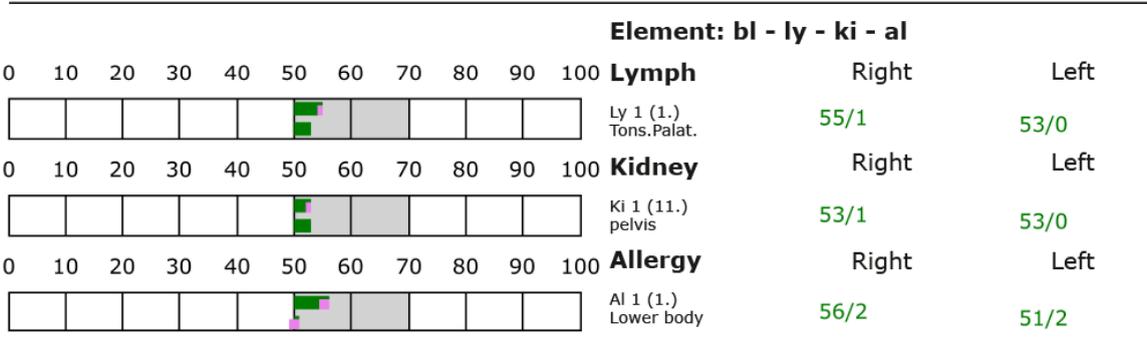
## BESA basic test

+++ : 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.)

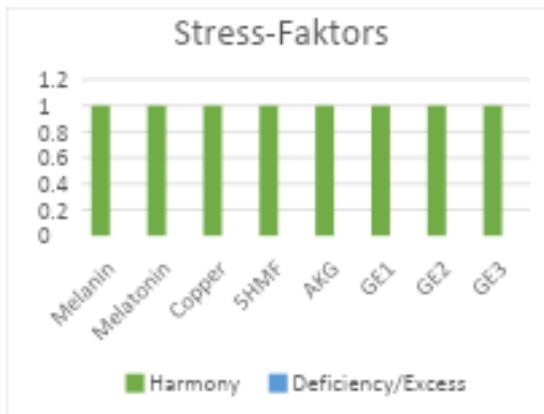
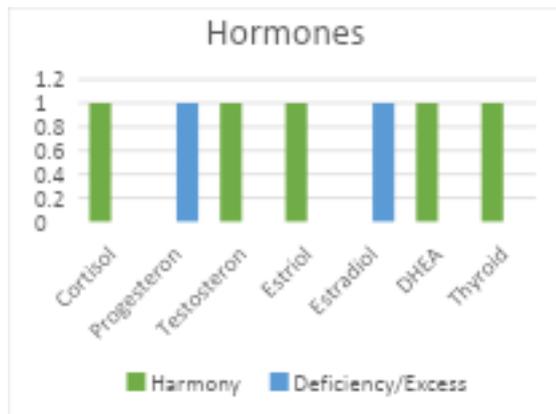
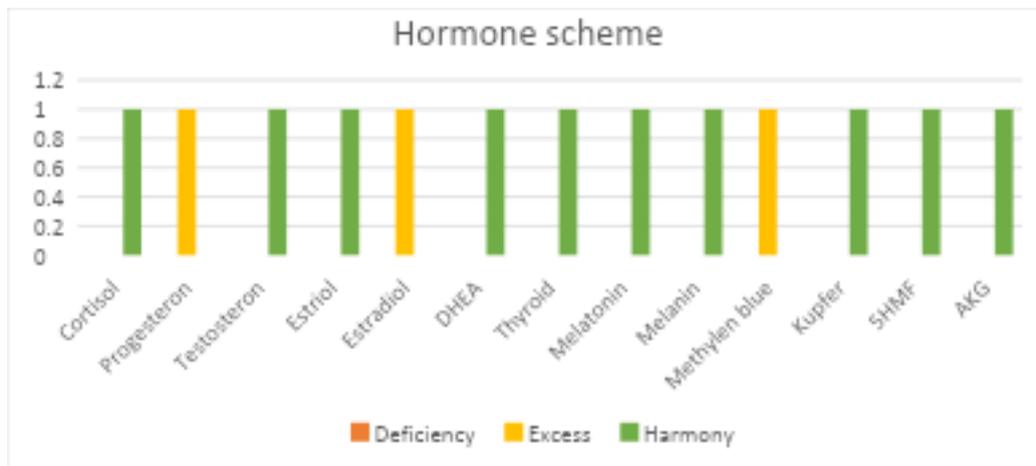


## Hormone Scheme - AFTER

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



	Hypofunction	Hyperfunction	
Cortisol			+
Progesteron		+	
Testosteron			+
Estriol			+
Estradiol		+	
DHEA			+
Thyroid		+	
Melatonin			+
Melanin			+
Methylen blue		+	
Copper			+
5-HMF 5-Hydroxymethylfulfural			+
AKG Alpha-Ketoglutarat			+



### Cortisol-Level



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

## Elektromagnetic Interference Fields AFTER

	Yes	No
GE1 Silicea – EMSF loads		+
GE 2 elektromagnetic charger		+
GE 3 Radio transmitter loads		+

## Subject 3 HD BEFORE Testing



## BESA 1 Testing BASIC BEFORE

BESA-Test evaluation P82 1.0

from **02-12-2024 at 10:44 – 10:50** (6 minutes) page 47 to 49

**Result:** The measurement results indicated some profound energetic stress at the meridian endpoints and, subsequently, the subject's subordinate metabolic status.

**95 % in the blue area**

**5 % in the green area**

**Conclusion:** As the graphs show, almost all measurement points are in the partially deeply degenerative blue zone (energy deficiency). Nevertheless, 5% of the corresponding values are in the green (optimal) zone.

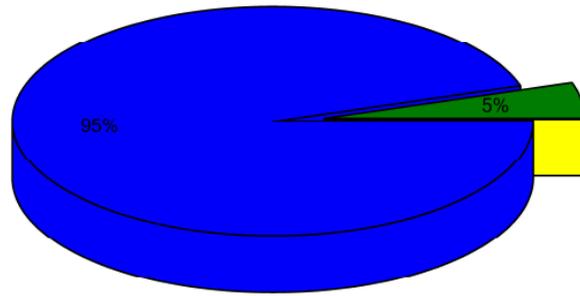
These measurements indicate a largely severe energy deficiency at the respective acupuncture points tested.

The comparisons of the BESA graphs confirm the stressful influences on the energy-informational processes in the subject's meridian system.

The following statistical results of the hormone scheme show a similar picture of deregulation and confirm 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 (95%)
- Green: standard values  
Values between 50 and 70 (5%)

## BESA basic test

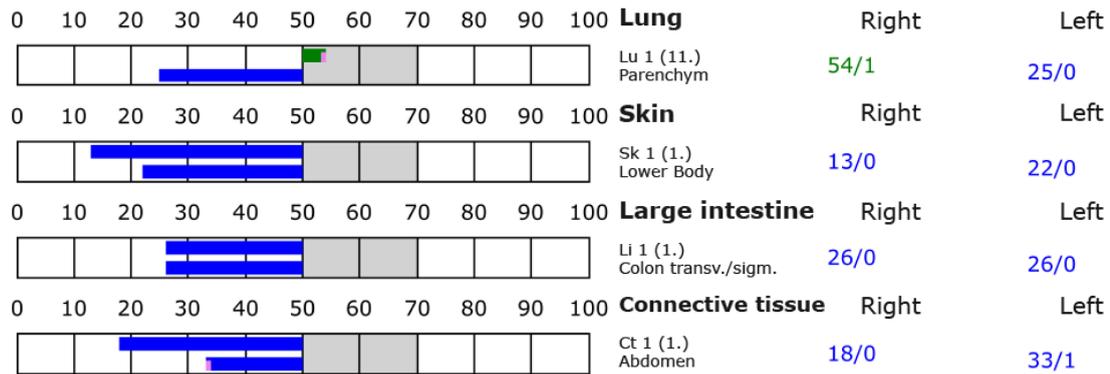
+++ : Indicator decline > 15 Skt.  
 ++ : Indicator decline 6-15 Skt.  
 + : Indicator decline 3-5 Skt.

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

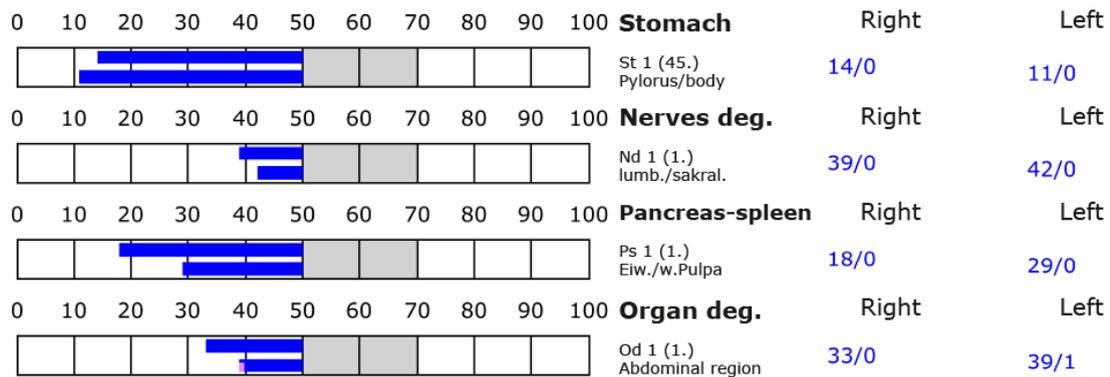
D: Degeneration (< 50 Skt.)

Standard values: (50-70 Skt.)

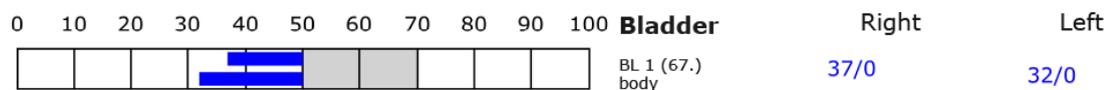
### Element: lu - sk - li - ct



### Element: st - nd - ps - od



### Element: bl - ly - ki - al





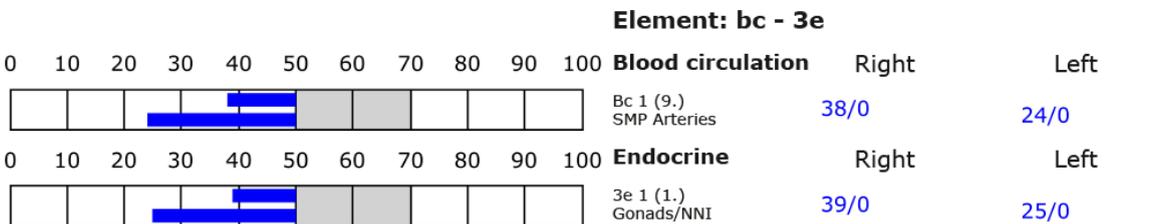
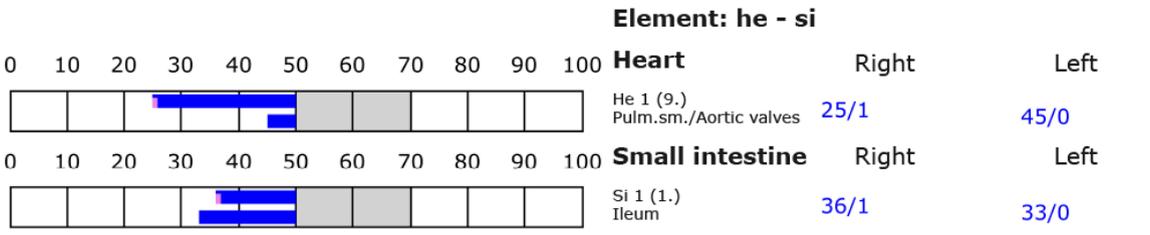
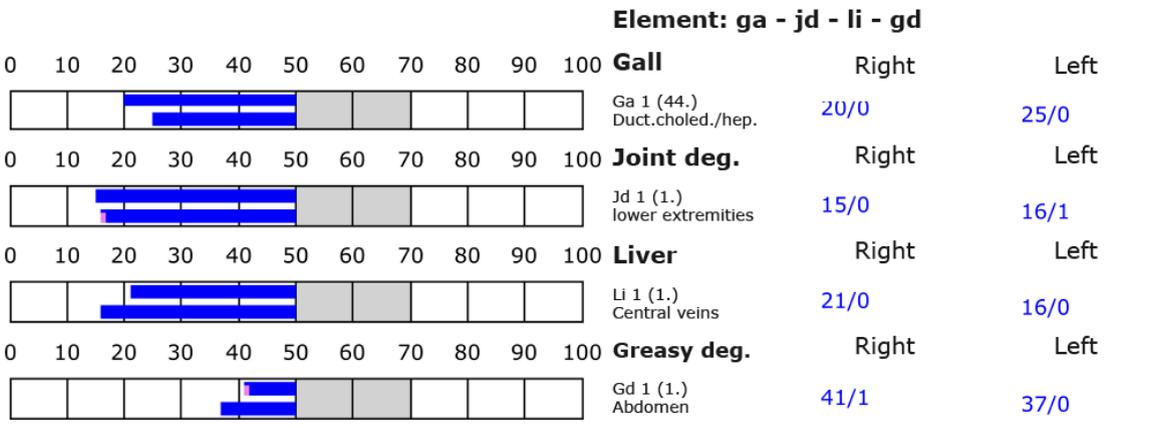
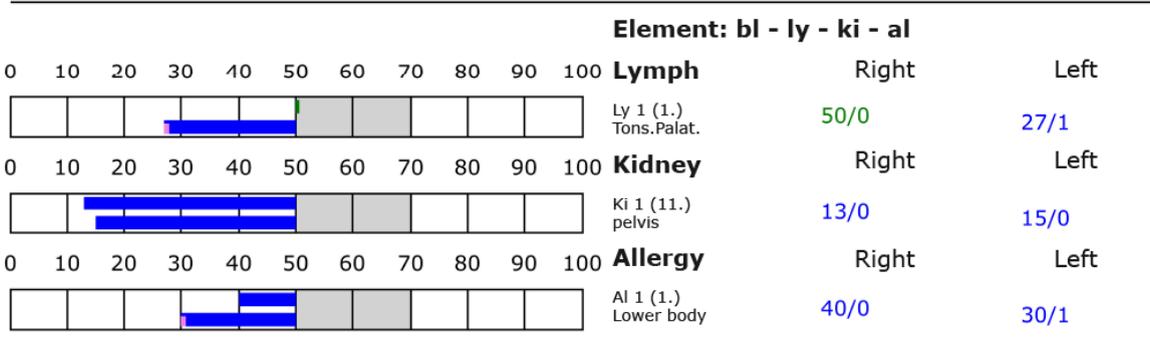
## BESA basic test

+++ : 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.)

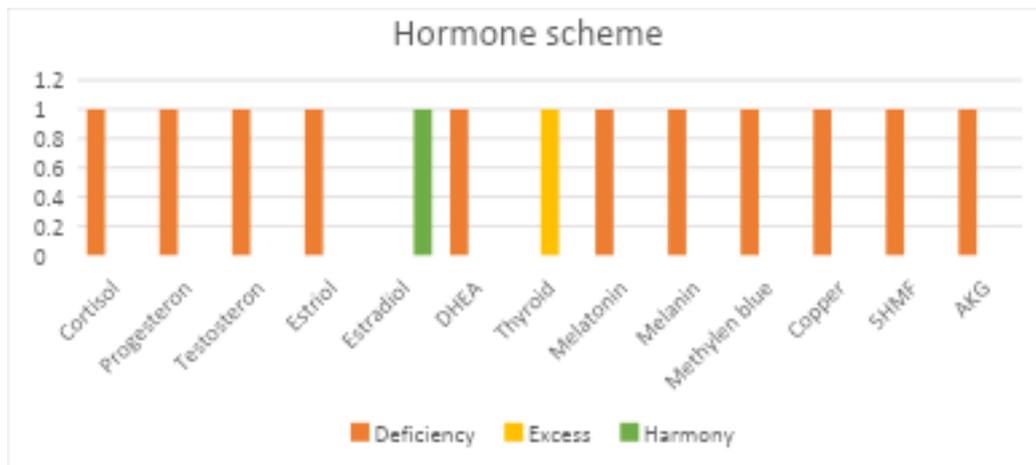


## Hormone Scheme - BEFORE

	Mangel	Excess	Harmony
	Hypofunction	Hyperfunction	



Cortisol	+		
Progesteron	+		
Testosteron	+		
Estriol	+		
Estradiol			+
DHEA	+		
Thyroid			+
Melatonin	+		
Melanin	+		
Methylen blue	+		
Copper	+		
5-HMF 5-Hydroxymethylfulfural		+	
AKG Alpha-Ketoglutarat		+	



### Cortisol-Level

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

### Elektromagnetic Interference Fields BEFORE

	Yes	No
GE1 Silicea – EMSF loads	+	
GE 2 elektromagnetic charger	+	
GE 3 Radio transmitter loads	+	

## Subject 3 DH



## BEFORE Testing 2

### BESA 2 Testing BEFORE in Confrontation with the Test-Nosode Benzene

BESA-Test evaluation P82 1.0

from **02-12-2024 at 13:01 – 13:12** (11 minutes) page 51 to 53

**Result:** The measurement results indicated severe energetic stress at the meridian endpoints and, subsequently, the subject's subordinate metabolic status.

**95 % in the blue area**

**5 % in the red area**

**Conclusion:** As the graphs show, almost all measurement points are in the partially deeply degenerative blue zone (energy deficiency). 5% even show acute degenerative symptoms. Harmonizing these measurements requires a corresponding external stimulus!

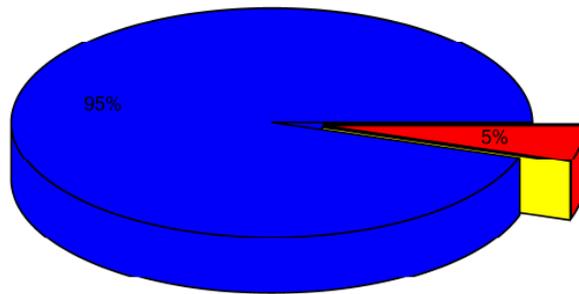
These measurements indicate a predominantly severe energy deficiency at the respective acupuncture points tested.

The comparisons of the BESA graphs confirm the stressful or toxic influences of the test nosode BENZENE on the energy-informational processes in the subject's meridian system.

The following statistical results of the hormone scheme show a similar picture of deregulation and confirm the expression of energy deficiency.



## Overview of BESA measuring



- Red: values with indicator decline  
Decline greater than 2 (5%)
- Yellow: high values without indicator decline  
Values over 70 ( )
- Blue: low values  
Values lower 50 (95%)
- Green: standard values  
Values between 50 and 70 ( )

## BESA basic test

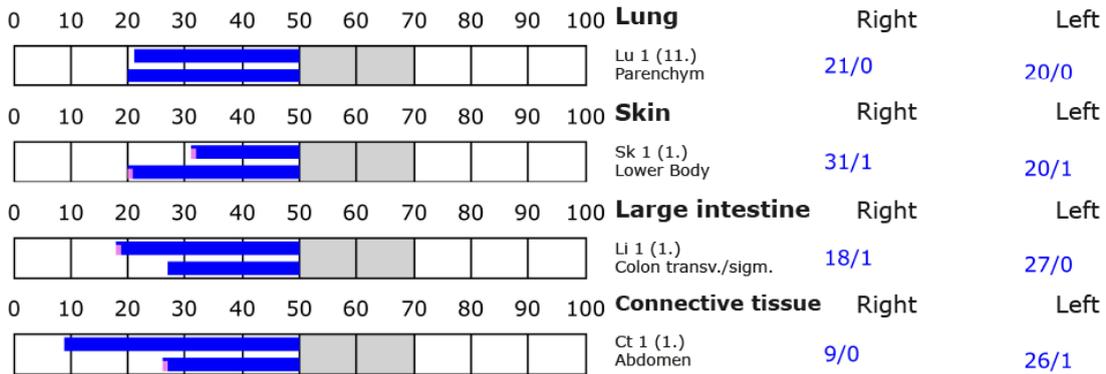
- +++ : Indicator decline > 15 Skt.
- ++ : Indicator decline 6-15 Skt.
- + : Indicator decline 3-5 Skt.

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

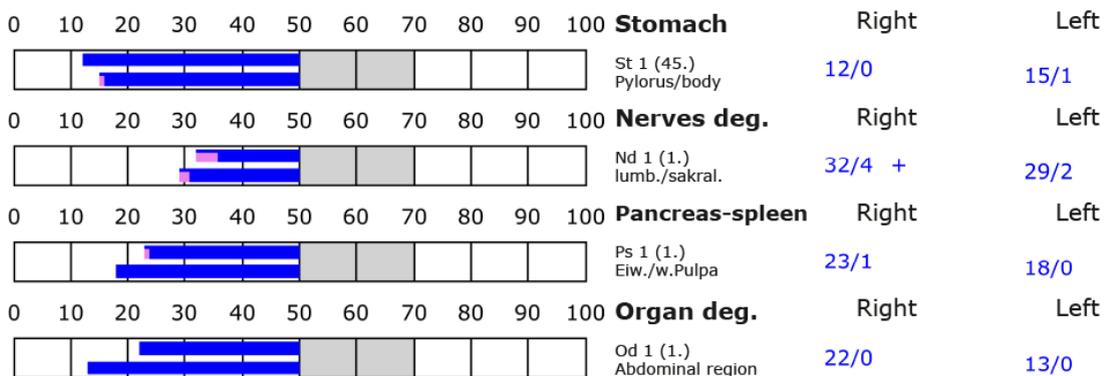
D: Degeneration (< 50 Skt.)

Standard values: (50-70 Skt.)

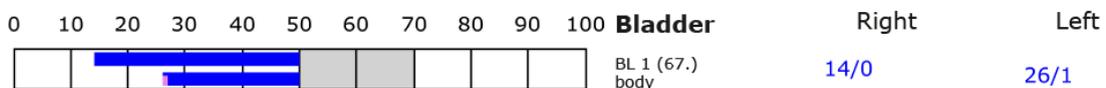
### Element: lu - sk - li - ct



### Element: st - nd - ps - od



### Element: bl - ly - ki - al





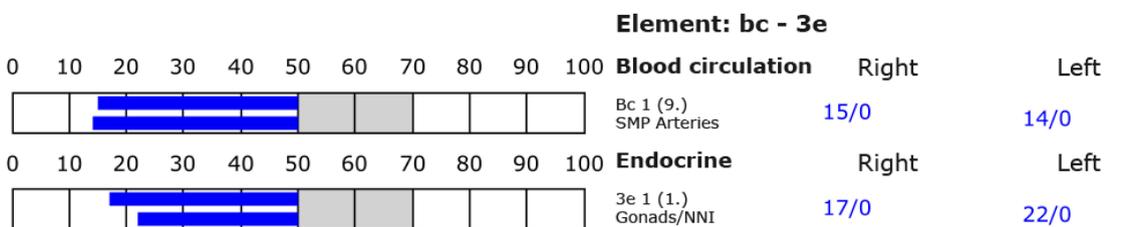
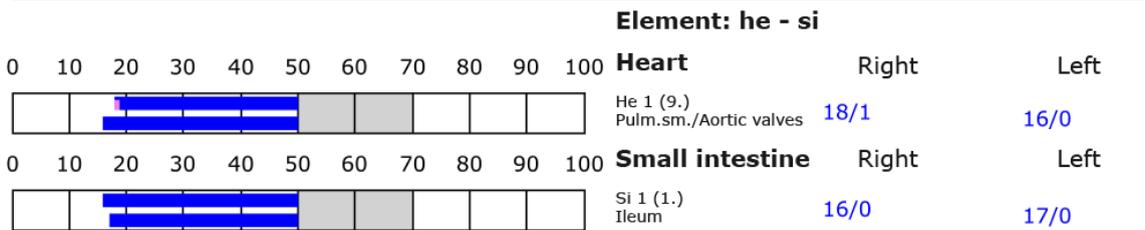
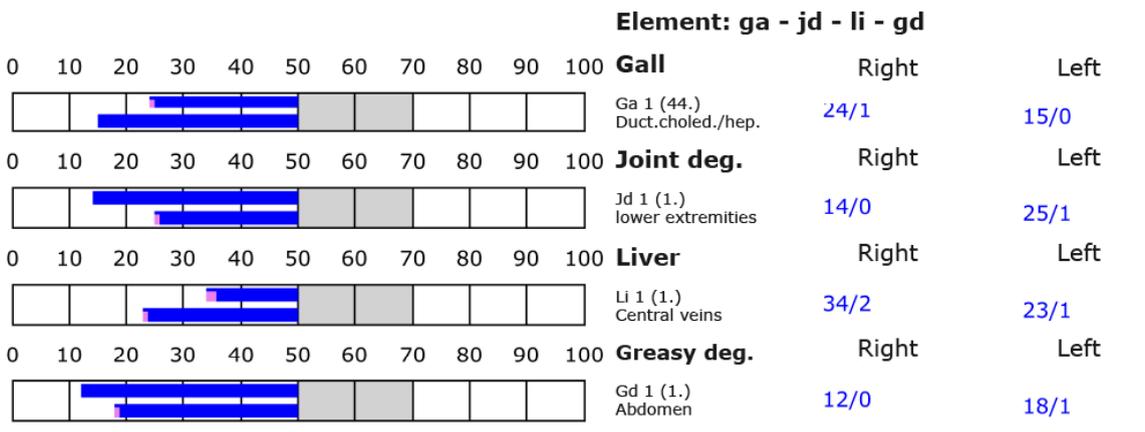
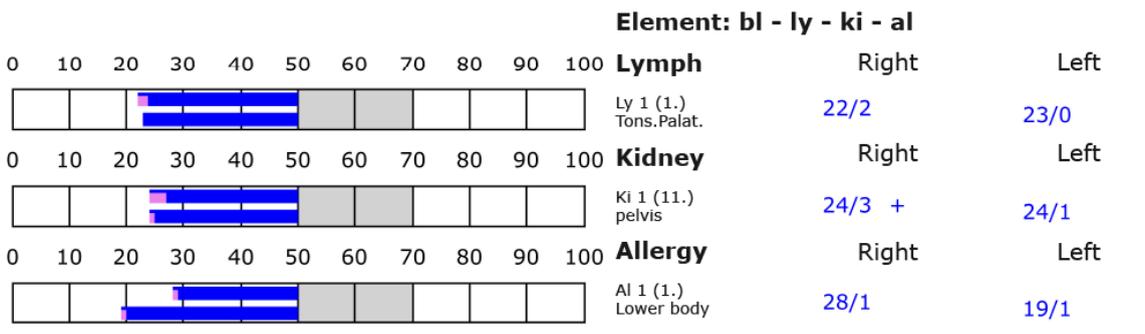
## BESA basic test

+++ : 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.)





## Hormone Scheme - BEFORE

	Deficiency	Excess	Harmony
	Hypofunction	Hyperfunction	
Cortisol	+		
Progesteron	+		
Testosteron	+		
Estriol	+		
Estradiol		+	
DHEA	+		
Thyroid	+		
Melatonin	+		
Melanin	+		
Methylen blue	+		
Copper	+		
5-HMF 5-Hydroxymethylfulfural	+		
AKG Alpha-Ketoglutarat		+	

### Cortisol-Level

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

### Elektromagnetic Interference Fields BEFORE

	Yes	No
GE 1 Silicea – EMSF loads	+	
GE 2 elektromagnetic charger	+	
GE 3 Radio transmitter loads	+	



## Subject 3 DH AFTER Testing

### BESA 3 Testing AFTER, after Confrontation on the Subject with the Test Object and the Test-Nosode Benzene

BESA-Test evaluation P82 1.0

from **04-12-2024 at 13:00 – 13:08** (8 minutes) page 55 to 58

**Results:** The measurement results show significant improvements at the meridian endpoints and in the subject's energetic state after application of the test object.

**100 % in the green area**

**Conclusion:** As the graphics show, after approximately 2 days of exposure of the test subject to the test object, all measurement points are in the green, optimal, and harmonized range (balanced energy system).

The BESA test results in a significant improvement in the energy situation in the test subject's meridian system compared to the BESA 5 tests BEFORE.

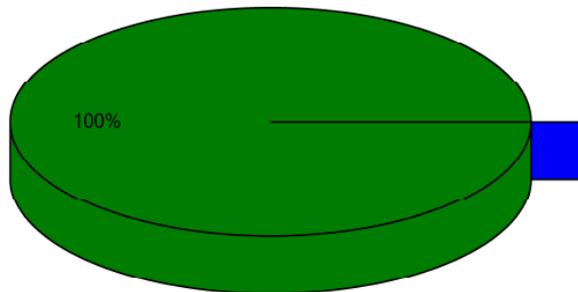
All measured values were at or slightly above 50 Skt. This shows that the test object is capable of providing the necessary impetus for harmonization (neutralization) into the life-promoting range for the deregulations identified in the BESA 1 and 2 tests BEFORE, including the red measured values, despite the test subject's exposure to the test nosode BENZENE.

The individual BESA tests also show correspondingly significant results with the reference values as markers. Here, too, one can see how the aggressive effect of the nosode Benzene was able to be harmonized in the test subject.

The comparison of the BESA graphs confirms the change and harmonization of the stress factors in the meridian system.



## 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 (%)
- Green: standard values  
Values between 50 and 70 (100%)



## BESA basic test

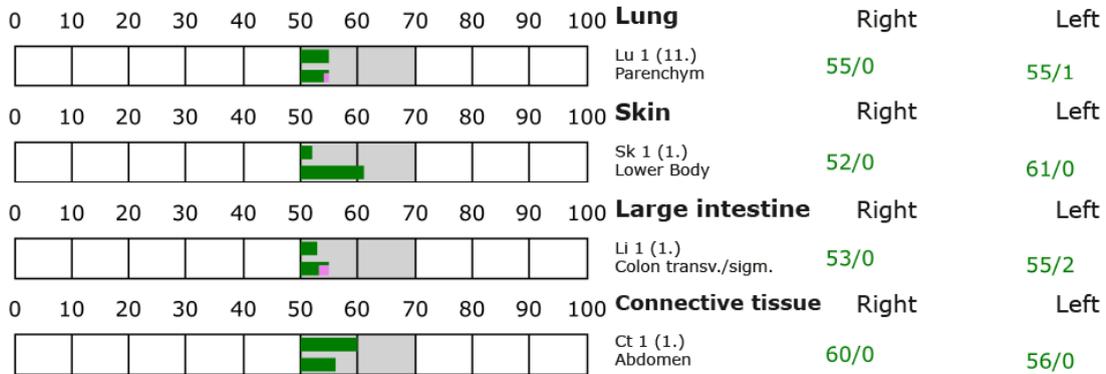
+++ : Indicator decline > 15 Skt.  
 ++ : Indicator decline 6-15 Skt.  
 + : Indicator decline 3-5 Skt.

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

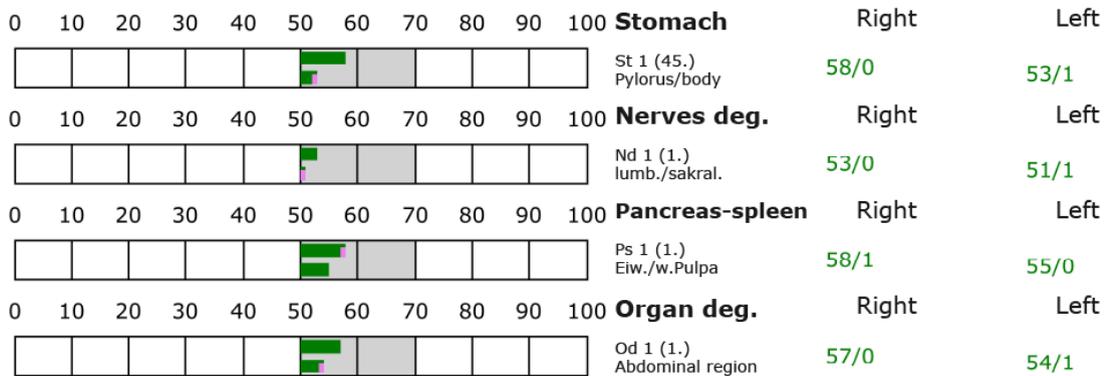
D: Degeneration (< 50 Skt.)

Standard values: (50-70 Skt.)

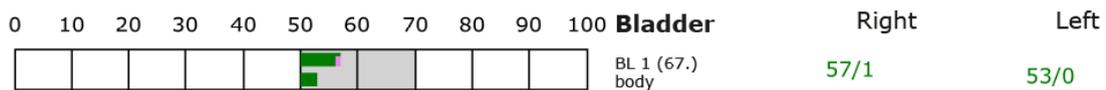
### Element: lu - sk - li - ct



### Element: st - nd - ps - od



### Element: bl - ly - ki - al





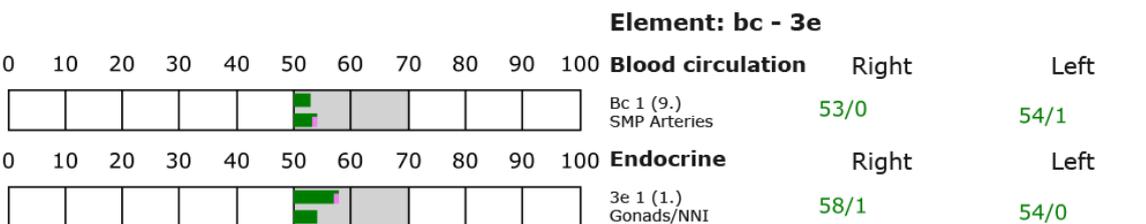
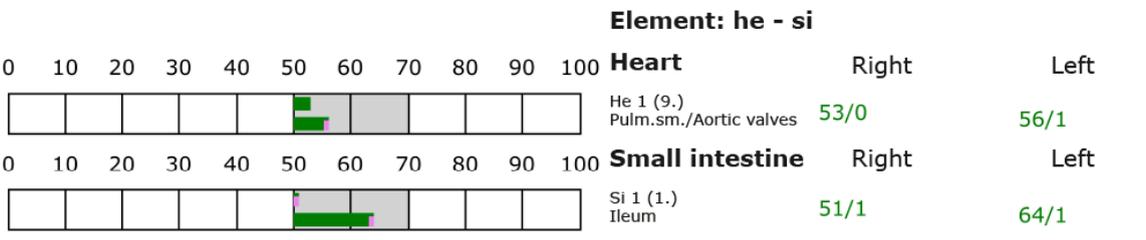
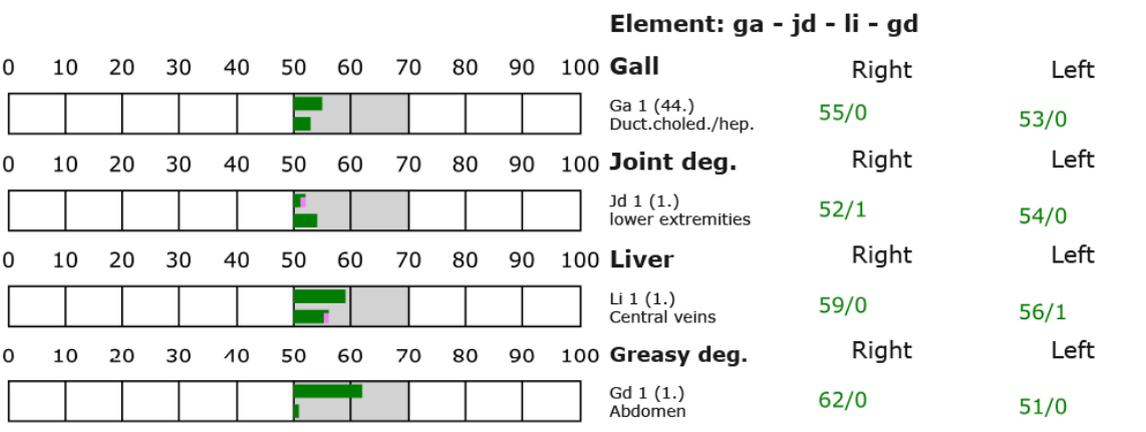
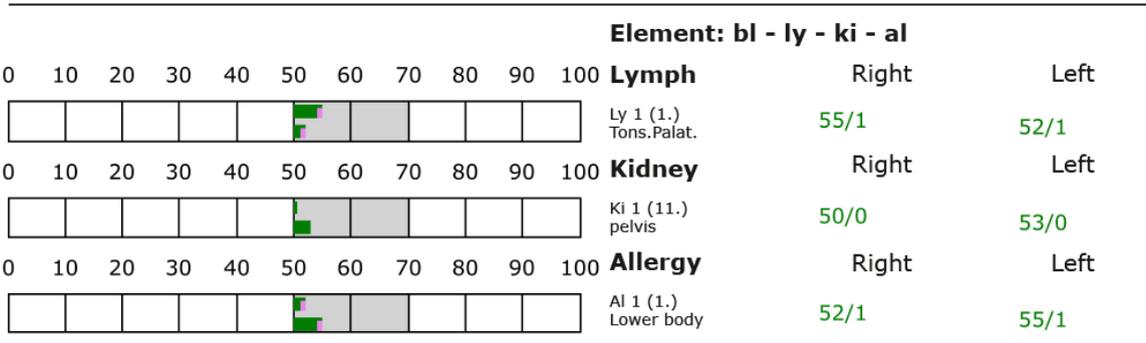
## BESA basic test

+++ : 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.)

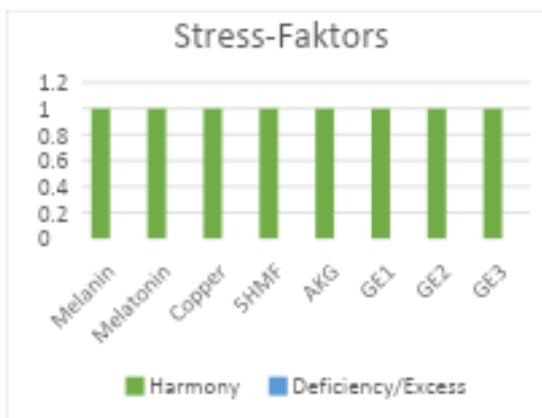
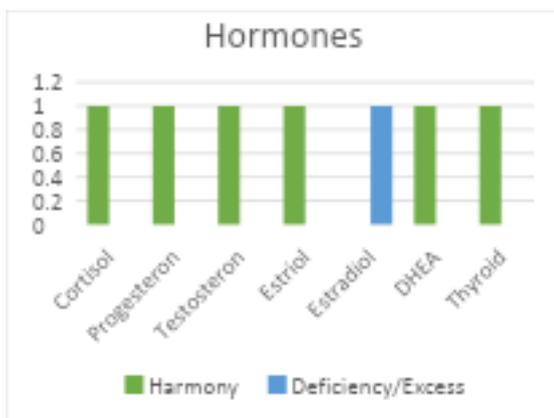
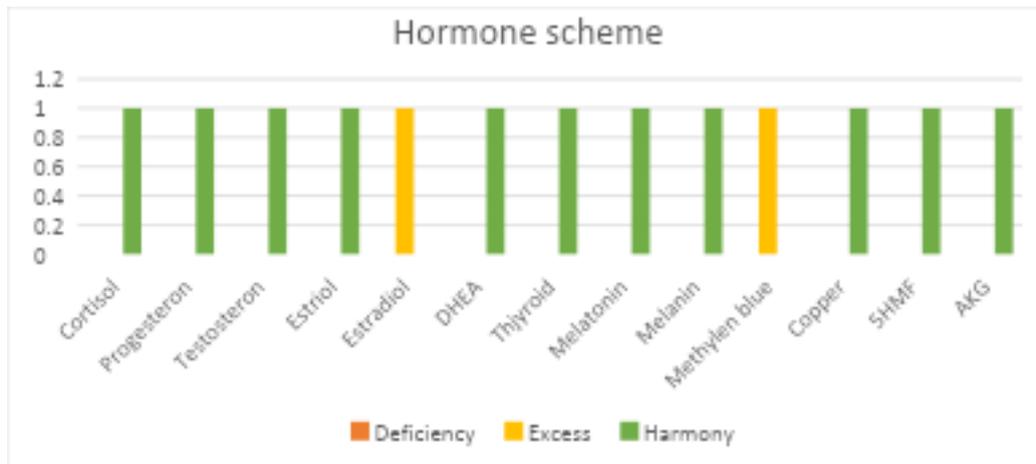


## Hormone Scheme - AFTER

	Deficiency	Excess	Harmony
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	Hypofunction	Hyperfunction	
Cortisol			+
Progesteron			+
Testosteron			+
Estriol			+
Estradiol		+	
DHEA			+
Thyroid			+
Melatonin			+
Melanin			+
Methylen blue		+	
Copper			+
5-HMF 5-Hydroxymethylfulfural			+
AKG Alpha-Ketoglutarat			+



### Cortisol-Level



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

## Elektromagnetic Interference Fields AFTER

	Yes	No
GE 1 Silicea – EMSF loads		+
GE 2 elektromagnetic charger		+
GE 3 Radio transmitter loads		+



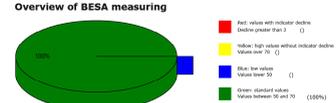
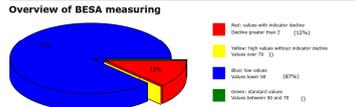
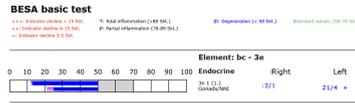
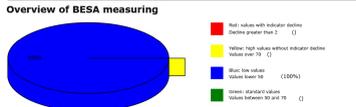
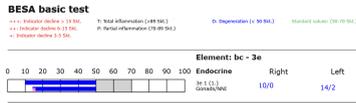
# The results of the BESA tests at a glance

## Subject 1

BESA 1 Testing BASIC BEFORE as energetic status

BESA 2 Testing AFTER, after Confrontation on the Subject with the Test-Nosode Benzene

BESA 3 Testing AFTER, after Confrontation on the Subject with the Nosode and the Testobject

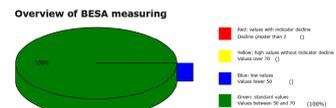
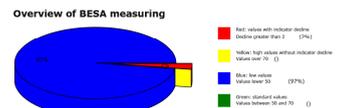
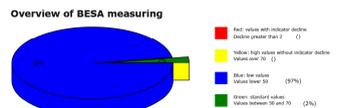


## Subject 2

BESA 1 Testing BASIC BEFORE as energetic status

BESA 2 Testing AFTER, after Confrontation on the Subject with the Test-Nosode Benzene

BESA 3 Testing AFTER, after Confrontation on the Subject with the Nosode and the Testobject

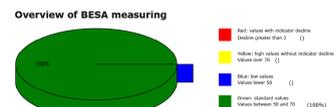
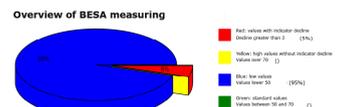
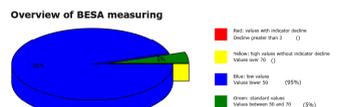


## Subject 3

BESA 1 Testing BASIC BEFORE as energetic status

BESA 2 Testing AFTER, after ff

BESA 3 Testing AFTER, after Confrontation on the Subject with the Nosode and the Testobject





## Effect of quantum technology as a test object of bioenergy informational system analysis - BESA

Within the framework of this project, we investigated the effect of the test object as a quantum technology on the energy-informational behavior (in the meridian system) on the energy-informational parameters and biological changes of the subjects. Using bioenergy-informational system analysis, we investigated whether potentially life-promoting changes in the energy-informational status (BESA) of the subjects could be demonstrated. In particular, the question was whether the application of the described quantum technology within the energy-informational control circuits or certain biological structures could be demonstrated in relation to the toxic nosode benzene. In this context, it was also important to test other factors, such as the HPA axis (stress axis) or hormone status, as reference values, or to examine whether constructive changes could also be observed in these areas. Previous studies and their results had already suggested that the technology of the test object promotes the energy-informational balance of the organism, stabilizes the energy-informational field, and modulates inflammatory processes.

### Interpretation of the Results

The results show that the tested quantum technology was not only able to compensate for the dysregulations induced by benzene exposure, but even brought about an improvement compared to the baseline state in several parameters. This indicates that the applied field provides a form of coherent energy and information order that enables the organism to reactivate its own regulatory capacity. At the cellular level, this effect could be explained by a stabilization of mitochondrial and membrane-physical processes. Increased coherence of electron flows within the mitochondria would reduce the formation of reactive oxygen species (ROS), which in turn leads to a relief of the HPA axis. As a result, cortisol secretion normalizes, and the system's stress resonance returns to equilibrium. At the bio-energy-informational level, the result can be interpreted as a resynchronization of cellular communication. The quantum field provides, in a sense, a coherent reference pattern to which the cells can "reorient" themselves. This overwrites or harmonizes faulty or disrupted information patterns, such as those caused by toxic influences. This explains why, even under contamination, a regulatory surplus was measurable: The system enters a higher order instead of simply returning to its initial state. This observation supports the hypothesis that these quantum technologies do not act as a pharmacological antidote, but rather as an energetic, coherence-creating system. They activate the organism's self-regeneration and salutogenesis mechanisms by restoring the balance between energy, information, and consciousness.

### General to the Test results

Humans, like all biological objects (including animals and plants), represent a kind of receiving antenna for environmental information. This is because life, especially that of



humans, animals, and plants, depends fundamentally and exclusively on environmental information. Our organism is biologically very sensitive where natural information (fields) are located, or where this natural information is subject to interactions and fluctuations. The situation becomes all the more dangerous when such fields of constructive structures are disrupted by various environmental stresses.

**For this reason, detected informational (including electromagnetic) interference fields are biologically highly relevant. Any reduction or transformation of these interference fields (ideally 100 percent) is biologically very important, in some cases even life-determining.** These informational burdens from our primarily artificial environment are only compatible with life if they can be adjusted to a natural tolerance for fluctuations. Disturbances, problems, blockages, and disharmonies in the biological control circuit of biological objects are caused by such disruptive informational influences.

**Neutralizing and harmonizing effects were demonstrated in this P82 project to determine the effectiveness of the test object, the Quantum Upgrade, on the test subjects. The Quantum Upgrade was able to neutralize the biologically adverse effects and effects of the tested stress factors observed in the test subjects.**

**The significant ability of the test object to neutralize and harmonize the stress factors tested in this P82 project is hereby demonstrated. This project demonstrates the transformation of the tested information into bioenergy information with biological and life-promoting qualities.**

## Comparative Studies

Here are some interesting research approaches and studies + suggestions for further study involving the intersection of benzene/benzene exposure, cellular/mitochondrial dysfunction, cabin air quality, and stress axes.

### Relevant Studies

#### 1. Metabolome wide association study of occupational exposure to benzene (Rothman et al., 2021)

- Examined workers exposed to benzene and analyzed plasma metabolic profiles. Found evidence of **disturbances in lipid/carbohydrate metabolism**, oxidative stress, and mitochondrial pathways, among other things. ([OUP Academic](#))
- Relevance to you: Shows a link between benzene and metabolic/energy dysregulation—fits the HPA/mitochondrial perspective.

#### 2. Impact of chronic benzene poisoning on aberrant mitochondrial DNA methylation (Wang et al., 2023)

- Observed people with chronic benzene poisoning; found altered mitochondrial DNA methylation patterns. ([Frontiers](#))
- Relevance: Direct link between benzene toxicity and mitochondrial function/regulation changes.



### 3. Health consequences of exposure to aircraft contaminated air and fume events (Soskolne & Michaelis, 2023)

- Review of "fume events" in aircraft (cabin air contamination) and their health consequences. ([BioMed Central](#))
- Relevance: Relates the topic of cabin air quality/aircraft to toxic mixtures (including VOCs such as benzene) and provides starting points for the exposure chain.

### 4. Environmental Chemical Exposures and Mitochondrial Dysfunction: a review (2022)

- Overview of environmental toxins and their effects on mitochondria in humans. ([SpringerLink](#))
- Relevance: Provides a broader theoretical foundation for how environmental toxins (including benzene) can affect mitochondria—fits well with your quantum field/energetics perspective.

### 5. Determination of eight benzene homologues in airport ambient air and aircraft cabin air (Liu et al., 2025)

- Measurement of benzene homologues (including benzene) in airport and cabin air. ([pubs.rsc.org](#))
- Relevance: Provides empirical data on exposure in the aviation environment—important for your roadshow/aircraft topic.
  - o The studies on **benzene metabolism and mitochondrial effects** ([points 1 & 2](#)) fit perfectly with the focus on cellular energy, stress, and the HPA axis.
  - o The cabin air/fume event studies ([points 3 & 5](#)) provide the context for the aviation environment discussed.
  - o The review study on mitochondrial dysfunction ([point 4](#)) provides a solid theoretical foundation for embedding the quantum technology interpretation discussed.

### Bibliographic table with approximately 10 selected studies

They cover relevant topics (e.g., benzene/benzene exposure, mitochondrial and energetic effects, HPA axis, cabin air/aviation environment). Each study includes a brief description, methodology, and relevance to the current P82 project.

Nr.	Citation	Short description	Methodology	Relevance
1	Wang D. et al. (2023) „Impact of chronic benzene poisoning on aberrant mitochondrial DNA mtDNA methylation“	Examines individuals with chronic benzene poisoning; shows reduced mtDNA methylation. ( <a href="#">Frontiers</a> )	Prospective observational study – 30 cases vs. 60 controls	Direct evidence of mitochondrial dysregulation by benzene – fits your energy/mitochondria perspective



Nr.	Citation	Short description	Methodology	Relevance
2	Reddam A., McLarnan S., Kupsco A. (2022) „Environmental Chemical Exposures and Mitochondrial Dysfunction: a review“	Review of environmental chemicals (including benzene) and mitochondrial dysfunction. ( <a href="#">SpringerLink</a> )	Literature review (2012-2022)	Provides a broader theoretical basis for your approach to cellular/energy aspects
3	Smith X. et al. (2019) „Metabolome-wide association study of occupational exposure to benzene“	Workers exposed to benzene; metabolome profile reveals disrupted energy and lipid metabolism pathways. ( <a href="#">OUP Academic</a> )	Cross-sectional study with high-resolution metabolomics.	Links benzene to energy/metabolic disturbances – fits with the HPA/mitochondrial link.
4	Godoy A. et al. (2022) „Environmental Impact on the Hypothalamus–Pituitary–Adrenal Axis“	Chapter on how environmental chemicals and other exposures affect the HPA axis. ( <a href="#">SpringerLink</a> )	Overview chapter	Very relevant to our question about the intersection between benzene and the HPA axis
5	Zhang L. et al. (2022) „Occupational health risk assessment of benzene exposure industries: a comprehensive scoring method“	Employees in 50 factories in China; risk assessment and blood parameters for benzene exposure. ( <a href="#">SpringerLink</a> )	Epidemiological study with risk models	Provides context for exposure and biological burden – potentially adaptable for cabin air transmission
6	Liu Y. et al. (2025) „Determination of eight benzene homologues in airport ambient air and aircraft cabin air“	Measurement of benzene/homologues in airport environments and cabin air (as a hypothesis)	Field measurement of air pollutants	Directly relevant to your aviation environment (exit study)
7	Abplanalp W.T. et al. (2019) „Benzene exposure induces insulin resistance in mice“ (zitiert in Zhang et al.)	Animal model: Benzene exposure → insulin resistance	Animal experiment	Links exposure to metabolic stress – possible connection to HPA and energy
8	Chen X. et al. (2024) „Alterations in leukocyte telomere length and mitochondrial DNA copy number in benzene poisoning patients“	Individuals with chronic benzene poisoning show increased mtDNA copy number and shorter telomeres. ( <a href="#">SpringerLink</a> )	Observational study	shows cell aging and mitochondrial stress markers caused by benzene – your approach supports this
9	Kupsco A., Cardenas A. (2024) „Ferroptosis is involved in the benzene-induced hematotoxicity“	In vitro: Benzene metabolite-induced ferroptosis in lymphocytes. ( <a href="#">ScienceDirect</a> )	Cell culture-Study	provides molecular mechanism – helpful for arguing the toxic effect
10	Liu X. et al. (2025) „Interaction of benzene, toluene, ethylbenzene, and xylene with human...“	BTEX compounds and their effects on various organs ( <a href="#">ScienceDirect</a> )	Review/Mechanisms Studie	Context for Mixed Exposure – relevant when considering cabin air + mixed exposure

## Scientific question regarding copper:

How deeply does benzene affect cell regulation? Copper is central to the mitochondrial respiratory chain and is responsible for neurotransmitter synthesis (dopamine, norepinephrine).

A compact picture in the sense of the IFVBESA can be presented at the following levels:



chemical-biological, metallic-protein (chelation aspect), and energetic-functional

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## 1. Chemical-biological Level: Influencing Copper Binding

Benzene itself does not chelate copper in the classical sense (as, for example, EDTA or D-penicillamine would).

However, **its metabolites**, especially hydroquinone, catechol, and benzoquinone—contain multiple hydroxyl and carbonyl groups that can bind metal ions.

These metabolites have a high affinity for transition metals, especially  $\text{Cu}^{2+}$  and  $\text{Fe}^{3+}$ , because they:

- o readily donate electrons,
- o initiate redox cycles ( $\text{Cu}^{2+} \rightleftharpoons \text{Cu}^+$ ),
- o and thereby transform into semiquinonic radicals themselves.

**The result:** Copper is **not "captured" in the sense of stable chelation**, but rather released from its physiological bond, that is, expelled from enzymes, transport proteins, or cellular compartments.

This release occurs **intracellularly**, particularly in:

- o mitochondria (Cu in cytochrome c oxidase),
- o cytosol (Cu/Zn superoxide dismutase),
- o cell membranes (copper pumps ATP7A/B).

This release generates so-called **free copper (non-ceruloplasmin-bound copper)**, a first-order pro-oxidant trigger.

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## 2. Chelatological and redox-active effect – "covert chelation"

This is more accurately referred to as **"functional chelation"** or **metal redox shift**:

- o hydroquinone +  $\text{Cu}^{2+}$  => semiquinone +  $\text{Cu}^+$
- o  $\text{Cu}^+$  reacts with  $\text{O}_2$  =>  $\text{Cu}^{2+}$  +  $\text{O}_2^{\bullet-}$  (superoxide radical)

=> **This means:**

Copper is **forced into a redox cycle** in which it constantly oscillates between two oxidation states.

In the process, it loses its binding site to proteins—it is **"deproteinized" and thus essentially chelated out of the cell**.

Experimentally, the following are found (e.g., in in vitro studies with hepatocytes):

- o decreasing intracellular Cu/Zn SOD activity,
- o increased extracellular Cu levels,
- o oxidative damage to cell membranes.

**In this sense:**

Yes, benzene indirectly leads to a **chelation-like release of copper from cells**, albeit destructively, not therapeutically.

It is therefore more of a "chaotic leaching" than a regulated detoxification.

The free copper then acts catalytically as a pro-oxidant, a **cascade of Fenton reactions, lipid peroxidation, and DNA damage**.



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### 3. Neuroendocrine & Energetic Consequences

Copper is central to the **mitochondrial respiratory chain** and **neurotransmitter synthesis** (dopamine, norepinephrine).

When benzene removes copper from these functional spaces:

- o ATP production decreases,
- o ROS (oxidative stress) increases,
- o and the HPA axis reacts with cortisol overproduction.

=> This is the biochemical basis for the "stress axis overload" that you have already observed in your research.

Energetically speaking:

Copper carries the vibrational frequency of **electrical order** (it is a conductive metal in the bioelectrical sense).

When benzene "removes" copper, a **charge instability occurs**, comparable to a disruption of the cell voltage.

This manifests itself in:

- o reduced cellular light (biophoton emission ↓)
- o decreasing cellular coherence
- o and energetic fragmentation of the system

Your observed restoration through quantum technology would target this very point:

=> **The field reorganizes the electron resonance, causing copper to return to its functional bonding pattern.**

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### 4. Integrative Summary

Level	Effect from Benzene	Effect on Copper	Consequence
<b>Chemical</b>	Formation of hydroquinone/Benzenechinon	Redox-Interaction with $\text{Cu}^{2+}$	Release from Enzymes, ROS
<b>Chelatologically</b>	„covert“ release from proteins	Loss of Cu-binding	Increased free Copper in the Blood (Plasma)
<b>Mitochondrial</b>	Inhibition of cytochrome-c-oxidase	ATP↓, ROS↑	Energy deficiency
<b>Neuroendokrine</b>	Cortisol↑, Ceruloplasmin↑	Cu↑ extracellulär	Stress amplification
<b>Energetic</b>	Decoherence in light field	Loss of resonance	Electron flow-disturbance

#### Final Thought

Benzene doesn't act like a classic chelator, but rather like an **energetic disintegrator of metallic order**. It releases copper from its harmonic resonance space and forces it into chaotic redox cycles.

This is precisely where coherent quantum technology comes into play:



It brings this disturbed order back into resonance, and copper is re-embedded in its biological vibrational pattern.

**One could say:**

*Benzene creates chemical noise that tears copper out of its music, while quantum technology retunes the orchestra.*

## Comparative studies of copper and benzene

For comparison, see also Project P83 to Study "Focus Melanin" ([ScienceBESA](#))  
HQ/BQ↔Copper redox, ROS cascades, HPA/stress bridge via ceruloplasmin/copper,  
BBB/endothelium, mitochondria/COX

Here is a concise, curated list of one-sentence benefits per study/review:

### **Benzene metabolites (hydroquinone/benzoquinone) ↔ Copper ↔ ROS/DNA damage**

1. **Hydroquinone + Cu(II) generates ROS and DNA strand breaks** (classic work; demonstrates the Cu(II)/Cu(I) cycle with H<sub>2</sub>O<sub>2</sub>/•OH). ([OUP Academic](#))
2. **ESR evidence: Copper-mediated oxidation of hydroquinone generates ROS** (mechanistic confirmation; explains the DNA damage pathway). ([ScienceDirect](#))
3. **Chlorobenzoquinones cause oxidative DNA damage** (shows that quinone systems generally cause ROS-driven DNA damage; iron mediation, conceptually related). ([ScienceDirect](#))
4. **Proteomics of hydroquinone hematotoxicity (2024)** – confirms HQ as a **central driver** of benzene-induced bone marrow/blood effects (Mechanisms/Proteomics). ([ScienceDirect](#))

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### **Copper redox & oxidative stress (Context)**

5. **Copper(II) promotes ROS/RNS, DNA damage, and enzyme inhibition** (human cells/erythrocytes; comet assay, membrane damage). ([SpringerLink](#))
6. **Overview of Cu biochemistry and ROS interactions** (broad review of Cu-induced ROS and DNA interactions). ([MDPI](#))

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### **HPA/stress bridge via ceruloplasmin/copper (Acute phase)**

7. **Ceruloplasmin Basics (StatPearls/Europa-PMC)** – CP as a Cu-carrying acute-phase protein; relevant biochemistry for "free" vs. bound Cu under stress/inflammatory conditions. ([europepmc.org](http://europepmc.org))
8. **Ceruloplasmin & Neurodegenerative Contexts (Review, Springer)** – places CP/Cu in oxidative stress and neurological contexts; supports the systemic stress-copper axis. ([SpringerLink](#))

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### **Endothelium/BBB & Mitochondria (Targets)**

9. **BBB Disruption by Oxidative Stress (2024 Review)** – Mechanisms: ROS → tight junction loss, mitochondrial stress, neuroinflammation. ([MDPI](#))
10. **Mitochondrial oxidative stress in brain endothelial cells → BBB damage (Review)** – focuses specifically on **microvascular endothelial mitochondria**. ([ScienceDirect](#))



11. **Tight Junctions @ BBB (basic review)** – structure/proteins (occludin/cludins/JAMs); good for clearly demonstrating endothelial targets. ([BioMed Central](#))
- 

#### **Mitochondria/COX (copper-containing hub of the respiratory chain)**

12. **COX = regulatory center of OXPHOS (Review)** – demonstrates **the key role of complex IV** for ATP flow/stress sensitivity. ([ScienceDirect](#))
  13. **Copper delivery pathway to cytochrome c oxidase (COA6 review)** – confirms **CuA/CuB centers** as essential for COX function (direct copper dependence). ([MDPI](#)) "**Benzene requires metabolism**" (current status)
  14. **Benzene Metabolism & Dose-Specific Metabolites (2025 Overview)** – emphasizes that **metabolites** (including HQ) contribute to hematotoxicity. ([MDPI](#))
- 

#### **What this literature supports for the corresponding statements**

- **Indirect "chelation"/unbinding of copper from protein bonds:** The  $HQ \leftrightarrow Cu$  studies demonstrate **Cu redox cycles** with ROS formation and DNA damage – this is precisely the mechanism by which **copper is drawn from physiological bonds into redox-active pools** (functional unbinding). ([OUP Academic](#))
- **Endothelium/BBB as a sensitive interface:** Reviews demonstrate ROS-induced **tight junction disruption** and **mitochondrial involvement** in the BBB endothelium – fitting the "nerve endothelium" question. ([MDPI](#))
- **Mitochondria/COX & Copper:** COX is **copper-dependent**; disturbances in copper flow/redox **directly** affect OXPHOS regulation (energy axis). ([ScienceDirect](#))
- **HPA/stress bridge via ceruloplasmin/copper:** CP, as an acute-phase marker with copper binding, provides the biochemical bridge between inflammation/stress and **copper availability**. ([europepmc.org](#))