# Unknown

**Konstantin Korotkov** 

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The Principles of Bio-Well Analysis
Dr. Konstantin Korotkov and Elena Yanovskaja

This book describes the principles and step-by-step technique of the Bio-Well analysis of the human Biofield, which allows not only to make conclusions about a person's psychophysiological condition but also to develop recommendations for improving health and well-being. The last part of the book is an atlas of different cases with descriptions and interpretations. All the materials are based on many years of research and experience of doctors and medical professionals in different countries.

Photos by the author Editor DARLENE

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#### Preface

This book is intended for those who have worked with Bio-Well, performed more than a dozen analyses, and want to understand more deeply the subtleties of analysis. That is why we do not give detailed descriptions of the programs, there is an Instruction Manual for that. Certain points are taken from the book "Energy of Health" 2017, but in any case, we recommend reading both of these books. By 2024 we have added many new programs and functions, so all the examples in the fourth part are based on new material.

#### Introduction

The greatest use of a life is to spend it on something that will outlast it.

William James

(American philosopher 1842-1910)

In 1995, our group developed the first GDV device. The term "Gas Discharge Visualization Technique – GDV" we coined at the end of the last century during our series of studies regarding the Kirlian effect. GDV reflects the physical nature of the processes of registration of the glow emitted by objects of different nature in electromagnetic fields of high intensity. In recent years, the term "Electrophotonic Imaging–EPI" — more harmonious to Western ears — has been introduced. Today, we have improved qualities in our new lines of GDV devices. In this pursuit, several times I have changed teams with whom I've shared the development and distribution of GDV instruments. Following the rocket-like development of computer technologies, to progress in this way is a natural evolutionary process. You are doomed in today's world, if you don't progress—your toys will be superseded by those of others and the public will immediately forget you.

Ours is a modern world of cloud computing. Few people can imagine their lives without a mobile phone and the internet. At some point, it became clear to me that we should participate in this process. This key understanding enabled me to create the Bio-Well device, which absorbed the best ideas from GDV devices and opened up a whole range of new possibilities.

- First of all, the Bio-Well program is an opportunity to generate constant software updates, and, with one click of the mouse, distribute new updates to thousands of users. We are continually generating new ideas which are periodically translated into new programs. In particular, the Bio-Well program is now operating in 13 languages, and the list is constantly expanding.
- Secondly, it provides the possibility to calibrate devices, allowing all
  devices in the world to obtain comparable parameters. For the older
  GDV devices, this was not always possible, and led to a mass of
  incorrectly recorded data. My many encounters in meetings with GDV
  users convinced me to address this problem in the future instead of
  pretending that all was okay.
- Another flexible feature of the program is its ability to work on any computer operating system Windows, Mac or Linux. Sometimes this poses a lot of challenges for developers, but we have successfully overcome all difficulties. Currently, we are creating versions of Bio-Well for tablets and mobile phones, and will have them available in the foreseeable future..
- The Bio-Well device allows independence instead of forced reliance on only one particular type of computer. Users will now be able to reach their accounts from anywhere. For example, data can be collected at the workplace on Windows, then processed at home on a Mac.
- There is instant exchange of results between Bio-Well users. Many materials in this book are based on the results from our colleagues.
- Finally, online access to any Bio-Well device allows us to support and solve problems anywhere in the world. At the same time, your database remains your own property, and we do not have access to your data.

Over the years of Bio-Well exploration, we have garnered rich experience in Bio-gram interpretation due to the increasing possibilities for rapid data exchange and a significant expansion in the range of users as compared to previous versions of GDV devices. Doctors and specialists in different parts of the world are continually gaining clinical data, and this can be used to benefit joint discussions. This technology only became possible after the

implementation of the calibration via the Internet, which allows comparable data to be obtained.

It is necessary to note two important points.

Primarily, the Bio-Well analysis is a part of the Integrative Medicine line. The task of this line is not to treat symptoms of any medical problems, but to prevent health abnormalities at an early stage by recommending the necessary counter-measures to the patient to overcome possible problems. As a rule, this requires a significant change in one's attitude to life, the nature of food supplementation, and regular physical activity. Not all people are prepared for it, but those who follow the recommendations usually make fairly rapid progress. So, the purpose of the Bio-Well analysis is not just to generate a report, but to make insightful recommendations, which may help improve the lifestyle and health of the patient.

Secondly, we emphasize that the effectiveness of the analysis is about 80%, in 20% of cases, the information received does not correlate with the actual state and does not allow for the formulation of any conclusions. Such a result is estimated in medicine as very good. Basically, it refers to complex issues, such as oncology and autoimmune diseases. Only complicated mathematical algorithms based on clinical data, allow us to formulate some conclusions in these cases. So one should not worry if, in some cases, one's Bio-Well analysis does not reflect the true situation—human nature is very complicated and modern science still does not fully understand its functioning.

# PART I. Understanding The Principles Understanding the principles

### Four Pillars of Bio-Well Analysis

Life isn't about finding yourself.
Life is about creating yourself.
George Bernard Shaw (1856-1950)

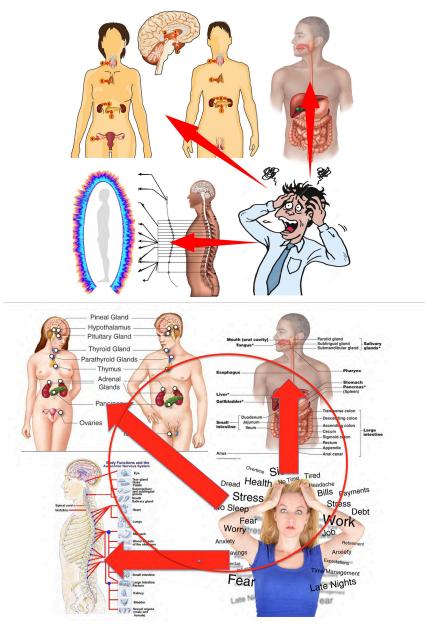
At last we arrive at the discussion of the four pillars of Bio-Well analysis. Henceforth, this will be the main principle, which we urge you to use in your daily practice, both in understanding the situation with your patients or clients, and in developing the strategy for their treatment. This approach is based on the many years of experience of many doctors in



the disciplines of holistic, integrative, functional, and energy medicine, For detailed discussions, I refer you to their books. Here, I will present only the main principles.

The first pillar is the endocrine system. As Michael Borkin writes: "The endocrine system is like a symphony with several glands working both alone and together to orchestrate bodily functions. Each endocrine gland — thyroid, pancreas, pineal, thymus, ovaries, testes, adrenals, parathyroid — produces and secretes hormones. These chemical messengers are like music to your body, exciting or inhibiting various tissues regarding metabolism, growth and reproduction."

The second pillar is the gastro-intestinal (GI) tract. As Sunil Pai writes in his book An Inflammation Nation: "Optimal health starts at our GI tract. Using our travel analogy, the GI tract is the Grand Central Station of the body. It is the point at which we receive the overwhelming amount of exposure to inflammation. This understanding is supported by traditional medical practices, like Ayurveda and Chinese medicine and more modern science and medicine such as functional medicine."



The third pillar is the autonomic nervous system (ANS), presented by sympathetic and parasympathetic divisions that work in a delicately tuned, yet opposing fashion. The autonomic nervous system is a control system that acts largely unconsciously and regulates bodily functions such as the heart rate, digestion, respiratory rate, pupillary response, urination, and sexual arousal. This system is the primary mechanism in control of the fight-or-flight response and the freeze-and-dissociate response. Proper functioning of the ANS to a large extent depends on the conditions of the spine.

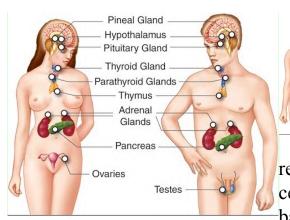
And the fourth, but perhaps the most important pillar, is a person's level of emotions and stress. This level is like an orchestra conductor, who hears every player, every tune, corrects any false tones and directs many different musicians within his/her different characters to play in synchronized harmony to create beautiful music. If the conductor's command is lost, all turns to chaos. I suggest you to watch classical movie by Federico Fellini, Orchestra Rehearsal (Italian: Prova d'orchestra) where this process is presented in dramatic visual form.

All these four systems – pillars – are interconnected and influence each other. They are indivisible parts of the united system of the organism and optimal health may be achieved only by attending to all of them as integrative. The main difference between Western or conventional medicine and Integrative medicine is in how they approach the patient. Western medicine stands above the rest of the world when it comes to acute and emergency care. For people with life-threatening illnesses, it would have meant their death even a generation ago if not for Conventional medicine, which has saved millions of lives. But for chronic diseases such as heart disease, diabetes, obesity, arthritis, or depression, conventional medicine has failed.

In the following chapters, we'll discuss all these pillars one after another. I ask you to keep in mind this four-quadrant picture as it will be a mark in our further discussion of the Bio-Well cases.

One can ask: why did not you mention the cardio-vascular system before, the number one killer of the modern civilization? The following discussions will show that the deep reason for this illness, in most cases, lies not with the condition of veins or the compartments of the heart, but with our 4 pillars of health. So let us proceed step-by-step.

#### The First Pillar - Endocrine System



With Dr. Michael Borkin

The endocrine system regulates the body's major continuous and prolonged processes, including

reproduction; growth and development; cellular metabolism and energy; blood balance of nutrients, electrolytes and

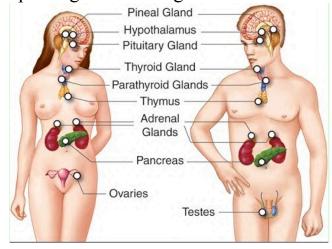
water; and the mobilization of body defenses against stressors (things that cause wear and tear on the body's physical and mental resources). It is made up of eight different glands located strategically throughout the body:

Pineal Gland

Hypothalamus Pituitary Gland

Thyroid Gland

Parathyroid Glands
—— Thymus ——



ovaries (in men, the testes)

adrenals

pancreatic islets

thyroid

parathyroid

pineal

pituitary

hypothalamus, which is also part of the nervous system.

Besides these major organs, the system includes pockets of hormoneproducing cells within the tissues in the small intestine, heart, kidneys and stomach. The endocrine system develops and begins producing hormones by the end of the second trimester of fetal development.

The integration of body functions in humans and other higher organisms is carried out by the nervous system, the immune system, and the endocrine system. The endocrine system is composed of a number of tissues that secrete their products - called endocrine hormones - into the circulatory system. From there, they are disseminated throughout the body, regulating the function of distant tissues and maintaining homeostasis. In a separate but related system, exocrine tissues secrete their products into ducts and then to the outside of the body or to the intestinal tract. Classically, endocrine hormones are considered to be derived from amino acids, peptides, or sterols and to perform at sites distant from their tissue of origin. However, the latter definition has begun to blur as it is found that some secreted substances can act either at a distance (classical endocrines), or close to the cells that secrete them (paracrines), or directly on the cell that secreted them (autocrines). A prime example of this difficulty is the insulin-like growth factor (IGF-I) which behaves as all three: endocrine, paracrine, and autocrine.

In the hierarchy of endocrine command, the hypothalamus is the body's CEO, orchestrating the events of the rest of the endocrine system. The hypothalamus controls autonomic reflexes (such as the activity of the heart and smooth muscles), and houses the body's "thermostat" and biological clock and maintains the body's rhythm of 24-hour sleep-wake cycles. The somewhat mysterious pineal gland, being an organ sensitive to retinal responses to light, also has a role in biological timekeeping. The pineal gland, believed to coordinate fertility hormones, produces melatonin, the hormone known for its sleep-triggering ability.

The hypothalamus also initiates part of the adrenal stress response, causing the pituitary to secrete the hormone that travels to the adrenal glands to stimulate secretion of cortisol, DHEA and aldosterone. The hypothalamus also initiates the female cycle by producing gonadotropin-releasing hormone (GnRH) that signals the pituitary to secrete follicle-stimulating hormone (FSH). FSH stimulates the ovaries to secrete estrogen, the sex hormone that stimulates development of breast, uterine and ovarian tissue (and, in synthetic HRT forms, is associated with excessive cell growth that leads to cancer).

The conductor of the Endocrine system is the anterior pituitary gland, nestled at the base of the brain. The hypothalamus sends special hormones called releasing factors to the pituitary, instructing it how to manage the other endocrine glands. Then, with its own set of directives, the anterior pituitary gland guides your body's other glands and also releases prolactin, a breast feeding and growth hormone.

Each endocrine gland plays a distinct role in your body. Since these actions overlap, they affect one another as well. When one gland is overly-or under-active, other glands feel the effect. The same goes for you. When part of your endocrine system is sick, you most likely are too. Fatigue is the one symptom that many endocrine disorders have in common. If you feel very tired or can't seem to shake your fatigue, see your doctor. Once you've discovered the source of your fatigue — whether endocrine related or not — there are many natural remedies you can try under the guidance of a professional.

Hormones are normally present in the plasma and interstitial tissue at concentrations in the range of 10<sup>-7</sup> M to 10<sup>-10</sup> M. Because of these very low physiological concentrations, sensitive protein receptors have evolved in target tissues to sense the presence of very weak signals. Additionally, systemic feedback mechanisms have evolved to regulate the production of endocrine hormones.

Once a hormone is secreted by an endocrine tissue, it generally binds to a specific plasma protein carrier with the entire complex being disseminated to distant tissues. Plasma carrier proteins exist for all classes of endocrine hormones. Carrier proteins for peptide hormones prevent hormone destruction by plasma proteases. Carriers for steroid and thyroid hormones allow these very hydrophobic substances to be present in the plasma at concentrations several hundred-fold greater than their solubility in water would permit.

The endocrine system is responsible for homeostasis, the body's ability to maintain stable internal conditions, such as body temperature, regardless of changing external conditions. Balance is crucial to all life processes. The body functions within very specific margins. Being forced to function outside of those margins can cause a whole series of negative events, even

death. The endocrine system also controls the processes of reproduction, metabolism, growth and development.

When one goes through chronic or severe long-term stress, the hypothalamus at first triggers an overproduction of the adrenal hormones (especially cortisol and DHEA). This eventually leads to adrenal insufficiency, a state in which the exhausted adrenals no longer respond adequately. During times of stress or conditions of chronic adrenal hyperstimulation, progesterone is capable of being converted into the stress hormone cortisol.

One very damaging adrenal dysfunction is excessive cortisol production, which causes, among other serious problems, increased calcium mobilization from the bones, leading to osteoporosis, or loss of bone density. In a person with a healthy stress response, excessive levels of cortisol are automatically buffered. Constant stress destroys this feedback loop.

Hormonal imbalances compromise not only physical health but also psychological health, manifesting as problems ranging from depression to panic disorder. One way the body tries to compensate for imbalances created and exacerbated by the demands of stress is to overproduce key hormones. Another way it tries to compensate is by converting sex hormones to stress hormones, thus further diminishing reproductive functions and the enjoyment of sexual health.

It is helpful to learn about these hormonal interdependencies because they allow one to see the bigger picture that the problems commonly associated with menses or menopause are actually indicators of greater endocrine imbalance. For many women, the next step in understanding the bigger picture might be to look at digestive health — such as the possibility of malabsorption syndrome or food allergies — and at nutritional supplementation strategies (see discussions below) that help restore or maintain hormonal balance.

One of the biggest reasons why hormonal imbalances are misunderstood is because "modern" medicine disregards the way the human body deals with its environment. Consider that the body's responses basically have not changed for 50,000 years. We still respond to our environment with the most primal of mechanisms: the "fight-or-flight" mechanism, the release of adrenaline and other stress hormones. The stress

response, initiated in the hypothalamus and pituitary and regulated by the adrenal glands, is responsible for redirecting energy and resources away from the reproductive organs when we are under severe or chronic stress, directing it instead to the muscles and organs that are necessary for survival. This redirection is allowed to take place because, on the body's list of priorities, survival comes first and reproduction comes last.

The reproductive system is the only body system whose functions are biologically expendable. With this in mind, we see how the ability to reproduce becomes a privilege in the body, not a right. Fertility, or the ability to ovulate, is therefore a good indicator of the overall health of a woman.

The fight-or-flight response can be a detriment as well as a lifesaving response. In a modern environment, many things — ranging from allergic reactions to being cut off while driving — can evoke this mechanism. Throughout daily life, there are many hidden as well as overt sources of stress. Most of the time, our response to stress ends without a literal "fight" or some form of physical activity, as our ancestors would most likely have engaged in. One of the problems with this is that adrenaline, unlike most hormones, has no enzyme "switch" to turn it off. Once released, it must be used or it remains active. As a result, we remain in a state of hyperstimulation with abnormal levels of adrenaline and cortisol, the primary fight-or-flight hormones. Other hormone levels, such as the pancreatic hormone glucagon, also become dysregulated. If hyper-stimulation persists, we have difficulty inducing a relaxation response and we do not return to a normal state.

The adrenal glands are the core of the endocrine stress response system. They produce about 40 hormones responsible for many body functions. The adrenals are the shock absorbers of the body. Two of their most important hormones (adrenaline and cortisol) are responsible for the fight/flight response. Adrenaline provides the first burst of energy in a crisis situation. Cortisol assists in this phase and then continues working for hours afterward. An analogy would be the firing of a gun: the initial trigger is adrenaline; the projectile continuing until it reaches the target is cortisol. Both are inseparable and both are extremely damaging when misused.

Over a period of time, if chronic stress continues, the body adapts to adrenal hyper-stimulation, existing in a perpetual fight-or-flight mode. This

is called maladaptation, a process in which endocrine system organs begin to break down. This process eventually reaches the point where the adrenals become exhausted and cortisol levels drop. One example of what can result from adrenal exhaustion is fibromyalgia, a condition that can arise when the protective benefits of normal cortisol levels are lost.

The adrenals are usually first in the order of endocrine function breakdown, followed by the insulin-producing portion of the pancreas, thyroid, ovaries, parathyroid, pineal, pituitary and finally, the link to the autonomic nervous system, the hypothalamus. The thymus gland, which produces immune defense cells, is also affected in the endocrine breakdown process. Each of these glands controls specific functions, and as each breaks down, new symptoms appear. Symptoms are subtle at first. Then over the years, as the body goes further into deficit, the symptoms will increase and worsen.

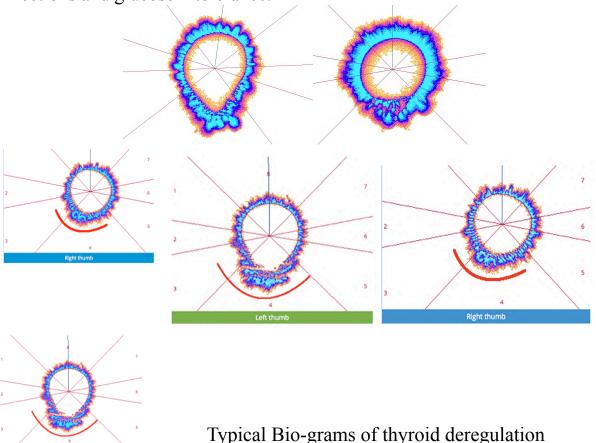
The more stress is endured, the worse the hormonal problems become. When the endocrine system is severely dysregulated, the hypothalamus is affected. If the production of corticotrophin-releasing hormone (CRH) becomes severely affected, the psychological symptoms can become debilitating. Because CRH controls fear — through stimulating adrenal secretion — an abnormal level of CRH can make it difficult to perform routine chores or leave the house. The fear response in turn worsens hormonal problems by further stressing the adrenals, which respond by converting more sex hormones to stress hormones and becoming more maladapted. What a vicious cycle.

The thyroid gland is also adversely affected by chronic stress. This gland's roles include regulating calcium metabolism and glycolysis, the breakdown of glucose for body energy fuel. Under normal conditions, the fight-or-flight response causes the thyroid to increase glucose breakdown. In conditions of chronic stress, however, the thyroid is continually overstimulated and eventually becomes depleted. Thyroid function is also disrupted by excessive estrogen, but this can be prevented by adequate progesterone levels.

With the Bio-Well analysis, we can often see disturbances in the thyroid area. This is a very common symptom but in most cases, the real reason is adrenal deficiency. So, if we see irregular patterns in the thyroid area, we need to check the overall hormonal balance.

Hyperthyroidism (overactive thyroid functioning) and especially hypothyroidism (low functioning) have become more common. The classic symptoms of hypothyroidism include sluggishness, early morning fatigue, cold extremities, lowered basal temperature and menstrual problems, including scanty periods.

Adrenal and other hormonal gland dysfunctions can cause some of the above symptoms and more, including cravings for sweets, weight gain, allergies, heart palpitations, insomnia, depression, fatigue, poor memory, foggy thinking, headaches, nervousness, inability to concentrate, recurrent infections and glucose intolerance.



#### The Gut-Thyroid Immune Connection

An important function of the gut is to host 70% of the immune tissues in the body. This portion of the immune system is collectively referred to as GALT, or gut-associated lymphoid tissue. The GALT comprises several types of lymphoid tissue that store immune cells, such as T and B

lymphocytes that carry out attacks and produce antibodies against antigens — those molecules recognized by the immune system as potential threats.

Problems occur when either of these protective functions of the gut is compromised. When the intestinal barrier becomes permeable, (i.e. "leaky gut syndrome"), larger protein molecules escape into the bloodstream. Since these proteins do not belong outside of the gut, the body mounts an immune reaction and attacks them. Studies show that these attacks play a role in the development of autoimmune diseases like Hashimoto's.

We also know that thyroid hormones strongly influence the tight junctions in the stomach and small intestine. These tight junctions are closely associated areas of two cells whose membranes join together to form the impenetrable barrier of the gut. T3 and T4 have been shown to protect gut mucosa lining from stress induced ulcer formation.

Likewise, thyroid release hormones (TRH) and thyroid stimulating hormones (TSH) both influence the development of the GALT. T4 prevents over-expression of intestinal intraepithelial lymphocytes (IEL) and in turn causes inflammation of the gut.

One little known function of the gut bacteria is converting inactive form of T4 into active form of thyroid hormone, T3. About 20% of T4 is converted into T3 in the GI tract, in the form of T3 sulfate (T3S) and tridothyroacetic acid (T3AC). The conversion of the T3S and T3AC into active T3 requires an enzyme called sulfatase.

Where does intestinal sulfatase come from? You guessed it: healthy gut bacteria. Intestinal dysbiosis, an imbalance between pathogenic and beneficial bacteria in the gut, significantly reduces this conversion. This is the reason why people with poor gut function may have thyroid symptoms, but good lab results.

Inflammation in the gut also reduces T3 by raising cortisol. Cortisol decreases active T3 levels while increasing inactive T3.

Studies also show that cell walls of intestinal bacteria called LPS negatively effect thyroid metabolism in several ways:

- Reduce thyroid hormone level;
- Dull thyroid hormone receptor sites;
- Increase amount of inactive T3;
- Decrease TSH, and
- Promote autoimmune thyroid deceases (ATS).

Constipation can impair hormone clearance and cause elevation in estrogen, which in turn raises thyroid-binding globulin (TBG) levels and decreases the amount of free thyroid hormones available to the body. On the other hand, low thyroid function slows transit time, causing constipation and increasing inflammation, malabsorption and infection.

Finally, a sluggish gal bladder interferes with proper liver detoxification and prevents hormones from being cleared from the body, and hypothyroism impairs GB function by reducing bile flow.

All of these connections make it clear that you can't have a healthy gut without a healthy thyroid, and you can't have a healthy thyroid without a healthy gut. To restore proper function of the thyroid-gut axis, both should be addressed simultaneously.

Healing the gut is a huge topic that can't be covered adequately in a few short sentences. But the first step is always to figure out what's causing the gut's dysfunction. Low thyroid is one possible cause, but often infection, dysbiosis, food intolerance (especially gluten), stress and other factors play an even more significant role. The second step is to address all these factors and remove any potential triggers. The third step is to restore integrity of the gut barrier. Fixing the gut is often the first, and most important step.

### Circadian Rhythm of Life

You're only here for a short visit. Don't hurry, don't worry. And be sure to smell the flowers along the way.

Walter Hagen American professional golfer (1892-1969)

Daily, humans exhibit physiological and behavioral rhythms with nearly all body functions showing significant variations including sleep, body temperature, plasma concentrations of cortisol and growth hormone, and urinary excretion of potassium. These circadian rhythms are produced by endogenous processes referred to as circadian oscillators which coordinate and orchestrate molecular and physiological rhythms with changes in the environment. The autonomic nervous system and endocrine signals are the principal mediators of this internal rhythmicity.

A 'master clock' in our brain, called the "suprachiasmatic nucleus," controls our circadian rhythms. It uses signals, like light and darkness, to determine when to release certain hormones and neurotransmitters that tell us when to wake up and be active or when to retire and go to sleep. From the beginning of time, people have awakened to morning light and fallen asleep in evening darkness. That's how we're genetically programmed to operate. We're energized during the day and sleepy at night.

As the day progresses, our body temperature, which starts out low, begins to rise, and so does our adrenalin, serotonin and overall metabolism. By midday, it reaches its peak. Later in the afternoon, the body clock reduces its output of active, energetic hormones. Body temperature begins to fall, metabolism slows down, and we begin to unwind. As evening progresses and light fades, the body clock signals the pineal gland to convert serotonin into melatonin and we become lethargic. As melatonin and other sleep hormones increase, our temperature continues to drop, and we start thinking about withdrawing for the night and it becomes difficult to stay awake. This is the best time to fall asleep. Body temperature continues to drop as melatonin is released into the bloodstream. We fall asleep and dream.

Melatonin continues to be released until the body clock perceives a gradual increase of light. As dawn approaches, the production of melatonin shuts down and the body clock begins the active cycle all over again, releasing cortisol. As sunlight increases, the body clock begins producing adrenalin and serotonin. And so begins another day.

Cortisol is an essential steroid hormone secreted by the adrenal gland and, like many other physiological processes in the body, has a circadian rhythm. Normal individuals, without disease of the hypothalamus—pituitary—adrenal (HPA) axis, at midnight, have very low or undetectable cortisol levels that build up overnight to peak first thing in the morning. Cortisol levels then decline slowly throughout the day.

#### Salivary Cortisol Ranges, nmol/L

Cortisol 8AM	5.50 24.80
Cortisol 12PM	3.80 13.20
Cortisol 4PM	2.20 9.40
Cortisol 8PM	1.60 4.40
Cortisol 12AM	0.80 3.30
Cortisol 4AM	1.10 9.40

This data shows standard measurements of cortisol provide no clues to the actual situation because the range of parameters is very wide. It's not the cortisol number at any the particular moment that's important, but its variation throughout the day.

Circadian rhythm is important for health. When your circadian rhythms are properly regulated, you sleep well, you have energy in the mornings, and your energy is constant throughout the day until it starts to gradually diminish in the evening ... and it reduces your risk of chronic disease! The light-dark cycle is the most important signal to your circadian clock. This means that one of the best ways to set your circadian clock is be exposed to bright (ideally sunlight) during the day, but be in the dark at night. In fact, sunlight exposure during the day is probably the single most important thing you can do to support the normal production of melatonin in the evening. The component of sunlight that informs your circadian clock that it's now daytime is blue light. You have photoreceptors in your eyes and skin that are sensitive to blue light (the receptors in your eyes are much more sensitive than your skin) and conveys this information to the brain.

How much time outside is enough? If it's a sunny day, as little as 15 minutes (without sunglasses!). If it's cloudy, 30 minutes to an hour is better. And of course, the more the better. Equally important is for your body to perceive it's nighttime once the sun goes down. This means avoiding blue light at night and sticking with red and yellow wavelengths of light, while keeping the overall light level much dimmer. And of course, you have to sleep in total darkness. If there are still lights around (or if you travel to Northern hemisphere in summer, where there are sun 24 hours a day) we recommend using eye bandage to guard you from light at night.

The same principles apply to avoid jet-lag. In a new place, go to bed by 9-10 pm, sleep in total darkness, wake up by 5-7 am and go outside to accept morning light directly into your eyes. This will help your brain to restore the proper cycle of melatonin production related to a new time zone. By the way, morning air is more transparent and clean compared with evening air, which allows a broader spectrum of light to reach your eyes in the morning. At the same time, the best photos are taken at sunset, because light scatters in air filled with particles and vapors plus a big part of UV and blue spectrum is cut off. Morning light happens to be more beneficial for the treatment of winter depression (Levy A. et al. Morning vs Evening Light Treatment of Patients with Winter Depression. Arch Gen Psychiatry. 1998;55:890-896)

What is important is to have 7-10 hours of sleep every night (with most people needing between 8 and 9). Do not restrict yourself in sleep time. People who do not have enough sleep loose their ability to concentrate and think properly. They loose the quality of life. One of the most insidious of tortures is not to let people sleep. Loss of sleep produces loss of sanity.

### Energy Circadian Rhythm

Circadian rhythm is present within every aspect of the body's functioning, and, of course, it is also present within the variations of our daily energies. In the morning we should have an increase of energy, which should slowly decrease as the day wears on, reaching its minimum at night. In this case, you may function properly and efficiently (fig.1).

This data demonstrates that if you take Bio-Well readings during different parts of the day, you will inevitably receive variations with the results. This simply indicates our system's natural response to circadian rhythms. You may have stable data only if you are measuring metal calibration cylinder. We may have some "Iron Men" in the society, but they do not represent majority of population.

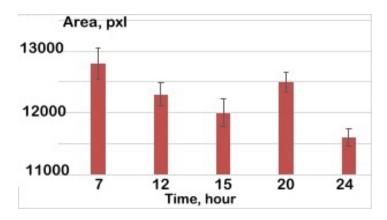


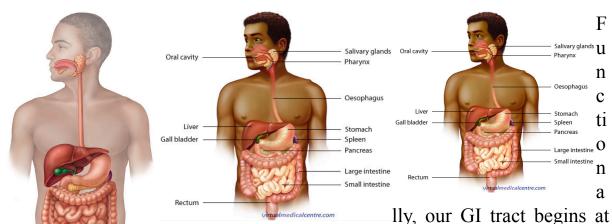
Fig.1. Change of Area of the Bio-gram of the 4th right finger, taken 10 times with 5 seconds interval 5 times a day.

## The Second Pillar - Gastro Intestinal (GI) tract

With extracts from Dr Sunil Pai and Dr Michael Galitzer books

There is no sincerer love than the love of food. George Bernard Shaw

(1856-1950)



our sinus and oral cavities, moves down to our esophagus, into the stomach, into the small intestine,

then the large intestine, into the colon and finally out through the anus. Although on a separate tract, the vagina is still part of this internal mucosal system.

Modern medicine dissects the individual into a bunch of separate parts – head and neck, stomach/GI tract, urinary tract – and suggests a separate doctor for each part. When we forget this tube is part of an entire person, we loose the holistic approach to medicine.

Different parts of the GI tract play different roles in the processing of food, so they have different levels of alkaline of acid content. This level is measured by the pH — the abbreviation for potential hydrogen. The pH of any solution is the measure of its hydrogen-ion concentration. The higher the pH reading, the more alkaline and oxygen rich the fluid is. The lower the pH reading, the more acidic and oxygen deprived the fluid is. The pH range is from 0 to 14, with 7.0 being neutral. Anything above 7.0 is alkaline, anything below 7.0 is considered acidic. Human blood stays in the

very narrow pH margin, ranging right around 7.35 - 7.45. Anything below or above this range indicates symptoms and disease. If blood pH moves to much below 6.8 or above 7.8, cells stop functioning and the most dramatic situations may occur. The ideal pH for blood is 7.4.

The pH in the human digestive tract varies greatly. The pH of saliva is usually between 6.5 - 7.5. After we chew and swallow food, it next enters the fundic or upper portion of the stomach which has a pH between 4.0 - 6.5. This is where "pre-digestion" occurs. The lower portion of the stomach secretes hydrochloric acid and pepsin until it reaches a pH between 1.5 - 4.0 — very acidic! After food mixes with digestive juices, it enters the duodenum (small intestine) where the pH changes to 7.0 - 8.5. This is where 90% of the absorption of nutrients takes place in the body. After this, the waste products pass through the colon (pH 4.0 - 7.0) and out.

Mouth pH = 6.5 - 7.5; Esophagus pH = 7.2 - 8.0 alkaline; Stomach pH = 1.5 - 4.0 acidic; Small intestine pH = 7.0 - 8.5 alkaline; Large intestine pH = 4.0 - 7.0;

If you have a health problem, most likely you are acidic. Research shows that unless the body's pH level is slightly alkaline, the body cannot heal itself. So, no matter what type of modality you choose to use to take care of your health problem, it won't be as effective until the pH level is increased. If your body's pH is not balanced, you cannot effectively assimilate vitamins, minerals and food supplements. Your body pH affects everything. You may easily measure your pH level in the morning with standard pH strips by urine. It is interesting – people who have fish tanks are very accurate with pH level of water, otherwise fish die. Why is it we do not usually take care about ourselves in the same way?

A low pH signals a lack of oxygen being delivered to organs and systems – and this is a major reason for a multitude of health problems, including cancer. The most efficient and effective way to increase your pH level –is to intake appropriate food and water.

Many people have unpleasant GI symptoms such as heartburn, acid reflux and gastritis. Here are a few reasons.

• People overeat and consume larger portions than they need;

- The food are high in fats and animal based proteins, which make them more difficult to digest;
- People do not eat enough raw vegetables and greens;
- Some of the food are causing individual inflammatory or hidden allergic reactions which very often is difficult to define without special analysis;
- Different chemicals, additives, preservatives in food, as well as GMO food have damaging effect on a human system.

#### You are what you eat.

#### A lot of health problems originate from the GI tract.

The GI tract is supported by liver, gallbladder and pancreas — all of which play important roles in digestion. Each part of this system affects all the other parts, and consequently, they all need to be considered together.

The GI tract is the home of the body's enteric nervous system. Known as the body's "second brain." it is located in the linings of the esophagus, stomach, small intestine, and colon. The enteric nervous system is brimming with neurotransmitter proteins that are produced by cells that are identical to neurotransmitter-producing cells in the brain. The complex collection of neurotransmitters in the "GI brain" enables it to act, learn, and remember in much the same way the brain itself does. The GI brain is also responsible for producing "gut feelings."

An essential part of the digestive function is provided by probiotics – helpful inhabitants of our microbiome. They are bacteria that live in our GI tract and perform a variety of bodily functions. The total weight of probiotics in the average person is approximately 3-4 pounds (1.3 – 1.8 kg). Each of these probiotic species plays a specific role. Some probiotics produce specific vitamins, excreting heavy metals and toxins; some absorb various nutrients and provide immune protection; some have antimicrobial action against infectious agents and help reduce inflammatory reactions.

Antibiotics, GI tract surgery, infections, stress, drugs, toxins and other negative factors disrupt the probiotics – they die – and it takes a lot of time and effort to restore their population.

The microbiome comprises the collective genome of these microorganisms (bacteria, fungi, protozoa, and viruses) that live inside and on the human body. Your body contains approximately ten times as many

microbial cells as human cells. More significantly, microbial genes can and do influence the actions and functioning of human cells. The influence can either be positive or negative, depending on the health, or lack thereof, of the microbiome. This explains why upsets in your gut can frequently result in diminished health elsewhere in your body.

## GI tract is the command center where 80 percent of your immune system resides.

The immune system resides in a location collectively called the gut-associated lymphoid tissues or GALT. These are a group of hormones secreted by enteroendocrine cells in the stomach, pancreas and small intestines, which control various functions of the digestive organs. Later studies showed that most of the gut peptides were found to play the role of neurotransmitters and neuromodulators in the central and peripheral nervous systems. Enteroendocrine cells do not form endocrine glands but are spread throughout the digestive tract. They exert their autocrine and paracrine actions to integrate all gastrointestinal functions.

Even more than this was shown by the latest research demonstrating that many organs of the body take part in the endocrine regulation. These include the skin, liver, spleen, bones and appendix. This is just one more confirmation that our bodies function as whole systems. To divide our understanding between different fragmented parts does not help us appreciate an integrated whole.

Unfortunately, today more people than ever before suffer from some degree of impaired gastrointestinal functioning. Consequently, they are burdened with a wide range of other health issues. Poor gut health has been linked with many serious health concerns such as various types of cancer, impaired brain functioning, child disorders, heart disease, and many others. That is why this pillar is so important in understanding health and finding the ways to improve it.

#### Vitamins, minerals, supplements.

The only way to stay healthy is to eat what you don't like, drink what you don't like, and do what you don't feel like doing.

Mark Twain

Nowadays it is not necessary to convince most people that vitamins and microelements are needed to maintain the healthy body. But how to choose the optimal set of preparations for yourself?

Michael Borkin, an American endocrinologist, has developed a method of individual selection of supplements using the Bio-Well device. First, with "Stress Test" program, we define the background level. This measurement can be repeated several times to make sure that the person's condition is stable. We recommend to take readings from the ring fingers – they are connected with endocrine system. After that, the person takes a blister or a box with supplements and presses it to the chest, while the readings are taken from a finger of the free hand. Then the hands are switched and the readings are taken from the finger of the other hand. This is repeated with different supplements, up to 10 preparations at one time. All these data are compared in the Bio-Well program and clearly show which preparations are useful for a person - they reduce stress levels or increase energy, and which are contraindicated, increase stress levels and decrease energy. Importantly, you don't have to swallow the drug, or even take it out of the package. Your body will subconsciously determine how suitable this substance is for you and will signal the autonomic nervous system to slightly change the sympathetic-parasympathetic balance. The entire study takes 10-15 minutes, and numerous experiments both in the US and elsewhere have shown the effectiveness of this approach. Figures 8 and 9 show examples of the resulting graphs.

As we can see from the test in Fig. 2, supplements 3 and 8 are contraindicated for this person, 4, 9 are neutral - they can be taken, while 2,5,6,7 showed very good effect.

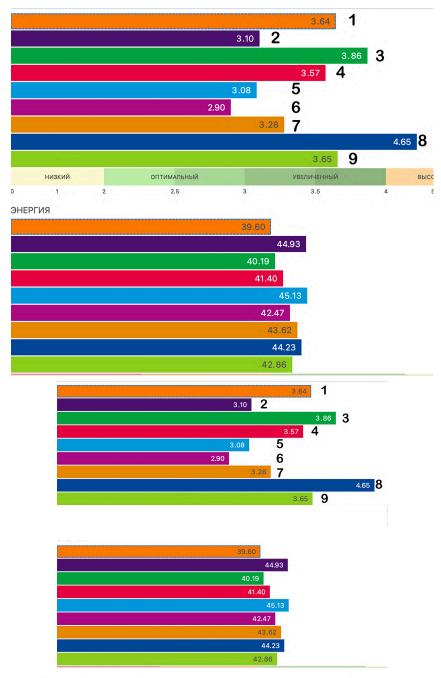


Fig. 2. Example of supplement test on stress and energy graphs. 1 - baseline, 2 - thyrodin, 3 - magnesium, 4 - potassium, 5 - vitamin B complex, 6 - detox cream, 7 - tryptophan, 8 - hormone cream, 9 - Gaba.

In the test in Fig.3, drugs 4,7,10 are neutral to the body, while the others lead to lower stress levels, meaning it is a good choice for this person.

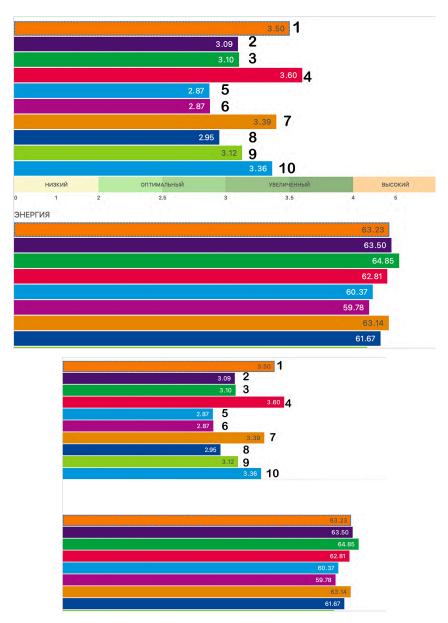


Fig. 3. Example of supplement test on stress and energy graphs. 1 - baseline, 2 - calcium, 3 - magnesium, 4 - potassium, 5 - vitamin B complex, 6 - detox cream, 7 - hormone cream, 8 - vitamin C, 9 - DHEA, 10 - Gaba, 11 - melatonin.

In both cases, the drugs had virtually no effect on energy levels, which is what we note in most of the cases analyzed.

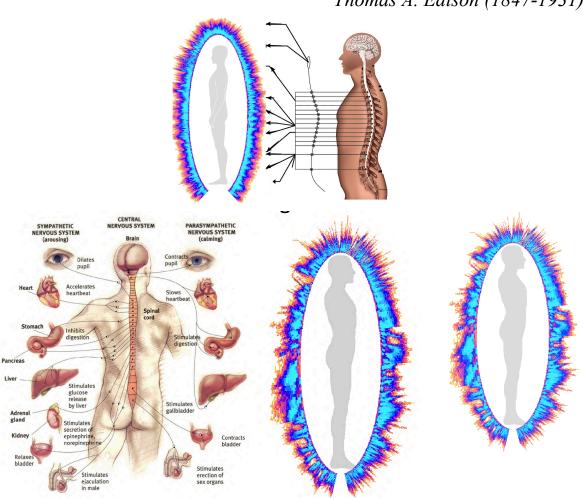
Anythings can be selected in a similar way - we have tested crystals, jewelry, foodstuffs. Many years of practice of using this test have shown its sufficient accuracy and practical significance. We recommend it for all your patients.

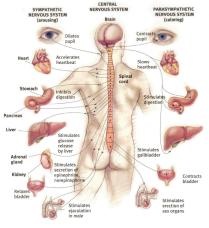
With the mobile version of Bio-Well, this test becomes even more convenient. The device fits in your handbag, you go to the pharmacy and test different drugs on the spot, instantly receiving the results on your phone screen. You don't have to take the capsules out of the package, so no one will object to your test.

# The Third Pillar - Autonomic Nervous System (ANS)

The chief function of the body is to carry the brain around.

Thomas A. Edison (1847-1931)





When we move and when we sleep, 24 hours a day, 7 days a week, our ANS is taking care of our functioning. This is an ancient mechanism centered on survival. From our animal ancestors, we inherited two main drives of life: hunger and sexual desire. These drives have not changed in millions of years. When we are hungry, we think only about food; when we are fully sated, we start

thinking about the other sex. The major topics in world literature are culinary recipes and love affairs. Our civilization is but a thin and fragile layer on top of a wild structure. A civilization thrives only with strict societal controls. When this control loosens, many people revert back to animals. All wars, including modern ones, provide the best examples. And all our basest instincts are governed by ANS.

In cases of survival and danger, the ANS suppresses functions not obligatory for life, such as the sexual drive. Testosterone converts to cortisol. People lose their desire as ANS re-directs all the systems of the body towards survival. Chronic stress is the best example. Thus, any misbalance in ANS has immediate implications on health and mood.

Being a long-time professional mountaineer, how very well I remember enduring a month in the high mountains. Every day was literally, a struggle for survival. After the first several days, all talk concerning women had ceased. We only spoke of mountains and food. This personal experience relates to a life and death situation when ANS, unmistakably, took over.

ANS has two divisions: sympathetic (SNS) and parasympathetic (PSNS). Sympathetic and parasympathetic divisions typically function in opposition to each other. This opposition is often viewed as more complementary in nature than antagonistic. For an analogy, one may think of the sympathetic division as the accelerator and the parasympathetic division as the brake. The sympathetic division typically functions in actions requiring quick responses. The parasympathetic division functions with actions that do not require immediate reaction. Many think of sympathetic as

"fight or flight" and parasympathetic as "rest and digest" or "feed and breed." However, many instances of sympathetic and parasympathetic activity cannot be ascribed to only "fight" or "rest" situations.

As an example, standing up from a reclining or sitting position would entail an unsustainable drop in blood pressure if not for a compensatory increase in the arterial sympathetic tonus. Another example entails the constant second to second modulation of heart rate by sympathetic and parasympathetic influences as a function of the respiratory cycles. More generally, these two systems should be seen as permanently modulating vital functions, in its usually antagonistic fashion, to achieve homeostasis. Some functions of the SNS include diverting blood flow away from the gastrointestinal tract and skin via vasoconstriction, enhancing blood flow to skeletal muscles and the lungs, dilating the bronchioles of the lung (allowing for greater oxygen exchange), and increasing the heart rate. In contrast to the SNS, the PSNS typically functions by dilating the blood vessels leading to the GI tract. This causes constriction of the pupil and contraction of the ciliary muscle to the lens (to enable closer vision), and stimulates salivary gland secretion in keeping with the rest and digest functions.

(Source: https://www.boundless.com/physiology/).

In Bio-Well analysis sympathetic-parasympathetic balance is reflected in the Diagram and Balance programs. When you see big differences in left-right diagrams (you may evaluate this difference by HS index of the diagrams) with more than 7-8 bars highlighted in the Balance program, this is a clear indication of an SNS-PSNS imbalance.

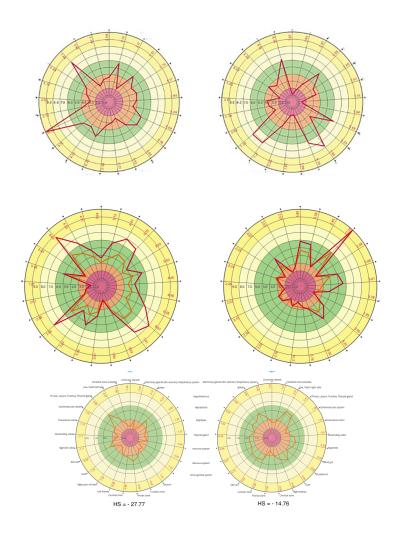
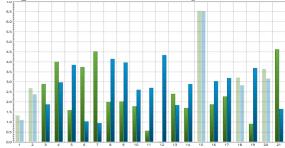




Fig.4. Example of a strong imbalance.

Nowadays, many patients demonstrate sympathetic dominance, which is a reflection of long-term stress and anxiety. This condition affects the functioning of all organs and systems, up to and including the development of symptoms of chronic fatigue.



Energy balance

Another important moment for understanding SNS/PSNS misbalance is the condition of the spine. The key thing to understand is that the activity of the ANS strongly depends on the condition of the spine. It is provided by different spinal cord segments.

As you understand from this list, healthy functioning of all organs and systems depends on the condition of the spine, but a lot of people have an improper relationship with this organ. Spinal disc problems are widely misunderstood for a number of reasons. Medical professionals do not always agree on the causes of pain related to the spinal disc, and patients have a hard time understanding this complex — and often not well-explained — medical topic.

On the back there are the so-called Zakharyin-Ged zones, in which hypersensitivity appears when an organ is inflamed. The occurrence of these zones is explained by the fact that pain excitations go from the affected internal organ through autonomic nerve fibers in the spinal cord and from there irradiate to the corresponding innervation zones. Ged has established exact correlations between internal organs and radicular cutaneous innervation, which allows, influencing these zones, to influence the state of health. Osteopathy is a great help in this. We have conducted a large cycle of research on the effects of osteopathy, where it was shown that in 100% of cases after the session reduces the level of stress and optimizes the parameters of the energy field. The condition of the spine is well revealed by Bio-Well analysis. [Korotkov KG, Shakirov AM. Analysis of the Influence of Osteopathic Procedures on the Psychophysiological State of Patient. EC Orthopaedics. 2024].

The spine's condition is also affected by mental and behavioral processes. It is a well-known fact that under negative and positive stress, our subconscious mind (our "inner beast") reacts with micro-movements. This is especially evident in a person's facial expressions and postures. The higher self-control a person has, the less it is noticeable to the naked eye. But if you make a video of a person in a moment of stress and then look at the video in slow motion, these reactions can be seen in everyone. This is not new; many articles have been written on this topic, and even TV series and movies have been made. What is important is that such reactions have been studied by science in great depth. The muscles of the face and back are most of all involved in such responses.

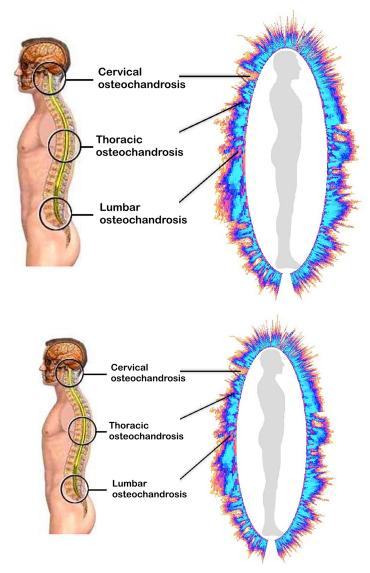


Fig.5. Spine problems.

And here, it makes sense to pay attention to the following. In the case of single stress, a person adopts a particular posture reaction to stress, for example, when frightened - protective, and after the situation is equalized, he relaxes, and his muscles relax after a while. If a person regularly experiences the same type of stress, the tense back muscles spasm and do not relax. Any massage therapist knows this and works with just such problems. But if a person does not consult a specialist and continues to live under stress, the spasmed muscles gradually begin to deform the spine, similar to how a young tree deforms if you bend it and tie it with a rope. Such changes disrupt the normal energy exchange in the spine, and this is very clearly seen in the Bio-gram and Energy Field.

One comment regarding the sympathetic prevalence as a possible symptom of chronic stress. In this case the level of stress in the Analysis may be normal, while the Balance program demonstrate sympathetic dominance. It is because for the organism this is a habitual state, to which the organism has adapted. As we are measuring physiological stress, it does not register as abnormal.

#### The Fourth Pillar - Emotions and Stress

Life is 10 percent what you make it, and 90 percent how you take it.

Irving Berlin American composer (1888-1989)

Life cannot exist without emotions. All higher animals clearly express emotions, especially us – humans. People are governed by emotions most of their lives. All too often, logic yields under the pressure of desires and drives. The entire world is governed by Love, but how many lives and families have been destroyed by gratifying love's desires? Emotions directly influence endocrine functions, activity of the ANS and GI tract. Positive emotions are mostly constructive, while negative are destructive. And the most dangerous emotion of all is Stress.

#### Stress - World's Number One Killer

All living creatures respond to stress utilizing a system known as the "adrenal response," commonly referred to as the "fight or flight mechanism." This mechanism has been genetically embedded in animals for hundreds of millions of years. Fight/flight, a series of chemical events that prepare your body to respond to an attack, is our most important survival mechanism.



It has been passed down, virtually unchanged from our early ancestors, to present-day man. What has changed is our environment and society. We have produced a culture of chronic stress. Instead of confronting the occasional saber-toothed tiger, we are now under attack 24 hours a day. Job pressures, noise and toxic pollution, dizzyingly rapid changes in the fabric of our society, and a barrage of invasive advertising and negative media messages charge at us. This chronic stress causes our bodies to overproduce chemical and electrical messages, disrupting our natural ability to regain balance, or homeostasis. Our body keeps its hormone functions in a constant state of emergency. Left unresolved, chronic stress results in serious health conditions. Stress, in fact, is involved to some extent in all injury, illness, disability, and death. The good news is that new tools are available for testing, understanding, and treating the effects of chronic stress

#### What Exactly Is Stress?

Stress is the sum total of all physical and mental input. The human body is unchanged for more than 50,000 years. The mechanism that was needed for survival 50,000 years ago is inappropriate for today's world. It is unlikely dial our Pleistocene ancestors, having narrowly avoided being trampled by a raging mastodon, would turn to a companion and say, "man, I am stressed out." We should be careful to distinguish between a serious stress problem and the fashionable

use of the term stress, which trivializes its lethal consequences.

Stress is communicated in the body by two primary vehicles: neurological impulses and chemical messengers. In response to external stressors perceived via the senses, nerve impulses travel at tremendous speed carrying data from our environment into the body where the information is processed. The brain then sends messages through nerve impulses to parts of the body in response to the incoming data.

The chemical messengers for communicating in the body are hormones. The hormonal system, while functioning at a much slower pace than the nervous system, works with the nervous system to maintain internal harmony and balance.

When the body perceives stress, nerve impulses and chemical messengers immediately work together to respond. Stress activates specialized cells in the cerebral cortex (where thought takes place), which sends an impulse to the hypothalamus (the brain's main stress control center). The hypothalamus then stimulates the sympathetic nervous system (SNS) and activates the survival mode (the fight/flight mechanism).

The heart starts to pound, the senses become acute, and the body begins to sweat. Blood pressure increases as blood is directed to the brain and major organs, the body's survival centers. Hands and feet become cold and clammy as blood is diverted away from the extremities and redirected to the large muscles used for fighting or running.

After the crisis, the homeostasis mechanism kicks in, seeking to recreate balance through the parasympathetic nervous system the function of which is summarized as "rest and digest."

#### **Destructive Vs. Constructive Stress**

Keep in mind that stress can be a constructive response (even a lifesaving one) to a threatening event. But what we're concerned with is what happens when stress accumulates. We need to look at our stress reaction and ask ourselves whether we're responding to stress appropriately. If we've lost our ability to adapt, we are experiencing destructive, or maladaptive, stress.

When a healthy individual is subjected to prolong, chronic stress, the adrenal glands initially increase hormone production (primarily cortisol) by enlarging in size. The abnormally high cortisol levels actually interfere with the adaptation process by preventing vasoconstriction (narrowing of the blood vessels).

When cortisol levels increase, the body turns off the immune system and growth and repair functions. (Why worry about the future when there is a more immediate danger?) Other functions, such as reproductive capabilities and tissue repair, also shut down or become diminished (thus, stress kills sexual desire and prevents recovery from illness). The large intestine can become paralyzed and the anal sphincter locked closed. As the body's ability to control inflammation decreases, and as digestion is inhibited, allergic reactions can result in a swelling of the intestines. This puts a person at risk for celiac disease, malabsorption syndrome, and a

multitude of opportunistic invaders such as Candida, parasites, and other dangerous microorganisms.

If threshold stress continues and body reserves become depleted, the adrenals begin to falter. They no longer produce the necessary levels of stress hormones. If the stress continues, the adrenals become exhausted and the body goes into a forced state of recuperation. The body is then likely to convert sex hormones such as progesterone and testosterone to stress hormones. Symptoms of this phase include fibromyalgia, heart arrhythmia, increased urine flow, profuse sweating, night sweats, muscle spasms, migraine, anxiety, depression, tension headaches, memory laps, stiff neck and shoulders, asthma, irritable bowel, herpes outbreaks, psoriasis, eczema, low back syndrome, sciatica, erectile dysfunction; amenorrhea, hot flashes, hypertension, skin blotching, rashes, acne, and immune suppression.

In this phase, the body shifts all its systems into the survival mode. All the body's reserves are directed for the purpose of trying to maintain homeostasis and all body energy is directed toward immediate survival. When one is in the survival mode, all the senses increase and become hypersensitive. This increases the volume of information entering the mind and causes it to reach maximum saturation before the sleep mode can help remove the stress, which it does by transferring date from active memory, the conscious mind, to the subconscious mind.

When we experience this kind of "overload," the body and mind become temporarily detached and we feel spaced out. This is the result of the body's release of opioids that anesthetize us.

To identify stress you must first separate positive, from negative stress. In a study, which utilized cortisol, the primary stress vhormone, olunteers where subjected to positive and negative stress and measurements of cortisol where taken immediately before and after the event. The study reveled that a 5 minute exposure to a positive experience yielded a mild increase in cortisol levels for a short duration of approximately 15 minutes. A negative experience yielded a dramatic decrease in cortisol levels for a period of six hours before it returned to normal levels. Every system reacts to stress in its own way.

Most people can even feel where an emotional manifestation becomes a physiological manifestation. Some feel it in their solar plexus, others between their shoulder blades. What most don't realize is that it can be

responsible for the pain in your foot as well as your head. The object, therefore, is to develop a method in which stressful situations do not produce the stress reaction in the body.

## **Understanding Long-Term Stress**

It is only when stress continues that it causes damage. Experiencing long-term stress at threshold levels even affects the way cells develop and mature, causing premature cell death. When a significant number of cells'



lives are compromised or shortened, the entire organism will suffer poor health or sometimes a shortened life span.

While every system reacts to stress in its own way, most people aren't aware of when they're experiencing destructive or long-term stress. We may have felt an emotional stress manifest physiologically, say, in the solar plexus or between the shoulder blades. But how many of us realize when stress is responsible for sciatica or hot flashes?

Those of us who are suffering from long-term stress need help to change our stress response and recover. While it usually takes several months, complete recovery form adrenal exhaustion is possible. Whether or not we've reached a state of extreme or long-term stress, what we all need ultimately is a method of healthy adaptation-a method by which we prevent stressful situations from producing a destructive stress reaction syndrome.

There are many ways to relieve the mind of stress and interrupt the patterns set in neural pathways that are programmed to receive and send stress messages. Hypnotherapy, visualization, hatha yoga, Tai Chi or Qi Gong, and most meditation techniques are helpful in stopping habitual mental patterns that engender stress reactions. Any activity that allows you to relax your awareness instead of reacting to all stimulation will ultimately give you some recovery time. That might mean walking in nature, swimming, or a creative activity that is different from your normal routine and is satisfying to you.

Individual counseling, group stress management classes, or workshops can also help unearth the underlying messages that trigger stress responses. Many maladaptive patterns are conditioned responses learned when we were young, and which we believed were critical to acceptance and hence survival on the planet. It is up to the individual to reduce exposure to new stress and counter the damages done by accumulated stress. Sometimes support helps us to accomplish this.

Dietary supplements are a vital, indispensable means of supporting the adrenals and other body/mind activities.

Our modern world compels us to deal with our stress in ways that are not genetically programmed; we have to take conscious action to avoid the devastating effect that chronic stress has on our well-being. Keeping our body in the emergency status of fight/flight is no more to conductive to our Pleistocene ancestor to try to use our method of dealing with his contemporary stressors by trying to reason with that saber-toothed tiger: "Can we just sit down and talk about this?"

The level of physiological stress is well reflected in Bio-Well programs. First of all, the Stress parameter, whose value of more than four indicates a stressful state. The field picture is characterized by many discontinuities, the diagram acquires a star-shaped character, and the chakras tend to "fly apart" in different directions (Fig. 6).

Note that in the state of stress the picture of chakras is very variable, which characterizes high lability of the nervous system. This is one of the signs used in the "Psychodiagnostics" program, which will be discussed further on.

The Bio-Well Filter should be used to assess the somatic state if there is a stress pattern. There are two types of emotional reactions: open and closed. In an open reaction, a person explodes and spills his emotions out, while in a closed reaction, a person does not show his feelings. This does not mean a person does not worry; they worry and how! But all emotions are raging inside him.

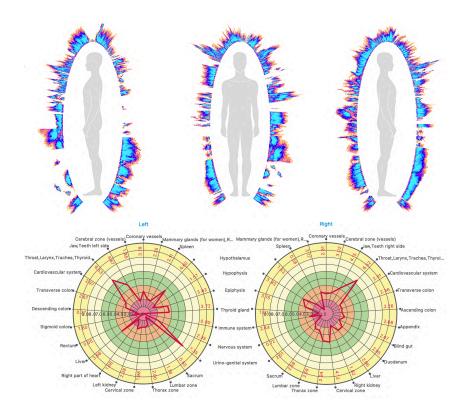
And so, if a person often openly and violently throws off his emotions - it devastates him: in such situations, he has no strength, and his Energy Field is very torn with many gaps and voids. If a person experiences emotions inside himself all the time, he accumulates muscle spasms throughout his body; thus, the energy exchange is disturbed, and his energy field looks

excessive, with a lot of overloaded organs with energy. Which of these is better? None.

By seeing a picture of a person's energy field, you can determine the type of emotional response and make recommendations on how to recover better.

One of the best ways to put your psycho-emotional state in order and restore energy balance is sport. It is only essential to use it correctly.

People with closed emotional reactions need active, energetic exercises and sports. This can be running with acceleration, martial arts such as boxing (all its types), karate, etc., all kinds of athletics, and active sports games. In addition to traditional sports, you can engage in fast, playful dances. These activities make the body shed the accumulated tension, spend all the accumulated energy on some energy-consuming but non-destructive actions, and competently warm up the muscles and break muscle blocks.



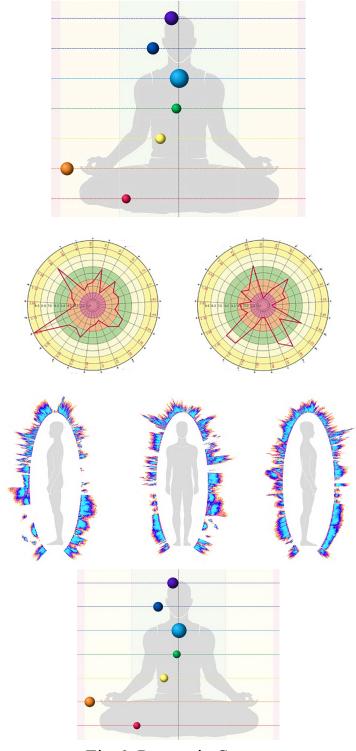


Fig.6. Person in Stress.

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People with an open emotional reaction also need sports, but here you need restorative sports: swimming, walking, slow running, the health-improving part of wushu, yoga, qigong, etc. Engaging in hippotherapy, nature walks, fishing, mushroom picking, and ballroom dancing is also possible. Any activity that energizes a person and saturates him spiritually and physically without overloading him emotionally is suitable here.

And, of course, those and other groups will be beneficial classes aimed at relaxation and harmonizing thoughts and feelings. After all, it is essential to be able to dump emotions and restrain them; it is important not to do it in excess. For this purpose, it is necessary to harmonize your inner world in time to reduce the degree of emotions. Meditation, art therapy, and breathing practices will help a lot.

Of course, it is recommended that such people regularly visit massage therapists, osteopaths, and reflexologists. Each of these specialists, at their level, will be able to remove accumulated blocks and clamps.

Massages for people with an open emotional reaction should be a soft, saturating force, and for people with a closed emotional reaction - deep, aimed at relaxing all muscle groups. It is essential to choose suitable aroma oils for such massages; this will significantly enhance the effect of the procedure.

# What We've Been Told About Heart Disease is Wrong

With extract from Dr. Michael Galitzer book

Ignorance is the curse of God; knowledge is the wing wherewith we fly to heaven.

William Shakespeare

Heart disease remain world's most prevalent health issue, with heart attack continuing to be number one killer, and death by stroke ranking third. These facts are proof that everything our medical system have been doing to combat and prevent heart diseases is not working. Something is wrong in the very idea of what causes heart problems.

Recent studies have found that a significant percentage of heart attacks occur in the areas of the heart where blood flow is not diminished by blocked arteries. Modern understanding shifted to the idea that in the vast majority of cases, heart disease will not occur unless there is first a decrease in parasympathetic activity. Typically, this decrease is followed by an increase in sympathetic activity, in particularly under the effect of permanent stress. This combination of events results in heart cells dramatically increasing their production of lactic acid. Due to the increased acidity in the heart, the heart cell walls become rigid, making them less able to contract, and leading to edema and impaired function of the heart muscle itself, as well as heart cell death, all of which are involved in causing heart attacks. In addition, the swelling (edema) of heart tissues results in changes in pressure of the arteries those run through the affected area of the heart. This increase in pressure, in turn, is what causes vulnerable plaque in the arteries to rupture, further blocking the arteries involved, and/or creating dangerous clots.

Directly related to this process of decreased parasympathetic activity is what occurs in the endothelium, the very thin layer of cells that line your body's arteries. A healthy endothelium is necessary for proper blood flow and overall cardiovascular function, especially in relation to the smooth vascular muscle that makes up most of the blood vessel walls. The events associated with decreased parasympathetic activity can all negatively impact

endothelium, resulting in one or more of three possible responses: inflammation, oxidative stress (increased level of free radicals), and vascular autoimmune dysfunction, all of which are linked to heart disease.

While surgical procedures can save lives during acute emergencies, research have shown that their overall benefits are minimal. Recent findings help to explain why. First, studies have found that a significant percentage of heart attacks occur in the areas of the heart where blood flow is not diminished by blocked arteries. Several research that evaluated the effectiveness of angioplasty, stenosis and CABG, found that, although the procedures can relieve symptoms of heart disease, they do not prevent further heart attacks and that only high-risk patients (specifically patients with blockage of the left coronary artery) whose lives are in acute danger receive any benefit from bypass surgery in terms of their improved chance of survival. One more proof of this concept is that many people having heart problems are likely to experience what are known as "atypical warning signs". Such symptoms include pain in the back, neck or jaw, nausea, vomiting, indigestion, and so on.

For example, although arteriosclerosis is a result of endothelium dysfunction and has long been viewed as a significant risk factor for heart diseases, the presence of arteriosclerosis by itself does not mean that angina, heart attack, or other types of heart diseases will occur. So long as parasympathetic activity is healthy, the autonomic function will override atherosclerosis, aided by the collated blood vessels. That does not mean that you can, or should, ignore atherosclerosis if it is present, any more than you should ignore any other risk factors that have been linked to heart disease. All such facts need to be addressed. But it is the activity of your parasympathetic nervous system that is of paramount importance when it comes to protecting your heart. So, it totally comes under the umbrella of Four Pillars of Health. Another important topic concerning heart is the new understanding of the heart functioning. As Professor B.M. Hedge writes: "It was very uncomfortable to accept that the heart is a simple muscular pump, which could pump blood through the enormous swimming pool of capillaries of which there are 800 kilometers in just one kilogram of body fat. We are lost in measuring the artifact, called arterial pressure, in a few meters of the arteries or, for that matter, in the veins". [J of Indian Academy of Clinical Medicine 9, 3, 2008, 172-174]. It is an absurdity to believe that such a little organ as the heart would pump blood all through the body. 90% of the blood is in the venous capillaries at any one time, and the total capillary surface area is approximately 3,000 miles! Standard Definition: The Heart: a hollow muscular organ that receives blood from the veins and propels it through the arteries. In humans the heart is located behind the lower part of the breastbone, slightly to the left of center. Now a lot of scientists came to conclusion that the Heart is not a pump as claimed in academia. The Heart is a blood flow regulator, which controls the imploding blood in our bodies via twin opposing vortices created within the Heart. It is these vortices that are so important in how blood flows through the heart. When a vortex forms within the flow of a liquid then that flow speeds up and the subsequent increased flow rate helps to increase the vortex effect which in turn accelerates the rate of flow. The vortex also induces what is known as the Zeta Potential, which helps to separate and disperse the blood cells. They expose maximum surface area within the blood and are therefore able to hold and transport more oxygen and other nutrients throughout the body. In the heart, pressure has no propulsive role, the forward flow of the vortexing blood is dammed (stopped); its energy transferred to increase the velocity in the vortex. In turn, the increased vortex velocity induces a larger etheric force to further speed up (enliven and strengthen) the blood. This is by no means the complete process of blood propulsion, but it is certainly different from the flow of water in a pump. [Marinelli R et.al. The heart is not a pump. Frontier Perspectives 1993;5:10-25].

I am sure that it is impossible to understand the functioning of the heart without accepting the role of blood as structured liquid, playing an active role in this process. We need to apply the concepts of Professor Gerald Pollack presented in his book "The Fourth Stage of Water: Beyond Solid, Liquid and Vapor" [Ebner and Sons Publisher, 2013]. Professor Pollack demonstrated in precise experiments that interaction of liquid with the capillary walls creates the electrical force that provides the movement of a liquid. This allows blood to pass the tiny capillaries without resistance transporting leucocytes of the size bigger than the diameter of capillaries. Still the full description of the blood system functioning waits to be written.

# Part 2. Bio-Well 3.0 - a new stage of technology development



Fig.7. Bio-Well 3.0 with Sputnik.

A key indicator of the reliability and quality of any device is the stability and reproducibility of results. When we designed Bio-Well 2.0, we wanted to maximize the stability of the instrument. We have achieved this. However, very high stability has a downside - the sensitivity of the measurements decreases. Therefore, in developing Bio-Well 3.0, we aimed to find a golden mean between the stability of the gas discharge and the sensitivity of the measurements.

It takes time for the gas discharge to propagate across the surface of the glass electrode. In the initial stages, only individual streamers are visible. Gradually, they appear all around the perimeter of the object under study. The whole process is very transient - it lasts about 20 ms. In the final stage, no new streamers are formed and the gas discharge spreads over the glass surface. Neighboring streamers merge and overlap. The image becomes more uniform and smooth – details are lost.

If you photograph a gas discharge in the early stages of its development, you will see streamers and discontinuities in the glow, while if you photograph it at a later stage, the details will disappear.

During the development of Bio-Well 3.0, we took this into account and introduced an adjustment to the discharge exposure time. Bio-Well 2.0 captures the discharge at a late stage and the images are very stable and reproducible. With Bio-Well 3.0 we can choose the time of discharge

photography and a stable glow is observed from 15 ms. By default, all 3.0 devices set the time to 18 ms from the beginning of the discharge formation - this value provides quite high stability, but the level of detail, i.e. sensitivity, is higher than that of Bio-Well 2.0.

Many women who come for consultations have beautiful manicures with long nails. In the case of Bio-Well 2.0, it was difficult to take pictures of fingers with long nails while maintaining proper finger placement. In Bio-Well 3.0, we did two things: we changed the angle of the glass in relation to the finger, and we added a free space at the top for the nail to fit. Now it's easy to take Bio-grams of women's fingers, even with long nails!

Another significant problem with the use of our instruments was the dependence on the PC computer's connection to the power outlet (grounding). In Bio-Well 3.0, we have made several changes to the grounding and cabling system that minimize the dependence of instrument readings on the above factor.

Also, many users of older Bio-Well1.0 and 2.0, had a problem with the external lighting overlapping with the glow of the finger itself and distorting the results. They had to re-scan their fingers several times or cover the device with a dark cloth. In Bio-Well 3.0 we added another layer of protective shutters and shifted the intersections of these shutters relative to each other. Now it is practically impossible to see external light on the obtained images, which greatly simplifies the work and improves the quality of the obtained data.

Another new feature is the software activation of the fan. This is especially important when scanning in the "Environment" mode.

Finally, the ability to calibrate without using a wire provides additional convenience.

#### Bio-Well calibration

To obtain reliable, reproducible data, calibration should be performed in the following cases:

- 1. When moving from one climate zone to another.
- 2. At full moon, new moon.
- 3. A significant change in weather conditions.
- 4. A change in the seasons of the year.

For Bio-Well 2 and 3, we recommend calibration every day.

The calibration process uses a specialized program that measures the device parameters, compares them with the standard parameters, changes the device settings step by step, and repeats the measurement.

We recommend to do calibration every day or once in several days.

#### **Calibration Process**

Wipe the optical lens with a dry cloth, remove the finger insert, and insert the calibration one. For the Bio-Well 2 device, connect the wire to the device's socket. Connect the instrument to the computer. Open the Calibration mode and press Start. The program will adjust the instrument. When the process is complete, remove the insert. The instrument is ready for operation.

### Peculiarities of using different programs

We always start with the Analysis program, which allows us to identify stress levels, overall Energy, and balance.

## Attention! If the stress level exceeds 8, topical diagnostics are not applicable.

The following program is **Area Diagram**. It represents the area parameter of the image in pixels for each sector. This parameter is proportional to the number of photons per sector.

More informative is the **Energy Diagram** program, which represents the energy parameter for each sector and displays the quantitative values for that sector when you click the mouse button. It is optimal to find the diagram in the green zone; however, this does not mean that there are no health problems. We pay attention to the peaks of the diagram in the yellow

zone. They testify to increased energy production in this zone, meaning the organism pays more attention to this zone. The point is that any inflammation is an energy expenditure. The body raises temperature, blood pressure, the number of active blood particles, and this is all Energy, oxygen. The diagram emissions above the green zone characterize the zones of increased Energy, which is associated with inflammation or the possibility of its formation. All of these areas are areas of high Energy. **The energy reserve** parameter correlates with the cellular reserve level and characterizes the organism's immune and adaptation reserve.

The **Balance** program identifies systems and organs with significant imbalances on the right and left sides. It characterizes the sympathetic-parasympathetic balance, an important indicator of health (one of the pillars of Bio-Well analysis).

The problem areas identified in these programs, hypo- and hyper-energetic, are confirmed in the **Organ Energy** program. We pay attention to the central systems of the body following the principles of the 4 Pillars of Health. The orange and red zones are areas of energy deficiency.

We pay considerable attention to the Bio-grams of the fingers. What is essential for us is the general appearance of an image, following the types of Bio-grams discussed in this book, and the presence of deficiency in individual sectors. Their degree of aggressiveness indicates the pathologic nature of the inflammatory process.

**One Finger** program allows us to take sequential Bio-grams of a single finger. In this way, we can check the reproducibility of a pattern in a particular sector and see if it is a temporary functional reaction or evidence of a pathological process.

On the other hand, the dynamics of the parameters of Bio-grams of one finger characterize the organism's activity level or a particular meridian. Rising dynamics indicate that the meridian is complete and the energy transfer process is active. Declining dynamics show weakness of both meridian and energy source (corresponding organ).

The given curves characterize these processes.

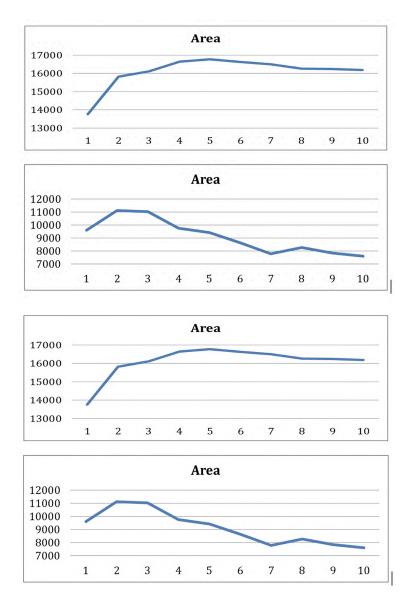


Fig.8. Parameters' dynamics of one finger taken ten times.

### Bio-Well data analysis

First of all, let us introduce the basic concepts.

The person's health state - general functional (Energy) state and psychoemotional balance measured at a specific moment.

Health assessment - conclusions about functional and psycho-emotional states made by a specialist based on Bio-grams.

Bio-Well is an expert system. It does not generate a analysis. It provides only numerical values of parameters and visual images, which a trained expert can interpret in one way or another. A physician or an authorized expert can only make any conclusions and analysis. Accurate assessments and conclusions can be made in 75-80% of cases.

The system is not designed to diagnose specific diseases and illnesses.

It effectively detects functional weaknesses in the body, which should be noted and further investigated by other medical methods. Bio-Well is the first step in analyzing a person's condition. To form a correct conclusion about the subject's condition, it is necessary to use the whole set of Bio-Well programs, as each represents different parameters of Bio-grams.

First, we look at the Analysis tab, which allows us to determine the stress level energy level and evaluate the sympathetic-parasympathetic balance.

Remember that energy level is not an indicator of health or problems; it is information about the overall energy level. We pay attention only to values that differ from the optimal level.

After that, we open the Area Diagram, which carries information about systems outside the optimal zone or a strong right/left imbalance.

### Analysis Program

We always start analyzing the patient's condition with the Analysis Program, which allows us to determine stress level, total energy, and evaluate sympathetic-parasympathetic balance.

#### Stress Level

The concept of "stress" is widely used in medicine and psychology, and in different branches of medicine it is understood differently. In Bio-Well, the level of stress is a measure of the disturbance of homeostasis - the level of adaptation of the organism to the conditions of the environment. Thus, the stress level reflects the balance of activity of stress-releasing and stress-limiting systems. The stress level scale is divided into the following ranges: 0 - 2 - lethargy (state of overactivation and areflexia or distress). This condition is manifested by a decrease in the rate of speech, weakness of emotional reactions, slowness. There may be many reasons for this condition, ranging from the consequences of poor sleep and fatigue to the consequences of chronic distress, leading to depression and nervous exhaustion, or a serious illness.

- 2 3 Calm state of a person in the absence of significant stress loads or and maximum homeostasis harmony.
- 3 4 optimal zone. Eustress, i.e. positive stress that mobilizes and trains the organism and its protective resources. Such stress is not harmful and has only positive effects on a person. However, if a person is in this state for a long time, eustress can turn into distress. This area is also characteristic of people with increased levels of anxiety. It should be noted that for certain types of temperament, the level of stress in the range of 1 to 2 (phlegmatic) and 3 to 4 (choleric) can be a natural, normal state.
- 4 6 short-term distress. Distress, the so-called "bad stress", depletes the nervous system and destroys the body. Under such stress, immunity decreases, a person becomes less resistant to any stress, the adaptation of the body is disturbed. Mental activity and efficiency suffer. However, if the distress is short-term, the organism recovers after some time. This state is also characteristic for overactivation, when reserves are at their limit; or for people in leadership positions, civil servants, contact with a large number of people. Also in people after poor sleep, colds, or exacerbation of chronic diseases that cause anxiety and disrupt adaptation to the world around them. 8 10 Acute stress. This is a peak acute state characterized by strong emotions. During acute stress a person may feel panic, dizziness, rapid heartbeat, nausea and be characterized by non-adjective reactions, aggressive behavior, disorientation in space. Acute stress is characterized by the fact that it cannot last long and exhausts a person very quickly.

At stress level 6 and above, a filter should be used to reduce the impact of momentary dynamic disturbances related to the person's current state.

It should be remembered that stress levels can change under the influence of certain pharmacological and psychoactive substances.

It should also be taken into account that children, adolescents and hypersensitive people with high emotional lability can quickly increase their stress level, but can just as easily return to a calm state after an emotional outburst.

Attention! If the stress level is more than 8, topical analysis is not applicable.

#### **Energy level**

**Important!** The energy level is not an indicator of health or problems, it is information about the overall level of metabolism.

This indicator is an average level of electric potential of cells and reflects the level of generation of electric charge of the whole organism. According to the energy data we can assess the intensity of metabolic processes. Low values are always associated with an acute period of illness, exhaustion, feeling of hopelessness, increased aggressiveness and decreases at the end of the day.

Energy level depend on a person's psycho-emotional and physical state. It is well known that the energy level decreases when the stress level is high. The energy level can also be low if a person leads an improper lifestyle, sleeps little, works "to exhaustion", has regular overloads, is in a weakened state after an illness, or lives is in unfavorable environmental conditions for a long time. The energy level scale is divided into the following areas:

- 0 20 low energy. This level corresponds to the state of exhaustion. Reasons for this state are: very high or long stress, long physical activity without rest, chronic fatigue syndrome, exhausting illness, long sleep deprivation, etc. In any case, rest, sleep and relaxation are recommended.
- 21 40 decreased energy. This level corresponds to the state of tiredness. Reasons for this state: stress or very strong emotions; physical fatigue after prolonged exertion; lack of sleep; weakened state before or after illness. In some cases, it is enough to rest for a few hours to regain strength, in others it is a long process. It should be noted that recovery is a very individual process, depending on the adaptation systems of the organism, mental mobility and the degree of imbalance in the work of the organism as a whole and the nervous system in particular.
- 41 60 optimal energy. This is the optimal energy level that corresponds to a calm, energized organism that can be active for a long period of time without harming itself. In more alert, healthy people, the energy level may be closer to 60 or even slightly higher.
- 61 80 increased energy. This energy level corresponds to increased activity of the organism. Reasons for such a state: mobilization of the organism under habitual increased load (for example, for athletes during training or military personnel); hyperactive, increased emotional state. At

the same time, increased energy is a reaction of the organism to an inflammatory process, a developing disease or a feverish state.

- 81 - 100 - high energy. This level of energy corresponds to an excessively increased activity of the organism. The reasons for this state are the same as for the previous energy level, but they are stronger in terms of the level of strain on the organism.

The organ imbalance indicates the degree of difference between the electrical potential produced by the left and right parts of the body. Taking into account the significant contribution to the electric potential of the peripheral and central nervous system activity. By the data of this analysis, we can evaluate the peculiarities of the vegetative (autonomic) nervous system balance. This parameter is very interesting for evaluating the effect of relaxing and harmonizing techniques, sport and physical activity, as well as all kinds of psychological techniques and oriental practices. This parameter is described in detail in the chapter "The Third Pillar of Bio-Well Analysis - Autonomic Nervous System".

### Area Diagram

The Area Diagram program displays the normalized luminescence area in pixels for each sector, correlated with a particular organ,.

From a biophysical point of view, the luminescence area is a measure of the electron avalanche scattering that ionizes the air layer between the finger and the device electrode. The glow of the electrons is detected by the Bio-Well device. The area parameter depends on the number of electrons in the electron avalanche, the more electrons there are, the higher the metabolism of the body.

Every cell has an electrically excitable membrane, and almost all processes in the cell involve polarization and depolarization. Therefore, every living cell with an integral membrane and active metabolic processes generates an electromagnetic field around itself. Bacteria and tumor cells also generate the field. Accordingly, larger organs have more cells and a larger field. More active tissue cells have a larger field. Actively dividing cells with an increasing number of cells also have a larger field than neighboring tissues. Thus, the character of the diagram may differ from the morphological picture obtained by radiological or sonographic examination

- it reflects dynamic functional processes. Inflamed organs, infected tissues and tumor processes are distinguished by increased area and increased functional activity. Stimulation of tissue activity, e.g. in hyperthyroidism, will also result in increased area and intensity of luminescence due to increased electrical potential of the organ.

On the other hand, processes of membrane damage, acidification of an organ or body region, intoxication and metabolic stoppage lead to a decrease in luminescence area and intensity. The disappearance of cells and their replacement by scar tissue, the melting and formation of cavities, or the growth of stones lead to the formation of an area without an electric field and, as a result, to luminescence discontinuities.

A decrease in the number of bacteria or cells (e.g. colon dysbacteriosis after antibiotic therapy) also results in a decrease in the luminescent area.

The combination of decreased area and increased function indicates a decrease in the number of cells and increased metabolic load of the remaining living tissue with fibrosis processes, e.g. chronic bronchitis in smokers.

From a psychophysiological point of view, the luminescent area reflects the nature of human metabolism, the degree of adaptation of the organism to internal (somatic and psychological problems) and external (stress, nutrition, ecology) factors. Thanks to adaptation, the organism is able to adjust to changes in the environment and increase its resistance to stress. This, in turn, allows to maintain and increase the internal reserve of the organism - the stock of its vital forces.

Optimal adaptation allows the organism to balance energy expenditure. When the luminescent area decreases (adaptation decreases), the organism's ability to adapt to the current conditions (maintain homeostasis) decreases. This means that the organism spends more energy for normal functioning of all systems and organs. And as a result, there is a depletion of adaptation resources (psychological and physiological), energy asthenization (loss of strength, energy vampirism). Symptoms of astheno-neurotic state can appear.

Psycho-emotional disturbances, characterized by mild excitability and rapid nervous exhaustion, may occur with reduced area. Usually, the first signs of psycho-emotional disorders are excessive irritability (as the patients themselves note, "over the smallest things"), as well as

intemperance (a person may, without meaning to, offend others and then regret it).

People having low Bio-Well area, can experience astheno-neurotic syndrome, in which patients complain of unstable mood (psycho-emotional lability with a predominance of bad mood and even with a tendency to depression), tearfulness, apathy, general weakness, malaise, decreased efficiency, fatigue. Asthenia is manifested by a decrease in not only physical but also mental performance, memory, willpower, inability to concentrate on a particular problem.

This condition is aggravated when sympathetic dominance is observed, which can be assessed by the Analysis and Balance programs.

When the area is elevated, physiological mechanisms are stressed, reflecting increased load on the system. It should be noted, however, that in some cases an increased area may reflect normal condition of a person and reflect a high level of internal energy (e.g., athletes or politicians). However, even if the causes of the increase are not pathological, it is important to remember that optimal adaptation in these cases requires high energy reserves and may result in periodical drop-down of energy. A cheetah can run at 120 km/h, but then needs to lie down in the shade to recover energy. To some extend it is applicable to people.

A high area indicates that the person is under too much load. Such a situation is possible in negative situations - very high temperature, feverish condition, developing disease or global overload of the organism due to serious changes in the environment. Or with significant workloads in some people (athletes, pilots, astronauts, military). It is important to realize that excessive loads waste energy and adaptation reserves of the organism. The price of such overloads can be a failure of the adaptive system. This, in turn, can negatively affect the functioning of all systems of the organism, and recovery will take a long time.

The presence of aggressive patterns in the sector increases the area of this sector, and it can mean that the organ may have not only functional, but also morphological changes due to this condition.

The charts for the left and right hands have areas of different colors:

Pink - deficient functional activity.

Beige - low functional activity.

Green - regular functional activity.

Light yellow - increased functional activity.

Yellow - high functional activity.

An imbalance between the left and right diagrams can mean:

- a temporary reaction to stress;
- a person is entering or exiting a state of illness;
- problems are created at the conscious level people invent problems (the number of deviated sectors on the right diagram is much larger than on the left diagram).

Let us discuss several examples.

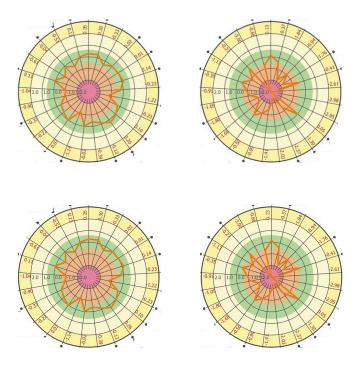


Fig.9. Female, 51 years old. She is very fond of complaining about her ailments, real and imaginary.

A person had a problem once and has already forgotten about it, but is still kept at the subconscious level (the number of deviated sectors on the right diagram is much higher than on the left diagram).

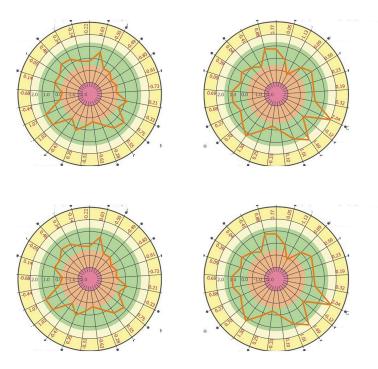


Fig.10. The boy is seven years old after moving into a new apartment. We see big difference between right and left diagrams.

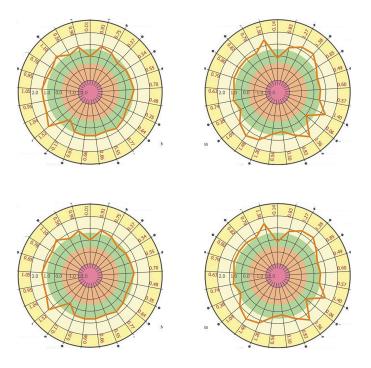


Fig.11. Female. 70 years old. Leads an active, harmonious lifestyle.

Sometimes, in people after 60 years, you can find diagrams in optimal zone, despite them having some health problems. This usually happens if a person's biological age is less than the passport age. That is, the body works with a level of load characteristic for 40-50 years, and it takes extra energy. In such a situation, we pay attention to the organs outside the optimal zone.

### Energy Diagram

More informative for assessing the psycho-emotional state is the Energy Diagram program, which displays the energy parameter for each sector and, by pressing the mouse button, displays the quantitative values for the sector. It is optimal to have the chart in the green zone, but this does not mean that there are no health problems. We pay attention to the peaks in the yellow zone. They testify to increased energy production, which means that the organism pays more attention to this zone. Every inflammation is an energy expenditure. The system increases temperature, blood pressure, the number of active blood particles, and all this requires energy, oxygen. These are zones of increased attention. Areas in the orange and red zone are areas of energy deficiency.

The **energy reserve** parameter correlates with the level of cellular reserve and characterizes the immune and adaptive reserve of the organism. This parameter characterizes the presence in the body of potential energy stored in mitochondria, which can be used for vital activity. The value of this parameter less than 20% is an alarming sign.

## Important! Correct information with the Energy Reserve parameter can be obtained only after calibration.

By clicking on the button "Show area diagram," the diagrams are superimposed in relative scale. In an optimal situation, the Energy curve should be higher than the Area curve (Fig.12). When they coincide, the corresponding sectors are colored red. When the difference between them is less than one conventional unit, the corresponding sectors are colored yellow. Both cases indicate the predominance of low-frequency photons in the luminescence spectrum.

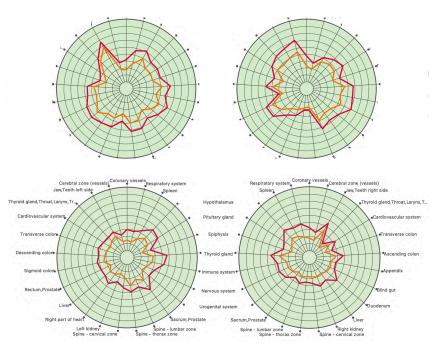


Fig. 12. Optimal location of the Energy and Area curves.

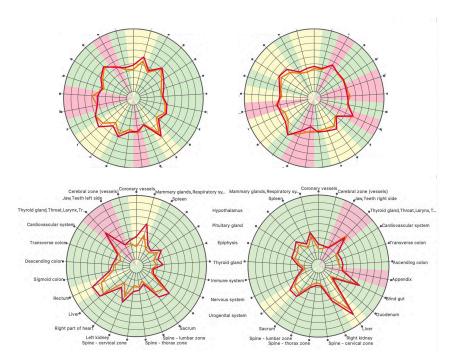


Fig.13. Diagram superposition.

Since the Area Diagram reflects the functional state of organs, and the Energy Diagram reflects the energy reserve of organs, we can assume that if the position of the energy curve of an organ is lower than the area curve, it means that it does not have enough energy for the level of functioning of

the organ. And since our organism is a self-regulating system, either the energy will be redirected from adjacent organs and systems, or the functions of the organ will be reduced. If an organ's energy and area diagrams coincide, it means an additional stress of the organ or system. It will lead to energy deficiency.

Note that the Energy Diagram program has the best reproducibility of all the programs. The shape of the chart is fairly accurate for most people when taken repeatedly over many years.

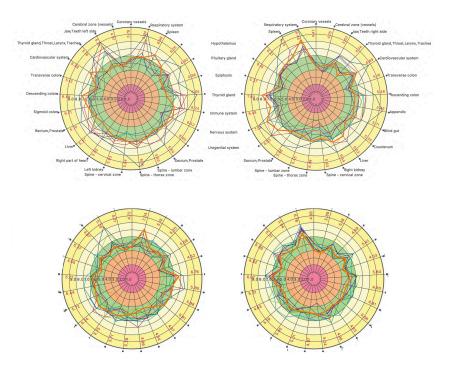


Fig.14. Energy Diagram taken over two years on different Bio-Well devices.

#### Balance

The Balance program identifies systems and organs that are significantly imbalanced on the right and left sides. It characterizes the sympathetic-parasympathetic balance, which is an important indicator of health status (one of the pillars of the Bio-Well analysis). The problem areas identified in these programs, both hypo- and hyper-energetic, are confirmed in the Organs Energy Program. We pay attention to the major systems of the body according to the principles of the 4 Pillars of Health. Balance is disturbed if there are more than seven bright bars.

**Darkened bars -** normal state of equilibrium, absence of imbalance.

**Bright bars** - unbalanced state; essential difference in energy between sectors on the left and right hands.

**Hint:** Find the three most unbalanced organs or systems and emphasize the examinee's attention on them.

Quantitative analysis of the Balance program data is presented in the Analysis program.

#### Organs and Systems Energy

It is an essential program for assessing the human condition. We pay attention to both decreased and increased organ energy. This is critical information in evaluating the four pillars of Bio-Well analysis.

Near each organ, indexes of a partial energy and balance are presented (if paired organs are present). When evaluating the organ system as a whole, average partial energy and balance parameters are calculated. Note that even if the system parameters are normal, individual organs may require attention.

**Important!** Repeat surveys may highlight different organs in each system. This is because the activity of the different glands of the endocrine system changes throughout the day, and the activity of the GI departments depends on nutrition and physical activity throughout the day. In addition to the numerical assessment of the state of the organs it is important to pay attention to the character of luminescence of each organ, the presence or absence of patterns and their severity. The description of patterns will be presented below.

#### Fingers

In this program, as well as in the Energy of Organs program, you can study the type of bio-grams and the presence of patterns. In this program we can see the luminescence of all fingers at once, without separating on systems and organs. Such information is necessary to evaluate the general tendency of functioning of the organism. We pay attention to the thickness and saturation of the luminescence, the roughness of the luminescent edge, the presence of gaps or outbreaks and their number. Do all fingers have

approximately the same luminescence or are they very different from each other.

Highly indented luminescence and a large number of gaps may indicate the presence of psychosomatic abnormalities. A large number of luminescence emissions may be associated with congestion or inflammatory processes.

Unusual appearance of bio-grams should cause increased attention. In this case, it is recommended to use filter to determine the influence of the psycho-emotional state. Severe patterns in specific sectors are usually associated with acute or chronic processes.

Important! If you observe strong abnormalities in the imaging of individual fingers, shoot all ten fingers, then reshoot the specific finger in "One Finger" program. Keep an eye on the correct finger placement.

The program allows you to calculate a large group of parameters shown on the fingers tab. Optimal parameters for the whole finger and individual sectors are also listed there. This information serves mainly for statistical calculations. You can only use it if you are an experienced statistician.

The **Yin/Yang** program can be effectively used by people familiar with the basics of Traditional Chinese Medicine.

### Analysis of Psychological Condition

An important indicator is the stress level; exceeding a value of more than three indicates an increased level of anxiety.

Important! The device measures the physiological stress level, which does not always coincide with a person's feelings - psychological stress. More detailed conclusions can be made when analyzing the data of the Chakra program.

#### Neurodynamic Program

We are all different and react differently to the external environment. Nobel prize winner Ivan Pavlov was the first to pay attention to this; in 1927, he introduced the concept of nervous system types based on the example of dog behavior. This concept was extended to humans. He distinguished three

main properties of nervous processes (excitation and inhibition): strength, the balance of excitation and inhibition processes, and their mobility (speed of transition from one state to another). Four main types were singled out (fig. 15).

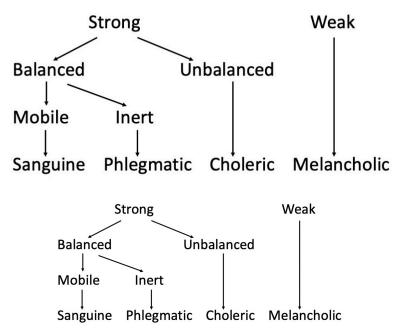


Fig. 15. Types of nervous system according to I.P. Pavlov.

This theory was relevant a hundred years ago, but it is now recognized that the psychological characteristics of temperament in general is not related to any one property of the nervous system, but to their combination, ie to the type of nervous system. The fact is that the strength of nervous processes is a parameter innate and unchanged, but temperament is affected by many factors. Therefore, it is impossible to establish equality between the property of the nervous system and temperament. The strength of nervous processes is characterized by the ability to endure stress. Weak nervous system is quickly fatigued, which is a protective reaction.

An important concept is also Emotional lability - mood swings and strong responses for various, often insignificant reasons. It It manifests itself in a rapid reversal of the polarity of emotions - from joy to sadness, from tears to laughter, from fidgeting to carefree relaxation. Emotional lability can be a symptom of a neuropsychic form of premenstrual syndrome, as well as varying degrees of mental disorders - for example, bipolar or mixed depression. These qualities are genetically predetermined

but can change throughout life with age or with specialized training and mental coaching. One powerful method of strengthening the nervous system is through exercise. At the same time emotional lability can be a symptom of a neuropsychic form of premenstrual syndrome, as well as varying degrees of mental disorders - for example, bipolar or mixed depression.

A program has been developed with a group of psychologists to assess these properties of the nervous system. The idea of the program is based on estimating the variability of the Bio-Well parameters in three consecutive measurements. The algorithm takes into account the variability of Chakra and Balance parameters. The program forms a conclusion on several properties of the nervous system and psychological characteristics of a person:

- Stability of psychodynamics.
- Strength of the nervous system.
- Level of self-realization of the personality.
- Stability of social self-perception, comfort of the social environment.
- Conscious-subconscious balancee.
- Level of intellectual concentration.
- Level of dominance of excitation or inhibition processes.

To form a conclusion, it is necessary to measure ten fingers three times in the Full Analysis mode with a break of 3-5 minutes and send it to Comparison. If you have the program "Neurodynamic" installed, a separate tab with the conclusion will be opened. You should request info@bio-well.com or support@bio-well.com (USA) to get this program.

### Chakras

The program's algorithm was once developed with a master of Ayurvedic Medicine and, over several decades, has shown its practical value. One of the indicators is that this program is actively used in India. The Chakras program is unique in that it combines the concept of traditional Ayurvedic medicine with the Western psychological approach to determining a person's motives and goals. The association of each chakra with certain organs and psychological characteristics of a person allows us to consider this program as a tool to analyze a person's needs, goals and

motives, as well as his or her ability to achieve these goals. The Chakras reflect a person's emotional state; the balance and reproducibility of the Chakra positions depend on the type of nervous activity. Perfect balance is often observed in people who regularly practice deep meditation or in people with a robust nervous system. After a meditation session, the balance of the Chakras is usually equalized. Parameters of energy centers (or Chakras) are calculated based on the state of organs and systems located in the corresponding parts of the body. They characterize the connection between the organs' functional state and the person's psychological state. The total energy level of a person determines the size of each energy center. Balance relative to the center (Left/Right) is the difference between the energies of the corresponding sectors of luminescence on the right and left hand.

The gray-green central corridor on the chart is the optimal balance.

Yellow corridor - deviation from the optimum.

Red corridor - high deviation from the norm - pay special attention.

The left side of the screen - social sphere, extraversion. The right side of the screen - personal life, introversion.

Hovering the mouse over each Chakra brings up a screen with essential characteristics.

### A brief interpretation of the chakras Chakra alignment and energy

Shifts of chakras to the right and left from the center speak about the presence of any needs in social or personal life. And the further from the center a chakra is shifted, the more significant or emotionally dependent this need is.

If all chakras are centered or very close to the center, it means that, at the moment, a person is in a calm, harmonious state. The higher the percentage of chakra alignment, the more balanced the person is. We observe such a picture for people regularly engaged in meditation, sometimes for prominent business people who have to control a large team and solve many problems that arise.

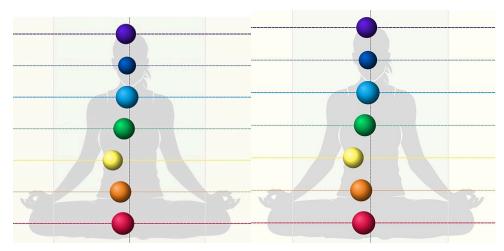


Fig. 16. Harmonic state.

However, if a person has all chakras in the center, but they are tiny, i.e., the person has no energy, it may mean that a person is in a state of psychoemotional exhaustion or depression. Such a state cannot be called harmonious. Such people usually have no desires or needs.

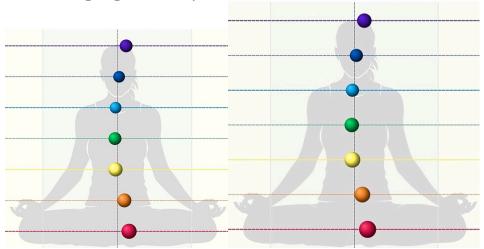


Fig.17 Depression.

If the chakra is in the green zone, it means that a desire or a task can be handled. However, in case of impossibility or great difficulty in achieving the desired topic, or if another more critical goal arises, the person may give it up.

The more people want to achieve their goals, and the longer they do not get it, the further away from the center the chakra shifts. Calm, self-confident people with a robust nervous system can assess their needs and capabilities adequately. If the goal is unattainable and unimportant, a person can give it up or look for other ways to achieve it. The more emotionally

unstable a person, the more mobile their psyche, the easier it is to knock them out of the rut and make them worry. Because of this, such people cannot react calmly to minor setbacks or difficulties; failure to achieve their goals or delay in their plans causes them strong emotional reactions, which are immediately visible on the chakras. For them chakras position is very unstable – it changes from one measurement to another.

If the chakra is in the yellow zone, it means that a person's need or task is very significant. This may be because they want to get what they want, or they may fail to achieve this goal. It will lead to some negative consequences. Also, the significance of the goal may be artificially increased by social hype - advertising, disturbing news, or discussions in society. In this way, the person loses critical thinking and feels that achieving the goal is the only way to their well-being.

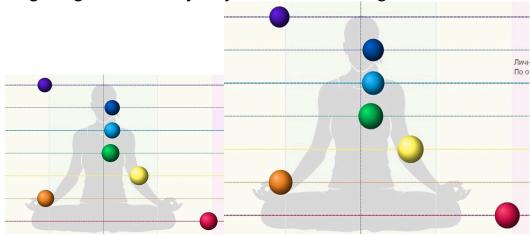


Fig.18. Chakras in the yellow zone.

The chakra is in the red zone when people cannot achieve what they want but can no longer adequately determine how significant this goal is and how realistic it is to achieve it. Also, they are not able to decide on the criteria of its achievement. And even if people are distracted from their goal by some more important task, they cannot stop thinking about it.

The size of the chakra is related to the level of a person's energy. If a chakra is big -  $5 \times 10^{-2}$  J and more, it means that a person has enough mental energy to realize the needs and desires related to this chakra.

The less energy, the more difficult to realize goals. If a person experiences negative emotions or nervous overload it takes a lot of energy. And thus, a person gets into a vicious circle. The longer people do not get what they want, the more they fixate on this goal, and the more they

experience negative emotions and anxiety and thus lose energy. And the more they lose energy, the harder it is to get what they want. This vicious circle is sometimes impossible to break without the help of a psychologist or psychotherapist.

This is why meditating and practicing wellness exercises and water procedures are so helpful. During these activities, people shed excessive anxiety which allow them to take a calmer look at their plans and goals. Suppose a person is in a panic or has too many tasks and cannot concentrate. In that case, the chakras will be chaotically distributed in several areas on different sides from the center. It should also be taken into account that people with an unstable nervous system, children in adolescence, and people under the influence of excitatory substances can change their psycho-emotional state several times an hour. For such people, it is necessary to let them sit in a relaxed position, breathe evenly without distractions, and only then take measurements.



Fig. 19. Deconcentration. Chaos in thought.

### **Assessment of priorities**

Which way the chakra is shifted from the center, makes a big difference.

The shift to the left side of the screen indicates that the person has social tasks. This may be a desire to prove oneself at work or in a socially significant society, or simply a need to separate from one's close environment, to find oneself among strangers in a foreign environment. The

shift to the right speaks that the goals and tasks of the person are related to the experiences, emotions, or close environment.

People who live whole, active lives sometimes have needs and goals in several areas simultaneously. In this case, a person's chakras will be slightly shifted in different directions, depending on what tasks and goals a person is solving now. According to which chakra is shifted farthest from the center, one can judge which task is a higher priority for a person.

Suppose all chakras are shifted to one side. In that case, we can say that people are concentrated on one side of their life, have extrovert tendencies (shift to the left - to society) or introvert tendencies (shift to the right - to inner emotions). Housewives, mothers of many children, and mothers of newborn children often have a shift of all chakras to the right due to their lifestyle and a large volume of tasks related to the close environment. Public personalities, lecturers, and managers pursuing a career mostly have a chakra shift to the left. And it is not necessarily connected with introversion or extraversion.

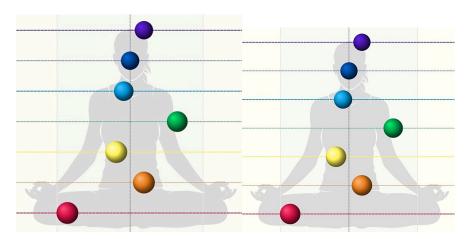


Fig.20. Needs in different types of activity

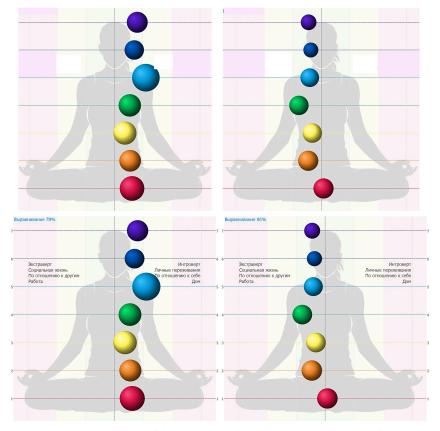


Fig.21. Example of intro- and extraversion tendencies.

### Psychological tasks and meanings of the chakras

Each chakra is associated with specific psychological properties and qualities of a person. Accordingly, the activity of all chakras is required to achieve goals and objectives. Thus, by the activity and shift of one or another chakra, one can judge what goals and tasks a person is solving. The shift of a chakra in a certain direction determines in what area people solve their tasks. By how far it is shifted, what energy it has, and what other chakras are shifted in the same direction, it is possible to determine how successfully these tasks are realized and how a person realizes them.

Below are the basic psychological meanings of the chakras.

#### Chakra 1 - Muladhara.

- Self-confidence, a sense of professionalism;
- Leadership skills, such as the ability to organize people and lead them;
- Ability to "hold a punch," i.e., to act in unfavorable conditions;
- Sexuality as a consequence of self-confidence.

Depending on which direction and how much the first chakra is shifted, a person needs to realize one of these qualities in society or close surroundings.

#### The most probable causes of chakra 1 shifts.

Shift to the left - to society:

- Insecurity, a desire to prove one's usefulness.
- An attempt to place oneself as a leader or personality in a new, hostile collective
- An attempt to salvage a crumbling reputation.
- A strong desire to "conquer the world" to prove to others that you are better than everyone else.

Shift to the right - into inner emotions:

- A stage of growing up, of becoming a person.
- Trying to establish new or defend old rules in the family.
- The need to fix family life in times of trouble.
- An acute need for complete, unconditional acceptance by loved ones.
- The need for proof of recognition of one's exceptionalism from a sexual partner.

#### Critical chakra positions can mean:

To society - a desire to impose oneself as the only leader and expert.

In the close environment - there is a painful need for loneliness or the desire to be the central, leading figure in the family.

### Chakra 2 – Swadhistana.

- Energy exchange and energy storage.
- Material creativity, including housekeeping, caring for children, and business, if it involves working with hands.
- Ability to organize one's space.
  - Sex and close relationships (hugging, touching, kissing, and shaking hands) as energy exchange.

### The most likely causes of chakra 2 shift.

Shift to the left - to society:

- A desire to get energized by strangers ("vampirism").
- Desire to leave to gain new impressions, to change the way of life completely.
- A strong need to organize the space at work to your liking.
- Trying to establish a crumbling business.

Lack of creative work.

Shift to the right - into inner emotions:

- A desire to be energized by loved ones ("domestic vampirism");
- Hyper-parenting or complete immersion in the lives of loved ones, in domestic life;
- Acute dissatisfaction with their own living space, the desire for positive changes;
- Acute desire for unusual sensations during intimacy, depressing routine, and detachment in relationships.

#### Critical chakra positions can mean:

To society - reluctance to return home because of problems in the family; total absorption in work - "workaholism."

In inner emotions - energetic and psychological fatigue (exhaustion) from society, as a consequence of the need for a safe space and a benevolent, undemanding environment; fear of losing loved ones and the desire for complete permanent control of someone or all family members with the closest possible contact.

#### Chakra 3 – Manipura.

- Willpower;
- The ability to insist;
- Ability to mentally "push through" the situation.

### The most probable causes of chakra 3 shifts.

Shift to the left - to society:

- Need for universal submission;
- An attempt to regain power when losing control over others;
- Violence over oneself accomplishing tasks that need to be accomplished despite a complete lack of desire to do so;
- An urgent need to influence a situation that is beyond the person's competence.

Shift to the right - into personal emotions:

- Domestic tyranny.
- Attempting to force loved ones to accept rules and demands in critical circumstances unconditionally.
- Self-violence under unfavorable conditions.
- An urgent need to influence a situation that is beyond the individual's competence.

#### Critical chakra positions can mean:

To society - a painful attempt to insist on one's decision in the apparent absence of approval from others; an unwillingness to think about one's problems; and, consequently, a willingness to attend to other people's problems.

To inner emotions - painful need to confirm one's unconditional authority in the family; fixation on personal or family problems to the detriment of other matters.

#### Chakra 4 – Anahata.

- Love.
- Kindness.
- Compassion.
- Willingness to help or sympathize.

#### The most likely causes of chakra 4 shifts.

Shift to the left - to society:

- Falling in love without reciprocity.
- Fanaticism, inadequate love for idols.
- Panic, anxiety for humanity as a whole or for specific people.
- Attempt to impose "good" on others against the background of feeling unrecognized.

Shift to the right - into inner emotions:

- Jealousy.
- Hyper-parenting, obsession.
- Need for attention from loved ones in alienated relationships.
- Hysterical love, need for constant affirmation of loved ones' feelings.
- Acute anxiety for loved ones in an unfavorable period.

#### Critical chakra positions can mean:

To society - excessive altruism, desires to "make" humanity happy. An attempt to gain recognition from others against the dislike and disrespect for oneself.

In inner emotions - a painful need for love and respect of loved ones; tyranny, the desire to control all areas of life of loved ones; egoism.

#### Chakra 5 – Vishudha.

- Communicating, sociability.
- Ability to receive and transmit information verbally.

• Intangible creativity (singing, poetry, writing, public speaking, journalism, psychology).

### The most probable causes of chakra 5 shifts.

Shift to the left - to society:

- Lack of communication.
- An acute need to receive certain information.
- The need to speak out after critical situations.
- Need for recognition of creativity and human activity.

Shift to the right - to inner emotions:

- Lack of communication with close people.
- The acute need to talk only on topics of interest to the person.
- The need to speak out after critical situations.
- Fear of public speaking, fear of criticism, desire to communicate only with "safe" people.

### Critical positions of the chakras can mean:

To society - painful need for publicity or socializing; unwillingness to communicate with loved ones and, consequently, excessive socializing. Into inner emotions - fear of contact with the social environment, avoidance of communication.

### Chakra 6 – Adjna.

- Intuition.
- Ability to read and understand non-verbal signals.
- Ability to receive information from your subconscious mind in dreams.
- Ability to feel a sense of danger.

#### The most probable causes of chakra 6 shifts.

Shift to the left - to society:

- Panic, fear of the unknown.
- Neurotic states on the background of global unfavorable events.
- An acute need to make an important decision without objective data.

Shift to the right - to inner emotions:

- Fear of the unknown, punishment, inadequate reaction from loved ones.
- Fear and anxiety for loved ones, fueled by the inability to get specific information.
- Fear, anxious thoughts about one's well-being or one's future.
- Fear of making a mistake when making an important decision against the background of hyper-responsibility for the family.

Critical positions of chakras in any direction say that people are possessed by panic moods and fears, they cannot make a balanced, adequate decision. Either people will look for an opportunity to remove responsibility for making a decision, or because of lack of information, they will expect and invent unknown danger and delay any actions. Depending in which way the chakra is shifted, that is where they will wait for "danger" and "miraculous rescue."

#### Chakra 7 – Sahasrara.

- Ability to receive information in a non-verbal way (books, internet, environment).
- Ability to decipher and analyze the received information.
- Religiousness.

### The most probable causes of chakra 7 shifts.

Shift to the left - to society:

- The need to receive information that, for some reason, is closed or not internalized by the person.
- Unwillingness to understand and accept information and replace it with another body of knowledge.
- Feeling of detachment, unwanted informational isolation from the world. An attempt to "break the barrier".
- Belief in God or other higher powers and desire to find a connection with them.

Shift to the right - to inner emotions:

- A desire to receive and work only with information that is interesting to the person.
- A fixation on receiving and analyzing some topic that is very interesting to the person.
- The need to receive and analyze information that significantly solves a person's problems.
- Belief in the Divine beginning of a person and desire to find it in oneself.
- Desire to "disconnect" from the world.

Critical chakra positions can signify a person's fixation on some information or idea. Or the need to understand something unattainable. Sometimes, people who need to digest or process a certain amount of information quickly fall into such condition. Also, people who, for some

reason, do not want to understand or hear certain information. Depending on what area the information is from and what they need it for, the chakra will shift either to society or to the person's inner emotions.

This is a brief description of the information that can be gleaned from the Chakra program. However, there is a sea of possibilities for the practitioners who work with this program. Depending on which chakras are shifted in a certain direction, one can assume precisely how a person will achieve their goals. With the help of the Chakra program, it is possible to determine a person's unconscious reactions and desires. The topic of chakra interpretation is voluminous, diverse, very interesting, and deserves a separate book.

When demonstrating Bio-Well programs to different specialists, many have a negative attitude toward the Chakra program. This is especially true for medical professionals and scientists. For such people, we have introduced the "Nerve Centers" button. The screen that appears presents a picture in the form of nerve centers, and for each center, a corresponding description appears when pointing by the mouse.

### Bio-gram patterns

We can define different types of patterns:

Glow emission outside the outer contour. It is evaluated in shape, size, brightness, and position relative to the main luminescence (distant or outgoing emission).

Emission is connected with the rest of the luminescence (actively running acute process, including infectious or ischemic nature).

The shape of the emission, its size, and brightness characterize the activity of the process: the more branched, brighter, and the larger the outline of the emission, the more active and acute the process.

The bright, strongly branched, and large pattern is characteristic of an acute process.

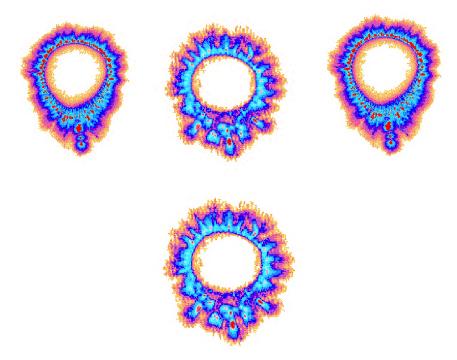


Fig. 22. Aggressive outgoing patterns.

Non-aggressive outgoing pattern - exacerbation of existing chronic pathology.

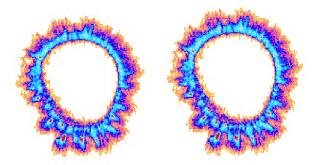


Fig. 23. Non-aggressive outgoing pattern.

The outgoing pattern has no direct connection with the main luminescence (characterizes a formed chronic pathological focus), usually an aggressive pattern.

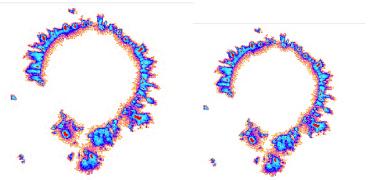


Figure 24. Aggressive pattern.

**Important!:** When scanning fingers, we recommend turning on the "Auto Cleanup" button, automatically removing all noise outside the image contour. Usually, this noise is related to the backlight. But if you're exploring some special states of mind, like altered states of consciousness, or mental anomalies, deactivate this button and rescan the fingers.

Deficiency Syndrome - is represented by so-called blocks, divided into complete and incomplete blocks.

A complete block is a block with a rupture of the internal circuit.

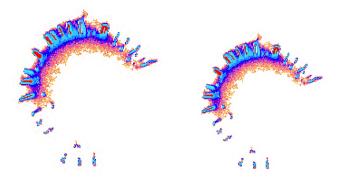


Fig. 25 Full block.

Incomplete block - the gap is combined with minimal glow, both in area and intensity.

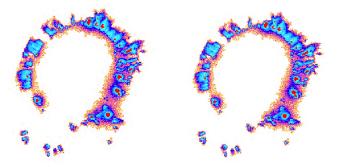


Fig.26. Incomplete block with detached emissions.

### Classification of patterns by aggressiveness:

#### **Low-Aggressive Emissions**

Patterns on the contour of the finger (non-aggressive). Corresponds to the chronic processes — for example, hypofunction of the thyroid gland – hypothyroidism.

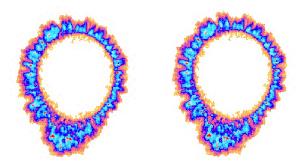


Fig.27. Non-aggressive pattern.

Pattern + block. Signs of transferred loads on the organ with a decrease in functional ability.

Aggressive pattern (drop symptom). Sign of hyperproliferative process, nodule, or a cyst.

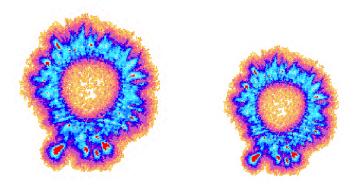


Fig.28. Aggressive pattern with internal noise.

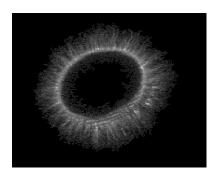
Appearance of internal or external noise. Sign of endo- or exo-intoxication (slags, energy debris).

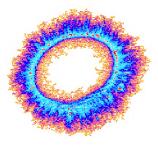
### Bio-grams Types

### **Type I (Healthy person)**

They are characterized by intense luminescence smoothness of the external contour. All parameters are in the optimal zone. Bio-grams without filter have a small number of patterns. There are fewer than seven highlighted bars on the Balance. Stress (activation) level 2<A<4.

This type is characteristic for people with optimal health, stable psyche and no serious health deviations at the time of measurement.





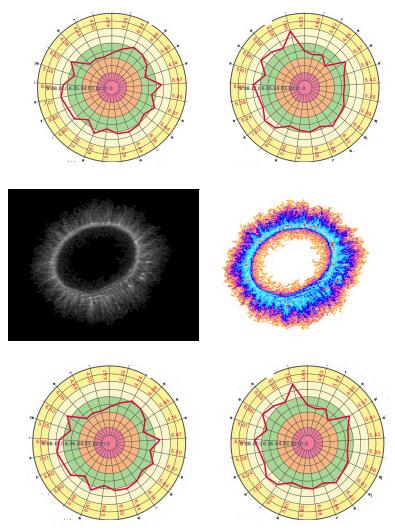


Fig.29. Bio-grams and Diagrams characteristic of type 1.

### Type II (Apparently Healthy Peron).

The most common type of luminescence for practically healthy people. A slightly indented outer contour and non-aggressive patterns on individual fingers characterize it. The diagram partially lies in the zone of energy deficiency. Expressed imbalance. Level of stress (activation) 3<A<6. Sector analysis is applicable.

People of this type live active, full lives, but usually have subacute chronic diseases that require therapy. There are a number of systems and organs that require attention. These are the weak areas of the body, which in case of unfavorable strain, acute stress, can cause symptoms and inflammation. As a rule, we pay attention to all 4 pillars of the Bio-Well analysis. The most common areas of focus are the spine, GI tract and thyroid.

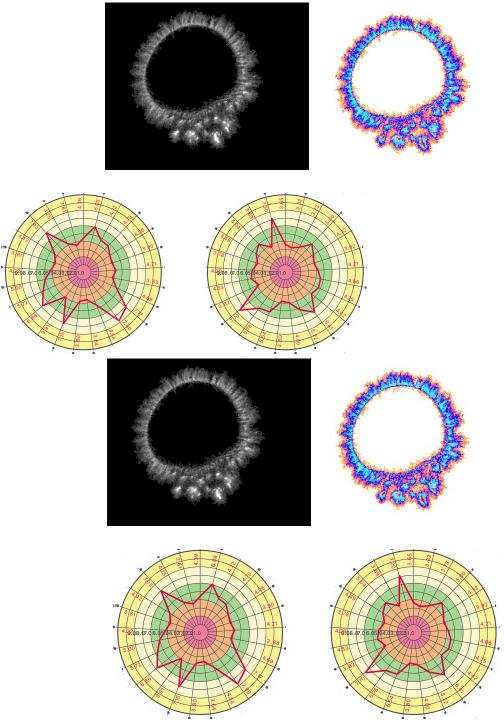


Fig.30. Bio-grams and Diagrams characteristic of type 2.

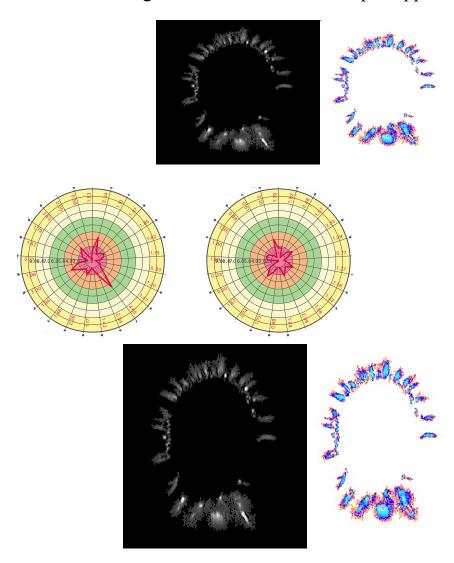
### Type III (Stress)

A glow with many tears is a clear indication of high stress. Often these people have wet fingers. It is important to understand whether this condition is a permanent stress or related to a specific moment. Allow the

patient to relax for about 15 minutes in a quiet environment and repeat the recording.

It is mandatory using a filter.

- Bio-grams without a filter have a specific "piecewise intermittent" appearance.
- Diagrams in the red area often have a star-like appearance.
- Bio-grams without a filter have a specific "piecewise discontinuous" appearance. Specific patterns appear in the form of detached spots, branches, and double rings.
- Diagrams with filter have a specific "cloud-like" structure in several sectors. The diagrams often have a star-shaped appearance.



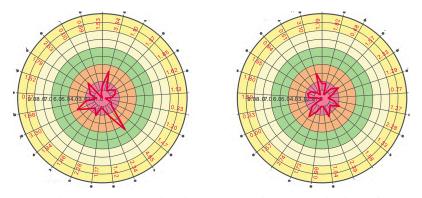
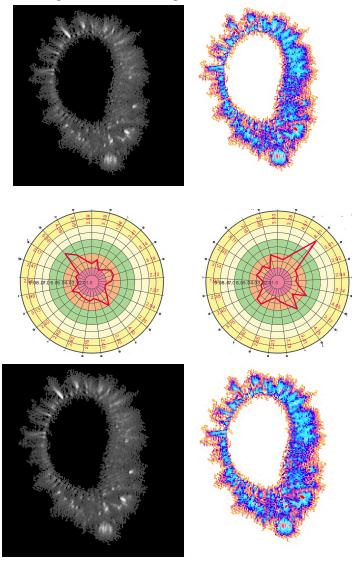


Fig.31. Bio-grams and Diagrams characteristic of type 3.



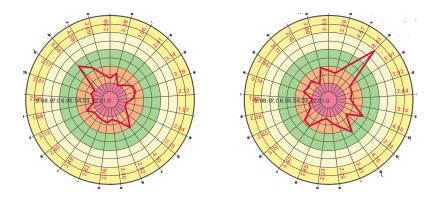
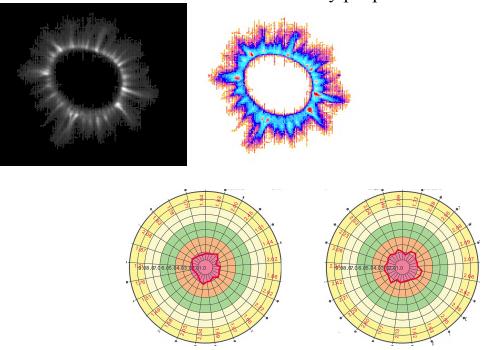


Fig.32. Bio-grams and Diagrams of a person from fig.31 scanned with filter.

## Type IV (polymorbid condition) or people with mental retardation (PMR), including people with altered states of consciousness (ASC).

Bio-grams are characterized by "star-shaped" character of luminescence, uneven contour or low level of luminescence with small gaps. This reflect the energy exhaustion of the organism, which can be associated with diseases, emergencies, polymorbid condition - the presence of a large number of dysfunctions of various organs and systems. This type is often characteristic of small children and elderly people.



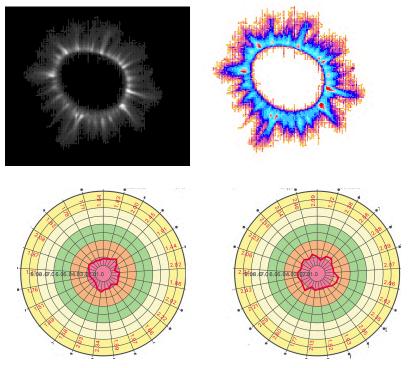


Fig.33. Bio-grams and Diagrams characteristic of type 4.

We have a lot of experience in analyzing the condition of the PMR group. Their bio-grams can differ significantly depending on the level of brain function - from type 1 to specific images, which we call a separate type. They are characterized by highly irregular structure, irregular shape, and different types of images on different fingers. The diagram of the butterfly type. The stress level is low, usually 3-4. These patients will be analyzed in Chapter 4. The diagram very often of the butterfly type (fig.34, 35).

When registering such images, one should be extremely careful - there are many people with unstable psyche, including those with serious mental disorders, which do not manifest themselves in their outward appearance and behavior. The behavior of such people can be unpredictable and dangerous. (Recall cases of mass scannings in schools and on the streets).

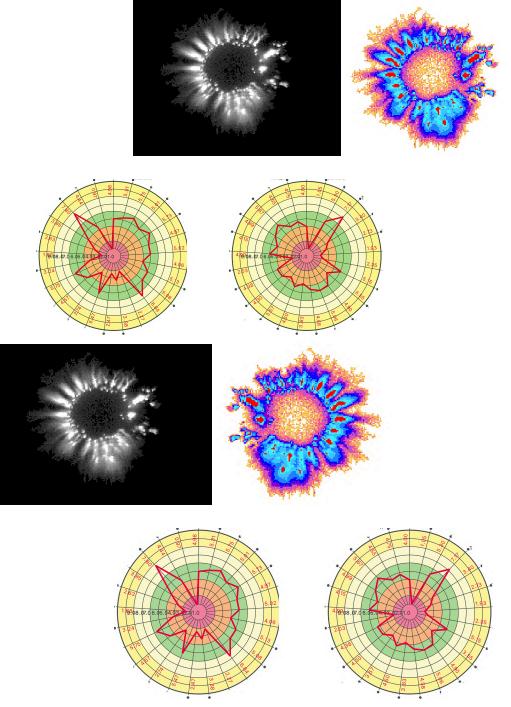
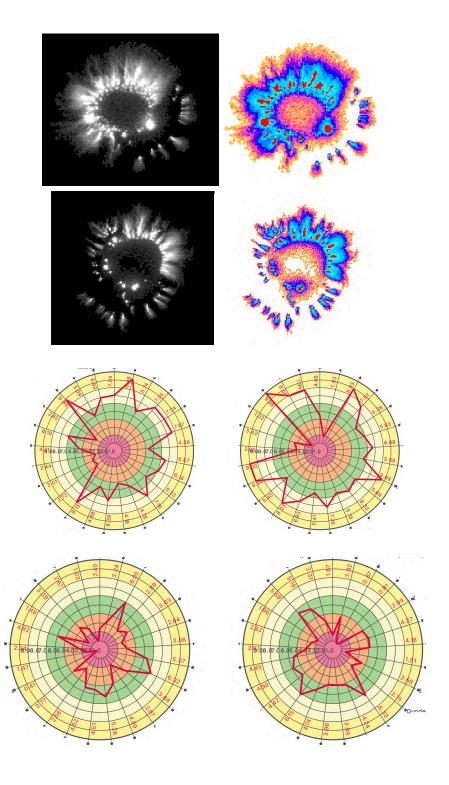


Fig.34. Bio-grams and Diagrams characteristic of type 4



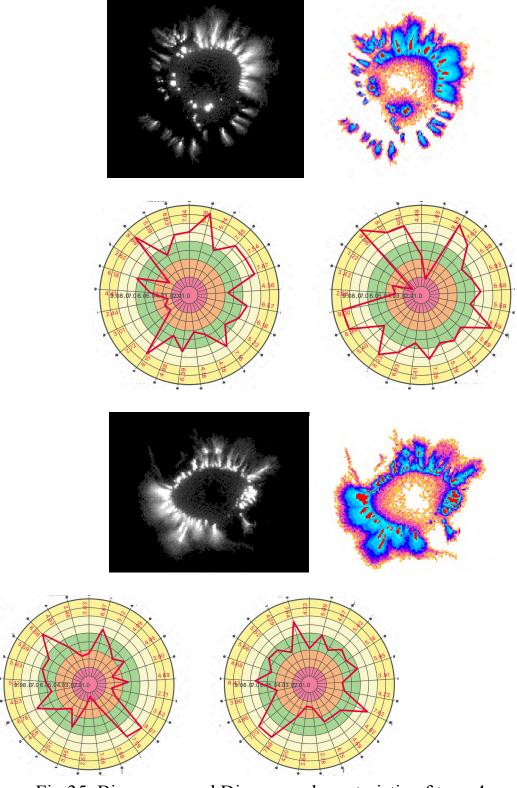


Fig.35. Bio-grams and Diagrams characteristic of type 4

**Important!** When recording such images, it is necessary to repeat the measurement to ensure that the data is reproducible. Finger placement may simply be incorrect.

In some cases we register **Highly Aggressive Images** - specific patterns in the form of indented spots, branches, double rings. Such images characterize the transition to the Altered State of Consciousness.

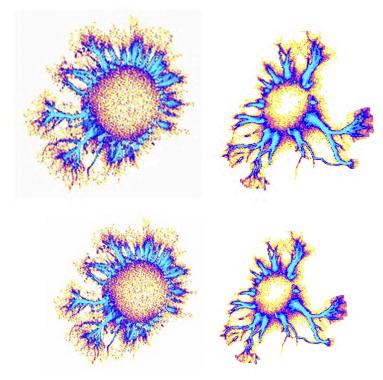


Fig.36 Pattern - branches.

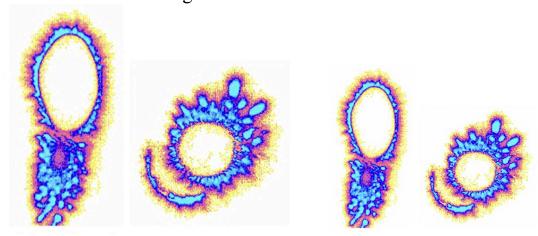


Fig.37. Pattern - spots.

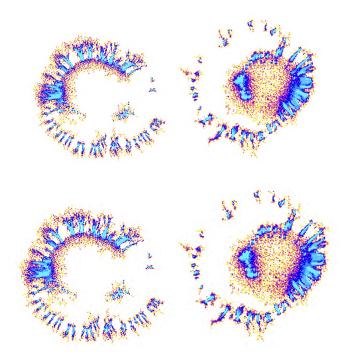


Fig. 38. Pattern - rings.

### Functional tests

### Necessity of the tests

Through "physiological provocation" to simulate an unstable operation of the system, which will allow the identification of its weak links.

Visualization of patterntic tendencies in Energy.

We are determining the nature of the response (hyperergic, normergic, hypoergic).

### **Classification of tests**

**Respiratory test** - deep, slow breathing ten times with a delay in exhalation. First, we inhale, count to 4, then hold, count to 2, pause, exhale, count to 4, and pause again for 2 counts. When we inhale, the diaphragm is compressed and lowered, the abdominal muscles relax and the stomach bulges. On exhalation, the diaphragm relaxes and lifts, the abdominal muscles tense, and the abdomen is pulled inward and upward. Similar to the pranayama exercise in yoga. There is a constriction of arterioles and as a

result - a decrease in the skin blood flow, which is an indicator of sympathetic regulation and shows the importance of deep breathing. While holding the breath, the body is saturated with carbon dioxide, which increases the blood pH.

**Orthostatic test** - transition from sitting to standing position, including central mechanisms of hemodynamic regulation and checking the work of the circulatory system (pericardium meridian) and the heart channel.

Use of signal points of acupuncture. (Conducted by a specialist). Various influences on the points to provoke changes in channel energy. "Subtle experiments" that require skill and knowledge of reflexotherapy. We achieve both decrease and increase of Energy, visualize specific patterns.

**Hyperventilation**. Deep breathing at a rate of 10-12 times per minute. Functional stress on the system. The lung meridian (bronchopulmonary system, vagus) is stimulated. We observe changes in the patterns associated with this meridian.

**Provoking "uncovering" unconscious tendencies**. Distraction. Discussing the problems of a client.

### Trial criteria

Background value - 100%

Load value - x%

Difference = 100% - x% = reactivity

Criteria - appearance of reproducible pathologic patterns, energy change by 15%.

Minus 15% and more - decrease (hypoergic variant of reactivity).

Plus 15% and more - increase (hyperergic variant of reaction).

### Conditions to obtain correct data

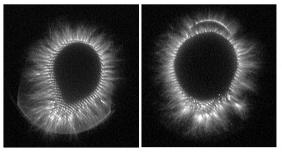
- Calibration should preferably be performed and applied on the day of the survey in the place where you conduct the survey. It is obligatory to carry out calibration at the change of conditions - another room, change of

computer, sudden change of weather conditions: more than 5% of relative humidity or five degrees in temperature

- No electronic watches, rings (except for rings that are not removed at night), or other metal objects on the subject's hands.
- The subject does not have a pacemaker (We have experience examining people with pacemakers, but this is a general requirement of regulatory agencies).
- To take readings not earlier than 2 hours after taking a meal, without the influence of alcohol, sex, or strong medications. It is desirable to satisfy the natural needs of the body before study.
- Do not be wash hands immediately before readings.
- If the fingers are sweaty, wipe with a tissue each finger immediately before placing it on the electrode and the electrode itself after each finger.
- It is advisable for the patient to relax for 15 minutes, drink water, and sit in a relaxing environment before readings.
- For two days before, during, and two days after menstruation in women, the Bio-Well data may be severely distorted.
- In the case of long nails, mostly with Bio-Well 2.0, you may clean the picture from nail traces after taking pictures of all fingers.
- Before each measurement, the optical electrode of the Bio-Well device should be wiped.
- If unusual Bio-grams are recorded, it is necessary to repeat the measurement and ensure the results are reproducible.
- It is necessary to use a new filter to capture ten fingers of each patient's hand. Ensure the filter is placed correctly, straightened, and not crumpled during imaging.
- A circadian rhythm will result in different values recorded in the morning and evening. When measuring a patient repeatedly, always do so either in the morning or in the evening.
- Data taken at the end of the day may give skewed information.
- Be careful when taking type IV images the presence of mental states does not allow sector analysis.
- When taking pictures of small children, people in a coma, or very old, remove the finger insert, take the subject's finger with your fingers, and place it on the electrode. Cover the device with a dark cloth and take the picture. Repeat for each finger.

### Proper placement of fingers on the electrode

Try to keep the inscribed ellipse as close to a circle as possible and the finger as close to the center of the electrode as possible (this is your guarantee of correct finger placement and more accurate analysis). Look at possible errors:



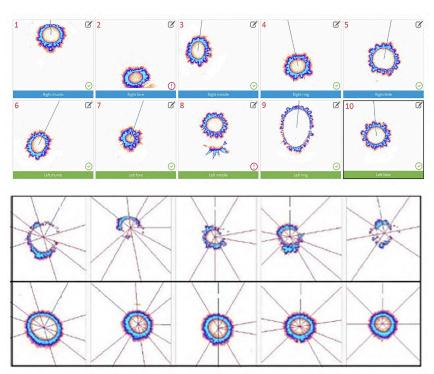
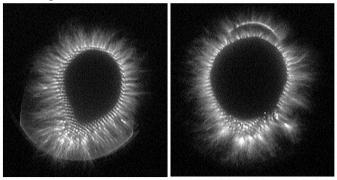


Fig. 39. Errors in taking pictures.

1 - the finger is too high (part of the glow is cut off); 2 - the finger is too low (there is a reflection from the walls, and the nail is visible); 3 - the finger is slanted to the side; 4 - the nail touches the electrode; 5 - excessive pressure on the finger (the inscribed circle is too large); 6 - the finger is rotated (the program cannot even correctly identify the top of the finger); 7 - insufficient pressure; 8 - external light that needs to be removed (to edit

the image, click the pencil icon in the upper right corner of the image); 9 - the finger is flat, touching the entire phalanx; 10 - ideal position. Try to have all 10 Bio-grams look like No10.



Important! When scanning, the vertical line defines the position of the ellipse and, accordingly, the division into sectors. If you are sure that your finger is placed correctly, but the ellipse deviates from the vertical, its position can be corrected for all images by pressing the button next to the "Analyze" button or for an individual image in the "Correction" mode.

### Using filter

Without a filter, we get Bio-grams that are related to the psycho-emotional state of a person, i.e., they depend on the psyche and, naturally, for some people, can change every current moment. With a filter, we get Bio-grams that reveal only physical, somatic states. So, when we want to ensure the influence of psyche and emotional state on the Energy of this particular person, we look without a filter and then repeat the scanning with a filter. Thus, we reveal the contribution of the psycho-emotional component.

# PART 3. BIO-WELL ACCESSORIES Sputnik device

ww.sputnik.bio-well.com.

The Energy Environment sensor (EES) "Sputnik" is designed for the following measurements:

- Energy Active Zones;
- Historical Places, Ancient Monuments;
- Meditation;
- Influence of different devices on the environment.

EES Sputnik works with the Bio-Well device by connecting to the jack of the metal cylinder installation

### The principle of Sputnik's operation

Bio-Well device contains a system of resonance coils of Tesla type (fig.40). When we apply short impulses of EMF to the primary coil, it stimulates the high-voltage impulses on the secondary coil, which is connected to Sputnik. Under these impulses, Sputnik emits standing electromagnetic waves in space. The signal depends on the propagation of these standing electromagnetic waves.

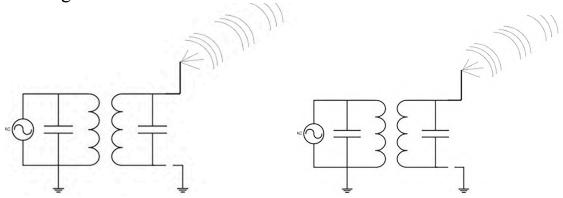


Fig. 40. The principle of Sputnik operation.

If we operate **in the room**, propagation of the EM field waves depends on the construction of the building and the presence of grounded and conductive subjects in the room.

If a person is in the room, the body is conductive, influencing the signal (fig.41).

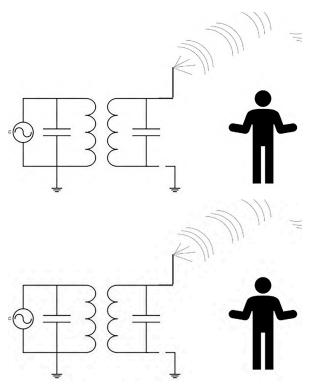


Fig.41. The principle of Sputnik operation.

If a person has some emotions or stress, it changes the ANS activity, the capillary blood circulation, and the skin conductivity, which would be reflected on the Sputnik signal. With a group of people, the changes may be even more substantial (fig.42).

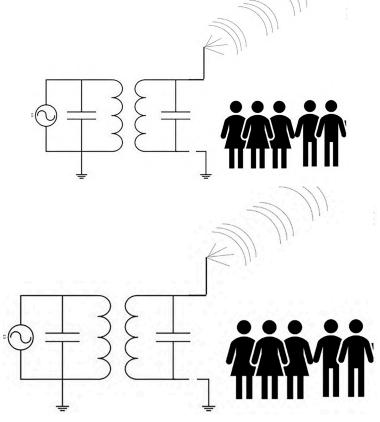


Fig.42. The principle of Sputnik operation.

If we operate **in the environment,** propagation of the EMF waves depends on the environmental conditions: amount of positive and negative ions, number of particles in the atmosphere, EM fields, conductive subjects around, etc.

### What are we measuring?

Technically, we are measuring photons emitted by the surface of a metal cylinder in the process of sliding gaseous discharge. The parameters of the discharge depend on several factors:

### Air pressure (altitude)

As you can see from the graphs of Fig. 43, at first glance, the measured Energy correlated with the altitudes. However, careful analysis demonstrates that these correlations are quite conditional. Data of measurements at the Zero meridian at the altitude of 2700 m showed higher values than subsequent measurements at 3600 m, 3000 m, and 2600 m. Also, the values at the volcanic Galapagos Islands were higher than those at

some higher altitudes. At the same time, the highest readings were recorded at the altitudes of 4000 m and 5000 m, which may be related both to the high energy of these places and to the physical properties of the gaseous discharge. The latter dependence is described by the so-called 'Paschen curve,' which demonstrates the dependence of the discharge ignition potential "U" from the gas pressure "p" and electrode size "d." Paschen curve for the air is presented in Fig. 44. As you can see from this graph for the range of atmospheric pressures under investigation (417 – 550 - 760 mm. Hg), the change of the potential "U" is not significant, and should not have a powerful influence to the data. So, we may conclude that the acquired data represented energy values in the different measured areas.

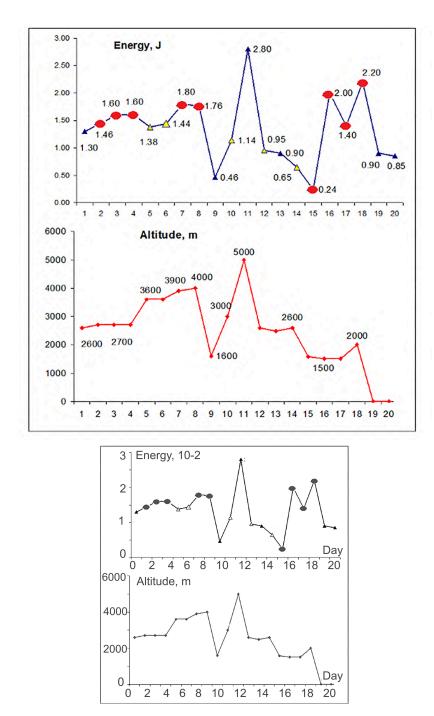
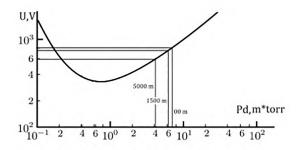


Fig.43. Energy was measured in Ecuador on different days, and the graph of the altitudes where data were collected by the red dots marked several measurements in the same area.



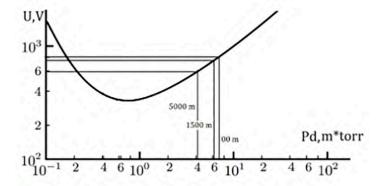


Fig.44. Paschen curve for the air

#### **Humidity**

The Bio-Well settings, and therefore the Sputnik signal, are dependent on humidity, and if the humidity is outside the standard parameters of 35-70% it can affect the finger measurement. As an example, we present results of the measurements at humidity above 80% (Fig. 45). As can be seen from the figure, the image became more jagged, resulting in higher stress level parameters. At high humidity, the stress level measured by the Bio-Well device is invalid, but humidity has almost no effect on the energy level.

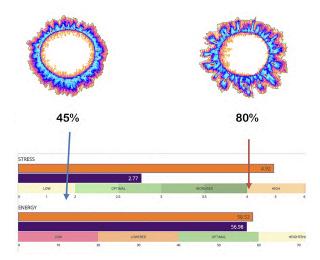


Fig.45. Bio-grams of the same person and comparison of parameters at different humidity.

Another example is the measurement in the mountains, where the humidity varied greatly during the day, from 20 to 60%, depending on the wind direction. This affected the measurements and in some places the energy values were incorrect, even after recalibration.

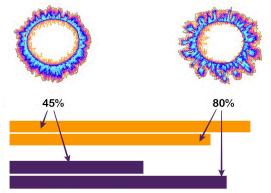
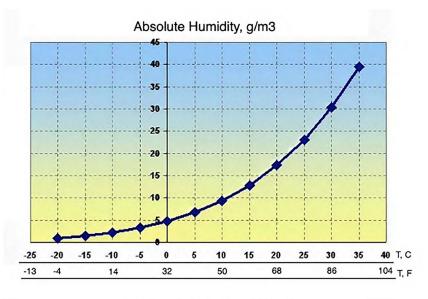


Fig.45. Bio-grams of the same person and comparison of parameters at different humidity.

In all such cases, we recommend that the fan be switched on during measurements. We guarantee the accuracy of measurements of human fingers parameters in the range of 35-70%. Measurement errors are possible for other humidity parameters, as well as at extreme temperatures.

Humidity depends on the temperature (fig.46) – the higher the temperature, the more water molecules contain in the air.



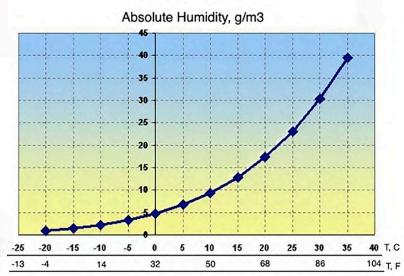


Fig.46. Humidity dependence on temperature.

Sputnik measurements after calibration depend on humidity (fig.47), so in 2023, we began production of a little sensor for measuring humidity and temperature (fig.48). We recommend using this sensor with the Sputnik sensor and recording humidity with your data.

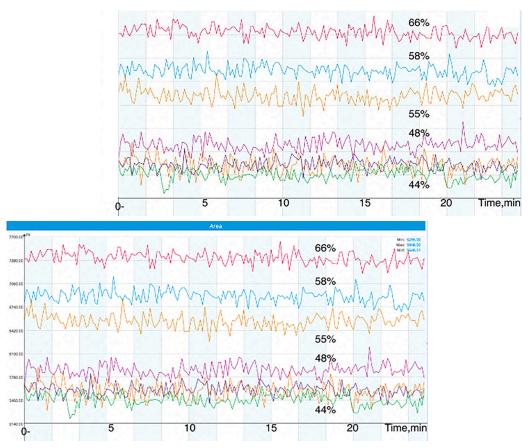


Fig.47. Measurements with Sputnik sensor on different days at the same place in Greece. Numbers show the level of humidity.

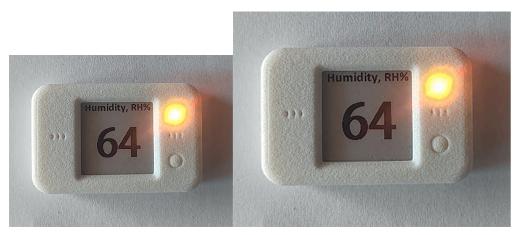


Fig.48. Bio-Well humidity meter.

## Composition of gases in the atmosphere.

Gaseous discharge depends on the composition of different gases in the atmosphere. This factor is impossible to evaluate without spectroscopic

measurements, but we must remember that strong emanations of technical or natural gases will affect Sputnik data.

#### **Procedure of Sputnik measurements**

In all cases, we first do calibration – online or offline.

#### **Environment measurements**

The aim of the environment measurements is to compare parameters at the particular area with parameters of other locations. Usually, we take readings in the morning at the hotel and then in the area of interest not far away. For example, you may compare readings near and far from the pyramid. If you need to measure some territory, you have to make a plan (a map) of the territory and take measurements at some cardinal points.

We can use two modes of measurement:

- Sputnik measurement in the Environment mode.
- Sputnik measurement in One Finger mode 50 times.

In the Environment mode, the recommended time of measurements is more than 15 minutes. This allows us to calculate the graph of the Activity Level of the Environment (fig.49). Later on, we'll discuss how to get this graph.

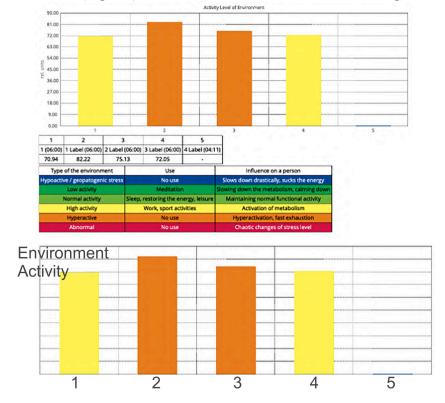


Fig. 49. The graph of the Activity Level of the Environment.

If you do not have time, take Sputnik measurement in One Finger mode 50 times. This is particularly recommended when you have to do a lot of measurements at some territory or in the house.

# Meditation measurements and detecting the effect of different devices on the environment.

In this case, you need background measurement for at least 10 minutes, and only then start measuring the influence.

#### Parameters for analysis

The main parameters we are taking into consideration are:

- Area
- Energy
- Area Standard Deviation
- Entropy

**Area** (S) is proportional to the number of photons a metal cylinder emits.

**Energy** (E) is the evaluation of the Energy in Joules. The equation for the Energy in the Bio-Well case may be presented as follows:

$$E(J) = S*I*4*10^{-8}$$

Where I is relative intensity.

Due to different scales, Energy is usually less sensitive than Area, so you must see which parameter to choose to reflect your process better.

**Area Standard Deviation** is characteristic of signal variation. It is a significant parameter, as it shows signal stability, reflecting the environment's stability. From this parameter, we calculate the **Activity Level of the Environment** parameter.

#### **Entropy (Shannon entropy)**

Shannon (informational) entropy measures a change of information in some process. We calculate it as follows:

For the first 120 points, we calculate the coefficient K, which is considered to be the standard deviation of the area at these 120 points.

2. Then, we calculate this coefficient in the sliding window regime:

we calculate the coefficient S for each new point, considering the standard deviation of the last 20 points.

The entropy is equal: Entropy = (1.0 - (K/S)) \* 100.0

#### **Data processing**

As a result of measurement in the Environment mode, you receive graphs of the parameters' time dynamics (fig.50).



Fig. 50. Graphs of parameters time dynamics.

On the Y scale, you see the absolute time from the beginning of the experiment and the time in the place of measurements. Please remember that we remove data from the first three minutes; we need this time for the sensor to adjust to the environmental conditions.

A simple way of processing is to press button **Analysis**. You will see the graphs of parameters averaged every 25 seconds (fig.51).

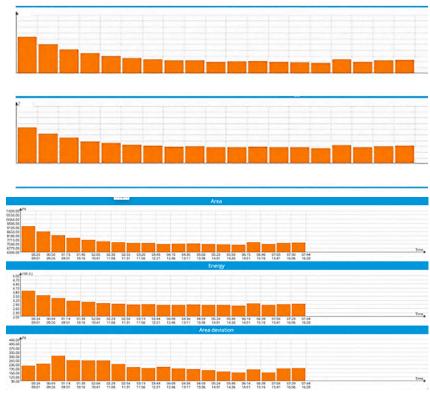


Fig.51. Results of **Analysis** processing.

This way of processing makes sense if your experiment lasts for some time. We can use a more sophisticated way of analysis by pressing the button **Statistics**. A new screen will appear (fig.52). You need to add **label intervals** by pressing the button in the left upper corner.



Fig.52. Statistical analysis screen.

The interval depends on the total time of the experiment: for example, if your experiment lasted 7 minutes, you may choose a 1-minute interval; if your experiment lasted 5 hours – 300 minutes. you may choose a 10-minute interval, The graphs of the activity level of the environment are calculated based on the area standard deviation at 360 points of measurement. If we measure with a 1-second interval, we need 6-minute label **intervals** to get this parameter (fig.53). With a 3-minute interval, we need 18 minutes, and so on. We recommend you add the first label at the beginning of measurements by pressing the right mouse button at the beginning of a scale.



Fig.53. Statistical analysis screen.

By pressing **close**, you will see the graphs with added intervals (fig.54).

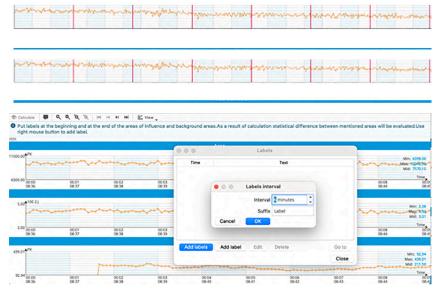


Fig.53. Statistical analysis screen.





Fig.54. Statistical analysis screen with embedded intervals.

After introducing labels, press the Calculate button to receive a screen of parameters (fig.55).

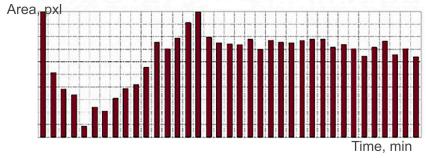


Fig.55. Statistical analysis screen of the Area parameter.

Every bar shows parameters averaged on selected intervals. You may see all the parameters: Area, Intensity, Energy, Area Standard Deviation, and, in case of appropriate intervals, the **Activity Level of the Environment** screen (fig.56).

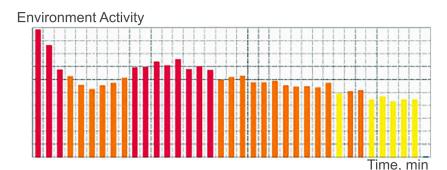


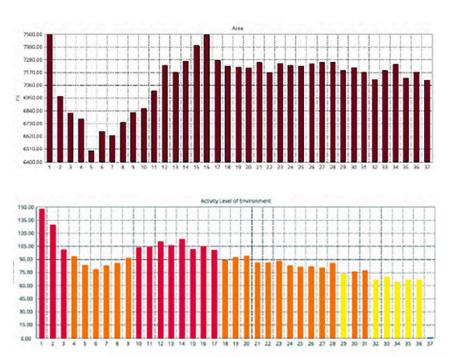
Fig. 56. Graph of the Environmental Activity.

Under every graph, you see a statistical comparison of two adjusting intervals with parametric and non-parametric analysis.

Based on many years of experiments, we defined how environmental conditions may influence the human state (Table 2): places with very high variation of parameters may negatively affect the human condition.

Table 2. The Environmental Activity Levels

Type of the environment	Influence on person	Unitts
Hypoactive	Slows down, sucks the energy	< 25
Low activity	Slow down, calming / meditation mode	26-40
Normal activity	Everyday activity	41-55
High activity	Metabolism activation, sport, business	56-75
Hyperactive	Hyperactivation	76-100
Abnormal	Stressful influence	> 100



Type of the environment	Use // Influence on a person	Activity Level of Environment, rel. units
Hypoactive / geopathogenic stress	No use // Slows down drastically, sucks the energy	< 25
Low activity.	Meditation // Slowing down the metabolism, calming down	26-40
Normal activity	Sleep, restoring the energy, leisure // Maintaining normal functional activity	41-55
High activity	Work, sport activities // Activation of metabolism	56-75
Hyperactive	No use // Hyperactivation, fast exhaustion	76-100
Abnormal	No use // Chaotic changes of stress level	> 100

For example, we present two meditation cases below (fig.57).

In these cases, Sputnik ran in environment mode for 30 minutes, and then people started meditating. This approach leaves no doubt that the change in Sputnik signal was due to meditation.

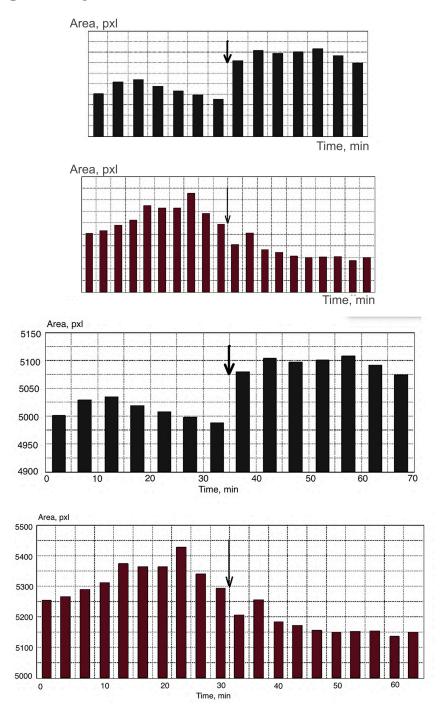
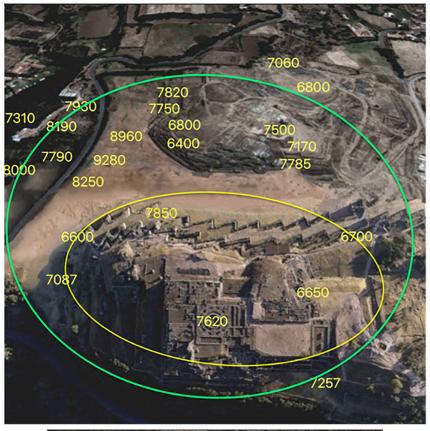


Fig.57. Examples of recording meditation (an arrow marks the beginning of meditation).

In these cases, Sputnik ran in environment mode for 30 minutes, and then people started meditating. This approach leaves no doubt that the change in Sputnik signal was due to meditation.

Another example is measurements at the Sacsayhuaman site near Cusco, Peru, performed together with Prof. D. Galitskii. Sacsayhuaman, on par with Machu Picchu, is the most famous visited ancient monument in Peru. We measured for three days in July and one day in November 2018. All data correlated well. On different days, the humidity changed from 36 to 33%; the temperature was 19 +/-1 C. During the last measurement, it was raining, and in the evening, it got cold. As seen in Fig. 58, we can conditionally distinguish zones that differ in the magnitude of the signal. Note that the measurements were carried out for three days, and all the results were well-matched for the presented scheme. The results suggest the presence of a geo-active zone in the area with the strongest signal. As we can see, this area embraced the space in front of the fortress, which, as is known from historical evidence, was used for mass ceremonies. At Sacsaywaman, the parameter of Environmental Activity had low values, which indicates a favorable energy environment for people.

The values of the averaged parameters measured at several ancient sacral sites and in the hotel differ significantly (Fig.59). The height of the places varied from 3550 m in Cusco to 3700 m in Tambomachay, which could not affect the results of measurements, weather conditions also did not change significantly. The distance between all places does not exceed several kilometers. So, we may conclude that these data suggest the existence of a particular energy at the ancient sites. Similar results were received measuring the Energy of pyramids (see paper at www.iumab.club).



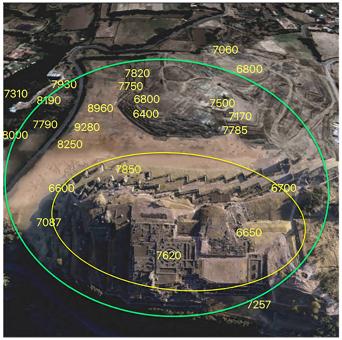


Fig.58. Averaged Area data in different places of Sacsayhuaman site in Peru.

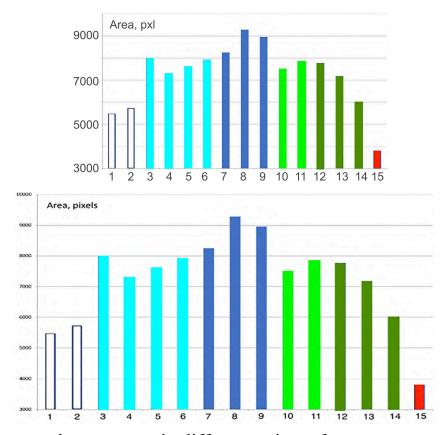


Fig. 59. Averaged parameters in different points of measurement. 1 – Nazca hotel; 2 – Nazca cave; 3-6 – near Sacsaywaman; 7-9 – Sacsaywaman; 10-11 – Tambomachay; 12-14 – Qenco; 15 – Cusco hotel.

#### Comparison of several measurements

After comparing several measurements from the Environment mode, you will receive the following screen (fig.60). For example, we present data from our measurements in Belize.

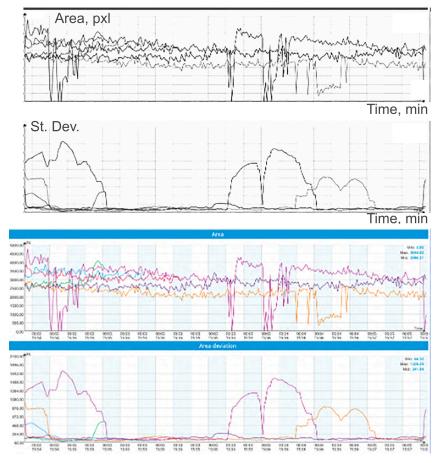


Fig.60. Compare screen.

It may be difficult to evaluate the difference between measurements from this graph, so we press the button **Charts** and get the following screen (fig.61).

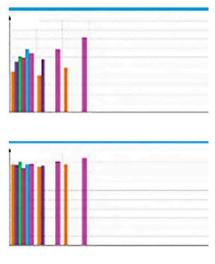




Fig.61. Charts screen in Compare mode.

We may use one more way of data processing. If you press the button **Cloud**, you will get a graph presenting selected parameters with variations of its data (fig.62). The wider the cloud of dots, the higher the variation.

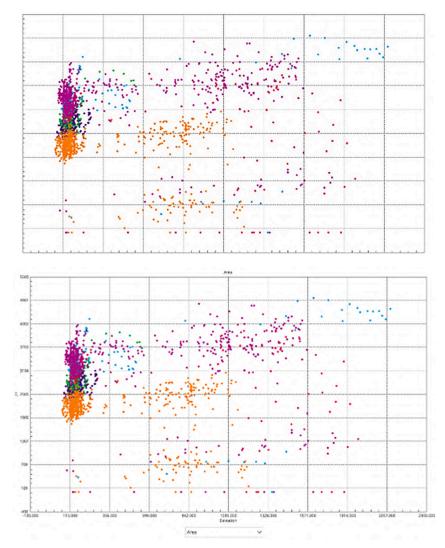


Fig.62. Cloud graph in Compare mode.

If we have taken measurements in **One Finger mode, the Compare** screen looks as follows (fig.63). We see the difference in different measurements. The comparison becomes more apparent if we press the Analysis button (fig.64).

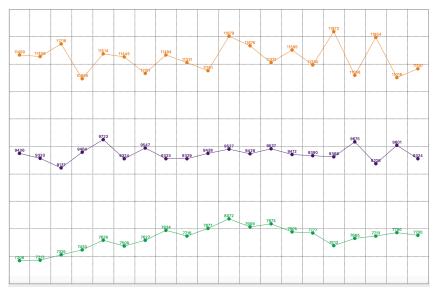
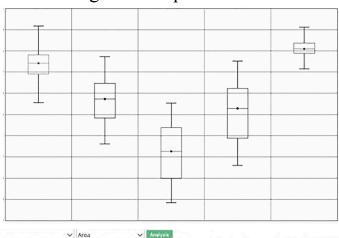


Fig.63. Compare screen.



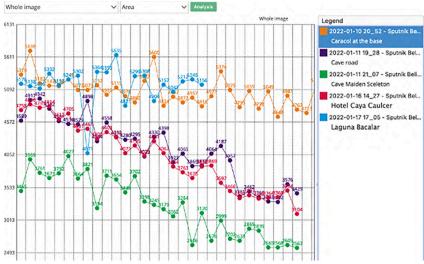


Fig.65. Compare screen.

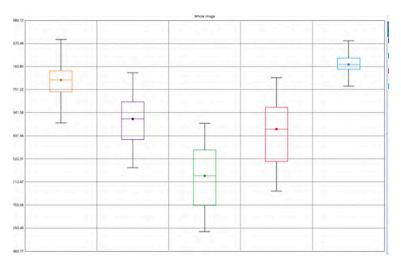
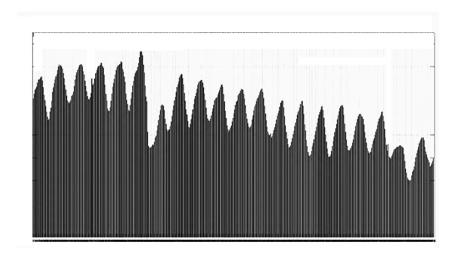


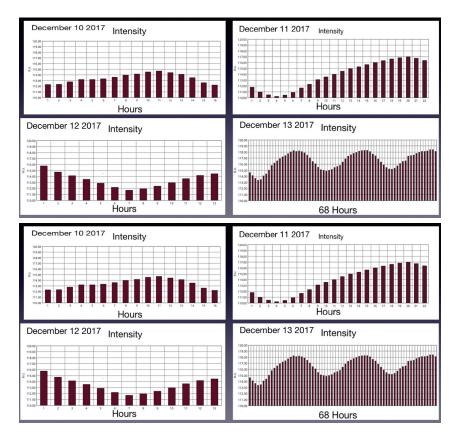
Fig.64. Compare screen in Analysis mode.

Every bar defines the standard deviation from the average defined by a horizontal line. Whiskers show max and min. Two data sets have statistical differences if their averaged values are different. If the boundaries of bars intercept, they are different but not so strong. In this graph, data for Cave Road and Hotel Caya Caulcer have no difference; all other data differ from each other.

#### **Influence of different devices**

The measurement principle is the same as in the case of meditation: you measure background as long as possible and then turn on the device. An interesting method was developed by our colleagues Adolfo Rodriguez and Marcela Torres (www.sputnik.bio-well.com, www.iumab.club). They've measured near the Torus Resonator developed by a physicist, Nassim Huramain, in the USA. Bio-Well was running offline from December 2017 till January 2019, practically non-stop. In a long-time measurement, a regular sinusoidal pattern was detected (fig. 65). It may be interpreted as a harmonization of the environmental Energy under the influence of Torus Resonator. Peaks corresponded to the middle of the day but not to some particular hour.





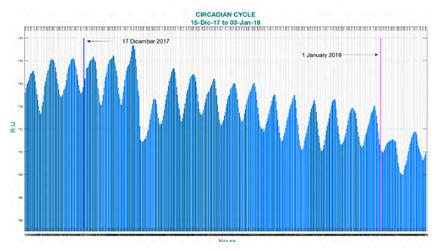


Fig.67. Circadian pattern of Energy detected near the Torus Resonator

#### Conclusion

This short description is not a Manual – you can find one at Bio-Well.com. All the programs have many convenient features, like saving images, exporting to CSV, Reports, etc. We suggest you use all Bio-Well programs, and then you will soon become an experienced master.

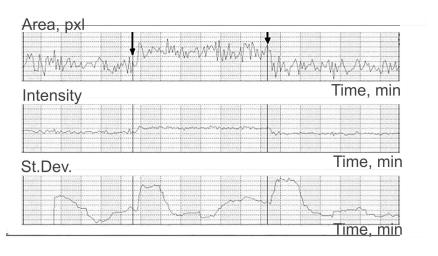
Good luck!

#### Fluid Research

The Water Bio-Well platinum electrode is designed to compare several different liquids. (e.g., initial and post-structuring water) and to determine the effect of various devices and mental practices on water.

Place the Bio-Well electrode in water and connect it to the connector of the calibration cylinder. Conduct a luminescence dynamics survey in the Environment mode.

During the survey, once the readings have stabilized, you can apply various influences (instrumentation or mental influence) to the water, marking these moments with labels. Below is an example.



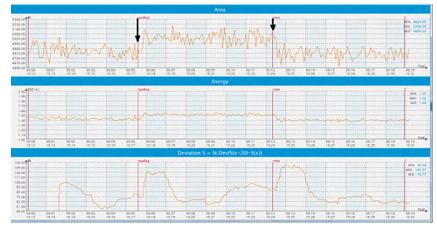


Fig.68. Time-dynamics of the parameters with external influence.

### Bio-Well glove

The glove is made of a particular conductive fabric, which allows contact with all biologically active points of the hand. Bio-Well glove is used when removing the signal from a person for a long time. In the "One Finger" mode, it is recommended to shoot no more than ten frames. Then, the signal may change due to the natural shaking of the finger. With the glove, a person can stay indefinitely without discomfort.

The glove is connected to the calibration cylinder, and the scanning is done in "Ambient" mode.

We used the glove to record a person's reaction to a piece of music or a movie and evaluate the individual meditation process.

After each use, the glove can be washed in warm water.

#### BioCor device

The BioCor device is designed to correct the user's energy state and reduce stress levels through music therapy and extremely high frequency (EHF) signals combined. Individual music files are created in the Bio-Well device in Chakra mode by converting the measured signal of the user's frequencies. These frequencies are fed to the BioCor device and used to modulate the EHF signal.

The headphone transmitter works cyclically. 1 min active mode (there is EHF radiation), then 1 min passive mode (no EHF), then the cycle repeats. The device will automatically turn off when the melody stops. If there is no melody, the device will not turn on.

The device uses frequencies 4.9 mm (60.12 GHz), 5.6 m (53.53 GHz), and 7.1 mm (42.19 GHz) of extremely low intensity: less than ten mW/cm2).

Exposure to the BioCor signal is safe for people of any age with any health condition. Using music files generated by the Bio-Well device, it is recommended to use BioCor signal therapy at least once a day, preferably in the evening before going to bed. In this way, individualized correction of the condition and reduction of stress levels is achieved. The result of the treatment can be checked by taking measurements on the Bio-Well device. After eight days, performing a Bio-Well measurement and creating new music files is recommended.



Fig.69. BioCor device with headphones and in the mode of water structuring.

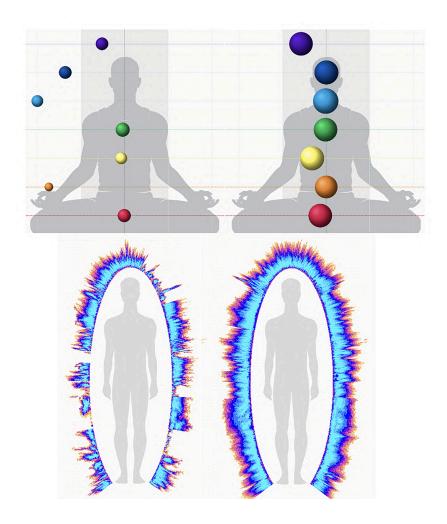
#### **Principles of EHF therapy**

In the 40s in the US, scientists established that there are so-called windows of biological transparency in the spectrum of electromagnetic waves; that is, waves of a specific frequency, when exposed to the body, give a pronounced biological effect. There are two such windows:

- 1 infra-low frequency waves 8 10 Hz, and
- 2 EHF waves of a millimeter range of extremely high frequency 30 100 GHz.

The first waves form the main background of the Earth's ionosphere; they adversely affect the body. EHF waves transfer resonance information for the cells and regulate processes at the cellular level. As a result of EHF exposure, the immune status of the body normalizes, antioxidant status increases, local tissue repair improves, as well as speed of wounds and ulcers healing. In the Soviet Union, extensive studies were conducted on the principles and medical applications of EHF therapy. Academician N.D. Devyatkov headed them at the Institute of Radio Engineering and

Electronics of the Russian Academy of Sciences. A review of the work is published in Russian in a special issue of the journal "Biomedical Technologies and Radioelectronics" No. 8, 2004.



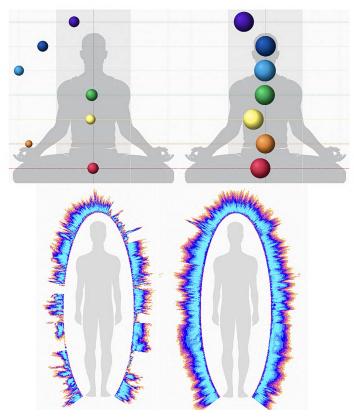


Fig. 70. Example of a single application of the BioCor device.

In a special study anxiety level for a group of 60 participants was studied with the Mood Mapping Profile Questionnaire and Bio-Well technology. Then the group was randomly selected to two parts: 30 people had 10 minutes BioCor session, while other 30 participants (control group) were resting for 10 minutes. All subjects from the experimental group demonstrated better mood state parameters, their stress coefficient dropped down significantly, while in control group no changes were found. [Korotkov K. The combined effect of music and frequency therapy from the BioCor device on stress level in humans. *Int J Complement Alt Med.* 2020;13(2):69-72. DOI: 10.15406/ijcam.2020.13.00495]

#### Bio-Well Element device

The Bio-Well Element device is designed to process optical radiation from water, liquids, biological and non-biological objects stimulated by electromagnetic field pulses.

The device is connected to a computer via a USB port and exchanges data with the computer via a USB port. But it receives power from an external 12 V power supply unit. The device works with special Bio-Well Element software. In the program, you can change the power of the pulse applied to the optical lens and several other parameters. The size of the working area is 9 x 12 cm (4.8 x 3.6 feet). The Bio-Well Element comes with several accessories for different studies.

The instrument allows you to take short video clips.



Figure 71. Bio-Well Element with an open cover.



Figure 71. Bio-Well Element with an open cov



Figure 72. Bio-Well Element with water study device.

#### Some applications of the Bio-Well Element device

The high degree of informativeness of the method of dynamic electrophoton imaging applied to the study of liquid-phase objects was first demonstrated in the study of luminescence of microbiological cultures [1], blood of healthy people and cancer patients [2], blood reaction to allergens [3], homeopathic remedies of 30C potency [4] and very low concentrations of various salts [5]. Differences between the luminescence parameters of NaCl, KCl, NaNO3, and KNO3 solutions and distilled water were observed up to dilution 2-15; however, the dynamic trends of dilution 2-15 and distilled water still had different directions. Luminescence studies of natural

and synthetic essential oils with identical chemical compositions showed statistical [6,7] differences between oils obtained by natural and synthetic processes and organic and conventional oils. An interesting application is the detection of water response to the directed mental influence of humans [8].

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#### Bio-Well Mini device

Bio-Well is preparing to release a new device, BW Mini, in 2024, which works with cell phones via Bluetooth. The programs work on Apple and Android phones. The device is intended for mass use, so the number of programs on the phone is limited.



Fig.73. Bio-Well mini

# Parameters of the Bio-grams

The standard image processing application packages cannot be used to process Bio-grams because the tasks are specific. Therefore, we developed a software environment for processing and analyzing Bio-grams oriented towards the work in different problem domains. Adaptations for particular assessments are performed through a combination of optimal operations from the library for the given problem domain, the selection of corresponding procedures, and (or) the selection of optimal threshold values. The following main algorithms are included in the library: (1.) Initial image processing, (2.) Calculation of the main parameters of the image, (3.) Calculation of the parameters of calibration images and (4.) Calculation of derived parameters. The original image obtained from the Bio-Well camera has a rectangular shape and an 8-bit format. Each pixel is represented by one byte, which contains the intensity value from 0 to 255. The initial processing of the image is noise filtering, the calculation of area and intensity, and the determination of the position of the inscribed ellipse.

#### Stages of image filtering:

Calculating the image spectrum.

The spectrum represents the distribution of the number of pixels per intensity unit. The spectrum determines the threshold level of noise clipping. When removing noise pixels, we delete all the points for which the intensity is less than the noise level. Then, the image is divided into related fragments. A bound fragment, neighboring pixels adjacent to each other vertically or horizontally, is considered a portion of the image. Further, the portions of the image in which the area is less than 30 pixels are removed. As a result, we get a filtered image. Simultaneously, when the filtering basic parameters are calculated, namely: Image area (S) - number of pixels with intensity higher than 0. The total intensity of the image (I) - the sum of the intensities of all the pixels in the image. The average intensity of the image ICP = I / S The approximate position of the inscribed ellipse. Its coordinates are calculated as the center of mass:

$$CX = (\Sigma Xi)/S$$
,  $CY = (\Sigma Yi)/S$ ,

where X and Y - the coordinates of the points, and S - area of the image.

## Calculating the image contours

From the preliminary center of the ellipse, rays are emitted over the entire circumference with a step of 1°. The first intersection with the point at which the intensity is greater than the average (Icp) is considered the first point of the inner contour, and the outer contour point is considered the last point with an intensity greater than 0. (Ray may not have intersections.) The Brezenham algorithm calculates the coordinates of the beam. Further, if the beams do not have any intersection points, the missing dots of the internal contour are computed as the average of two adjacent dots. This is necessary to obtain an internal contour consisting of 360 points. After this, the smoothing of the inner contour on 15 points is carried out as the arithmetic average of the sum.

# Calculation of the parameters and the orientation of the inscribed ellipse

The internal contour is used to calculate the parameters and the orientation of the inscribed ellipse. A detailed description of the calculation algorithm can be found here:

http://research.microsoft.com/pubs/67845/ellipse-pami.pdf

The result of the algorithm is the coordinates of the center of the ellipse CX, CY; the axis of the ellipse Axis A, Axis B; and the angle of rotation of the ellipse Theta.

### **Splitting into sectors**

For each finger, there is a sector partition. Each sector is given by its angular coordinates with the origin from the vertical axis of the inscribed ellipse. The sector's numeration goes counterclockwise.

For each sector, together with the area and intensity, the following parameters are calculated:

The standard deviation of the area,

The standard deviation of intensity,

The standard deviation of the radius of the inner contour, an example is for the thumb of the right hand:

### Pseudo-coloring.

For visual estimation of the image, there are several algorithms of pseudocoloring oriented towards marking out several peculiarities of Bio-grams.

# Programs calculate the following Bio-gram parameters.

**Area** Amount of light quanta generated by the subject in computer units – pixels (the number of pixels in the image having brightness above the threshold).

**Normalized area:** The ratio of the Bio-gram area to the inner oval area. This parameter allows the comparison of Bio-grams of people with fingers of different sizes.

**Intensity** Averaged of the spectrum for the particular Bio- gram.

**Form Coefficient** Is calculated according to the formula:

$$FC = aL^2/S$$
,

where L is the length of the Bio-gram external contour, and S is the Bio-gram area, characteristic of the complexity of the contour of the image.

Inner noise Amount of light in the inner contour of the Bio-gram.

**The energy of light** is evaluated in accordance with the following principles. The sensitivity of a CCD element was evaluated in [http://ellphi.lebedev.ru/20/pdf18.pdf] as follows:

$$W = E /_S = P \times t \times T/_S.$$

where W – relative Energy of a light source [J/cm2]; E –energy of a light source [J]; s – illuminated area of a CCD element [cm2]; P – power of a light source [Wt]; t – exposure time [sec]; T – filter coefficient.

For  $\lambda = 424$  nm, the sensitivity of the CCD element was experimentally evaluated as  $4*10^{-10}$  J/cm<sup>2</sup>, and it was increased with decreasing wavelength. This parameter depends on the type of CCD and optical system being used. So, we have made an experimental evaluation of the Bio-Well instrument using a standard lamp with tungsten filament having power P = 10 W with a relatively uniform illumination field. For this lamp, the lighting

area in Bio-Well programs was S = 61000 pxl with intensity specter (J) from 55 to 255 with a max at 160 and an average of 220. From this, the equivalent power of the light source may be evaluated as follows:

$$P(W) = S*I*10/61000*200 = S*I*8*10-7$$

Bio-gram of a healthy person may have parameters S = 10000 pxl, I = 80 => P = 640 mW. Bio-gram of an unhealthy person may have parameters S = 4000 pxl, I = 60 => P = 19 mW. Energy E(J) = P(W) \* t(s). For impulses with  $t = 10^{-4}$  s following with frequency 1000 Hz for 0.5 s the signal accumulation time at the CCD element equals  $5*10^{-2}$  s, from this  $E = 5*10^{-2}$  P. In the abovementioned cases, it will be  $3.2*10^{-4}$  J and  $9.5*10^{-5}$  J accordingly. The equation for the Energy of Illumination in the Bio-Well case may be presented as follows:

$$E(J) = S*I*4*10-8$$

Using this equation, we may present both the results of Bio-grams processing and the dynamic data in the units of the Energy of Illumination.

**Energy Reserve** - Parameter Energy Reserve is calculated using data from the Health Diagram and Energy Diagram as follows:

$$ER (\%\%) = \Sigma(JSk/JSkn + Ek/Ekn)$$

where JSk is an integral area of the particular sector; JSkn is an integral area of this sector for optimal health level; En is the energy of the particular sector; Ekn is the energy of this sector for optimal health level. We sum up all the sectors.

In the Health Diagram, the optimal level corresponds to zero JS parameter, so it may take both positive and negative values, while Energy is always positive.

Stress Level, we calculate as follows:

Stress = sumR + sumL + | sumR - sumL |;

where sum R - is the variability of all the areas of the right finger; sum L - is the variability of the left finger's total area.

These amounts change from zero to one. One is taken as 100%. And if stress is > 10, then it is equal to 10.

# Scientific research with the Bio-Well device

The very first GDV device, released in 1995, attracted the attention of researchers. This was because many people were fond of Kirlian photographs, and GDV organically continued this line on a new level. Since then, many studies have been carried out in different countries. Many published papers can be downloaded at **www.iumab.club** and **www.sputnik.bio-well.com.** More than 30 PhD dissertations in medicine, psychology, and technical sciences have been defended in Russia and other countries. Many of them can be found at www.iumab.club. There, you can also find works on various applications:

- Medicine.
- Psychology.
- Body reactions to exercises, procedures, mental training, etc.
- Sports.
- Consciousness research.
- Studies of geo-active zones, ancient structures, and the influence of consciousness on space.
- Research of liquids and various objects.

## Principles of research organization

In modern medicine, it is customary to distinguish several types of scientific research:

Case Reports (CR): articles describing interesting clinical cases or experiments. (Treatment effects or before-after effects).

Case series (CS): articles that report on more than two cases observed in practice.

**Cohort studies** (CO): small studies with the explicit purpose of protocol development or feasibility studies or studies their authors have identified as "pilot studies." Single group interventions: pre-experimental studies conducted under controlled conditions.

**Systematic Review Report** (SRR): articles that statistically analyze the results of a study over a long period by a single group.

Randomized controlled trial (RCT): studies using random assignment to treatment groups and intergroup comparisons. This class includes studies

that use comparisons between placebo and experimental groups and studies that use comparisons between treatments.

This means that a group of people of similar age, who are practically healthy or belong to the same nosology, is selected. An initial examination is carried out. Then, the group is randomly divided in half. The experimental group receives the actual treatment or intervention; the control group receives a placebo. Participants are not supposed to know which group they belong to. After a certain period, a second examination is carried out, and the results are analyzed.

Randomized studies are the basis of evidence-based medicine. Quite a lot of randomized studies have been conducted using the GDV method. The published data were analyzed in the review of works performed in 2008-2018 [23] (Table). Similar figures were given in the analysis for 2003-2008 [24]. Thus, we can assert that the GDV method is part of evidence-based medicine and can be used in clinical trials.

Table. Analysis of works performed in 2008-2018 [23].

Type	Clinical	Psychology	Total
RCT	16	3	19
SRR	12	1	13
СО	12	11	23
CS	4	5	9
CR		10	10
Total	44	30	74

Similar principles can be applied to research in fields other than medicine. We recommend the following principles for organizing research:

- Use several methods in parallel. We mainly use the heart rate variability (HRV) method with Bio-Well, psychological and cognitive tests, and blood and saliva tests if necessary. Blood pressure and pulse rate are measured. When examining athletes, their level of training on simulators is tested.
- The composition of the groups should be sufficient for statistical analysis. A minimum of 20 people in each group. The more, the better.

- It is necessary to pay attention to gender composition. We have repeatedly seen that men and women demonstrate different results in many experiments. It is optimal to have only one or the other, or at least an equal number in each group.
- Take into account the health status of the subjects and their clinical history: chronic diseases, recent problems (such as COVID-19), and medications taken.
- If we want to test the effect of some factor (drugs, devices, structured water, etc.), we need to monitor the response over at least a month, preferably three. Naturally, we conduct tests at the beginning and the end of the period.
- In statistical processing, choose the best method, considering the nature of the data: parametric or non-parametric. Look at different parameters and choose the most adequate one. Sometimes, it is Energy, sometimes, it is Area, it is essential to consider the variability of the data. Bio-Well programs offer many parameters, most of which are independent. All parameters are grouped in a CSV file, the composition of which can be selected.
- In Bio-Well programs, we use the European notation system: decimals are separated by a comma. In the USA, a dot is used for this purpose.
- Before conducting research, it is first of all necessary to develop a research protocol considering all the details. We are ready to help at this stage please contact us.
- Publication of results is an essential part of scientific work. There are many online peer-reviewed journals now, and published articles are easily accessible, although the ranking of such journals may not be very high, and publications are paid for. Choose according to your capabilities.

## Bio-Well in Medicine

One of the key applications of the Bio-Well is the integrative medicine. Hundreds research papers have been published, and systematic review of these papers done by several teams [1-7]. These data suggest that informatics based upon biofield measurement devices such as the GDV may help gain a more profound understanding of disease states and guide practitioners and their patients towards states of greater wellness. All the authors conclude that GDV method is an important tool for the biofield science.

The main conclusions of Bista S. et al. [6] were as follows. Though more studies with a robust methodology are needed to make definitive conclusions, the current literature review suggests a potential clinical role for GDV in diagnosing and monitoring patients suffering from various disorders, especially those related to endocrine and immune systems, and for assessing the wellness of healthy subjects. GDV may also help monitor the effects of ultrasensitive interventions, such as yoga, pranayama and meditation, acupuncture, qigong, music therapy, and massage. Values of GDV variables outside a defined range indicate a disturbance in homeostasis that may predispose people to different disorders. The interventions should bring the variables' values back to a normal range. Applications in Health. GDV and gender differences. Correlation with neuroendocrinological variables. Correlation with heart rate variability (HRV) and electroencephalography (EEG). Applications to Monitor the Effects of Interventions. Massage and osteopathic treatments and neurophysiological rehabilitation. Acupuncture. Dietary interventions. Music therapy. Meditation and other yogic practices.

The monograph [7] published by a big team highlights the results of clinical-physiological studies of the relationships between gas discharge visualization (electrophotonic imaging, kirlianography) parameters, on the one hand, and electroencephalograms, heart rate variability, immunograms, phagocytosis, the content of the main adaptation hormones (cortisol, aldosterone, testosterone, triiodothyronine, calcitonin) in the blood as well as acupuncture points - on the other hand. It is shown that the GDV/EPI method reliably reflects the state of the body's neuro-endocrine-immune complex and other parameters and has the right to take its place in the

arsenal of physiological/biophysical methods. They concluded that the GDV/EPI parameters are literally woven into the fabric of the factor structure, which reflects the integral state of the organism and its changes under the influence of factors of various natures.

Therefore, both the individual parameters of bioelectrography and the bioelectrogram as a whole reflect, at least, the state of different levels of cholinergic-adrenergic regulatory effects on the cardiovascular system and their consequence - blood pressure. The parameters of GDV, on the whole, are appropriately related to the functional state, foremost, thyroid, testis, and adrenal cortex, which, in aggregate, characterize the state of adaptation and nonspecific resistibility of the organism. Momentously, the combined influence of endocrine parameters on the state of GDV considerably prevails over partial influences, which testifies on behalf of GDV as a marker of the integral state of adaptations. Among the parameters of humoral immunity, IgA was most closely related to the parameters of GDV. The canonical correlation analysis results show that the determination by the GDV parameters of humoral immunity is much stronger than cellular: 81% vs 66%. Taken together, the six Chakras positively determine phagocytosis activity by neutrophils, the most represented bacterium in the human microbiota by 38%. Generally, GDV parameters determine phagocytosis parameters by neutrophils of gram-negative and gram-positive microbes by 72%. A strong canonical correlation exists between the parameters of GDV and principal neuroendocrine factors of adaptation and parameters of leukocytogram, immunity, and phagocytosis.

The authors believe that GDV-grams reflect "the state of internal production of negative entropy." This production depends on the functional state of the organism and the flow of energy and information from the outside. The experiments of the author's laboratory showed that the entropy of the GDV-gram is an informative characteristic of the organism's state. High entropy signals chaos, and low entropy signals death. Like many of the body's parameters, entropy values must be within the range of norms. In all processes, be they physical, chemical, or biological, entropy increases. Living organisms reduce their entropy by using energy from the environment. It is said that living organisms produce negative entropy or 'neg-entropy.' When therapy is performed correctly, EPI entropy reduces.

The overall conclusion is that the GDV technique has the potential to provide early analysis and screening, especially in disorders of the endocrine and immune systems. It might also be used to assess wellness in healthy subjects and monitor the effects of interventions, such as yogaincluding pranayama and meditation, acupuncture, qigong, music therapy, and massage on the human energy system. Future studies should focus on the validation of GDV imaging in clinical settings.

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## Bio-Well in Sport

Monitoring the psychophysiological condition of athletes in the training process and during competitions is an important task for sports of the highest achievements. At the same time, athletes, as a rule, do not have time and desire to conduct long, complex tests. Therefore, the use of methods of rapid assessment of the psychophysiological state that an athlete or trainer can conduct independently is a modern necessity. The practice of work with Olympic and Paralympic teams shows that such tests must meet certain criteria:

- 1. Noninvasive.
- 2. Ease of use.
- 3. Easy interpretation of the results obtained.
- 4. Ability to be carried out in all conditions, both in the training hall and outdoors, in various weather conditions.
  - 5. Automatic saving of the received information.
  - 6. Restriction of access to stored information.

For many years GDV method have been used in Olympic and Paralympic training process. Research was done under the auspices of the Ministry of Sport of the Russian Federation. Dozens of articles, several monographs and Doctor theses have been published. The official basis for application presented sport was by the "Methodological in recommendations for the use of the method of Gas-Discharge Visualization in the non-invasive analysis of functional, psychophysiological and health status of athletes of national teams of the Russian Federation" published by Federal Research and Clinical Center for Sports Medicine.

The psychophysiological condition of athletes is measured in the morning and evening in Stress test program. This allows monitoring the circadian rhythm and taking into account the adaptation of the athlete's to the changes of the environmental conditions and training loads. Athletes have different psychophysiological parameters, so the focus is on the dynamics of their parameters over time. The high degree of correlation between the values of Bio-Well parameters and the success of competitive activity during the performances was shown [1-7]. In the process of work with the Russian Olympic and Paralympic teams the method has earned

high appreciation from coaches and athletes due to its non-invasive, simple, and informative nature.

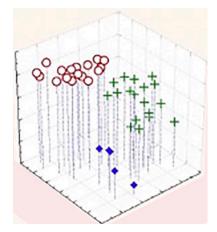
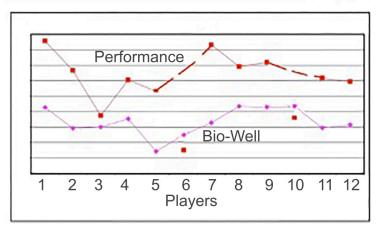
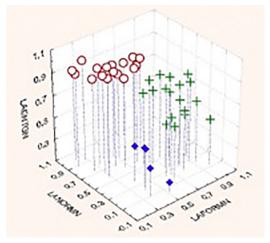


Fig.74. Computer classification of athletes in accordance with their GDV parameters and competition efficiency. Red dots – top level athletes; green crosses – middle-range athletes; blue – beginners.





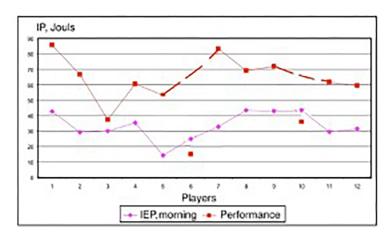


Fig.75. Compared of GDV Energy Potential with Competition Performance for 12 hockey players at World Cup in Turin [10].

The presented materials testify to the prospect of further wide introduction of the Bio-Well in sport.

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- 7. Banayan A.A., Grachev A.A., Korotkov K.G., Korotkova A.K. Prediction of competitive readiness of Paralympic athletes on the basis of assessment of circadian rhythm at sporting events by the method of GDV / Adaptive physical culture. 2016 2 66) 2-5.

## Water and Material testing with Bio-Well

The GDV method has shown high informativity for the study of various objects. Two main techniques are used: a special water electrode for the Bio-Well device, and the Bio-Well Element device, which allows to analyse the luminescence of various objects. A large number of publications can be found at **www.iumab.club**. The high degree of informativeness of the method was demonstrated by studying the luminescence of microbiological cultures [1], blood of healthy people and cancer patients [2], blood reaction to allergens [3], homeopathic remedies for potency 30C [4] and very low concentrations of various salts [5]. GDV parameters of natural and synthetic essential oils with identical chemical composition have shown statistical differences [6,7] between natural and synthetic oils, organic and conventional oils. An interesting application is the detection of the reaction of water to directed human mental influence [8].

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A lot of studies was done with Bio-Well and water electrode, the more options we have with Bio-Well Element device. As an example, we present the results of one of the studies with Bio-Well Element.

### Purpose of the study

To determine the possible effects of the Food Energizer devices on water and foodstuffs. The following food samples were investigated: apple, banana, carrot, celery, cucumber, cheese, potatoes, and sausage.

#### Food products. Organization of the study

For all types of products, 10 identical samples with a diameter of 10 mm and a thickness of 5 mm were cut with a cutter (Fig.76). For cucumber and sausage, 10 slides of equal thickness were cut from the middle part of the product. 5 samples were left on the laboratory bench and 5 samples were placed on top of the NBU&COUUFAL® Food Energizer.

Each sample was measured using the following process:

- 1. A 40 mm diameter plastic film was placed on the electrode.
- 2. The sample was placed on the film.
- 3. A sharp grounded needle touched the sample.
- 4. 10 measurements at 1 second intervals, and the data was saved as a CSV file.

This process was repeated first for 5 samples from the lab table and then for 5 samples from the food energizer. Thus, we had 50 readings for each sample type, allowing us to use Student's t-test for statistical analysis. The samples were kept in the Food Energizer from 10 (first measurement) to 15 minutes (last measurement). The process was repeated 3 times on different days. The results were comparable.

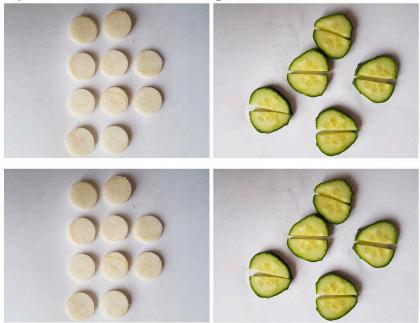


Fig. 76. Banana and Cucumber samples

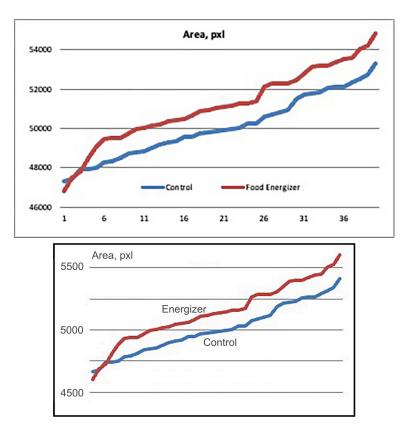


Fig.77. Apple energy parameters. X axis presents 50 test readings. Similar results were obtained for all samples except banana for which the result was non-stable.

For water samples, a statistically significant difference was also found for the suspended drop method. The fig.78 shows examples of Bio-grams.

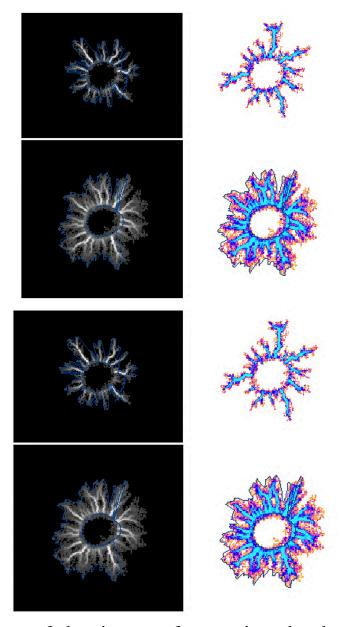


Fig.78. Comparison of glow images of non-activated and activated water.

# Environmental Study The Energy of Pyramids

Korotkov K.G. Pyramids: the impact of form on the environment. *Acta Scientific Medical Sciences* 2022, 6.5:81-85.

For centuries, people on every continent have built pyramids, many of which still stand today. Why did they do it, why was it necessary to invest so much effort and resources, and why this particular shape? Thousands of books have been written on the subject, various hypotheses have been put forward, and the pyramids attract huge numbers of tourists. Our task was to check whether the pyramids really have a special energy and whether this energy could be detected by the Sputnik sensor? Over the course of several years, we were able to visit pyramids in different parts of the world and take measurements. As shown in the previous chapter, the energy measured depends on many factors, so it makes no sense to compare results obtained in different climatic zones at different times of the year. One can only take a measurement away from the pyramid complex and compare the data with the measurement taken at the foot or top of the pyramid. It is important that there are no people near the place of measurement - their presence can affect the results.

### Teotihuacan

The place where the gods were born. The largest religious and economic center of Mesoamerica since the 2nd century AD, with a population of more than 125 thousand people. Teotihuacan's prosperity coincided with the heyday of ancient Rome, but the Mesoamerican city's history was longer. In the middle of the 6th century, it began to decline and after a century it was abandoned. When the Aztecs arrived, all they found were abandoned pyramids. In modern times, the pyramid complex has been restored and a visit to the site leaves a lasting impression. Measurements were taken at the top of the main pyramids in 2012 and 2019, the latter time we were invited to visit the tunnels found under the pyramids. In all cases the energy of the pyramids was significantly higher than the energy of the nearby hotel. It was interesting to visit the man-made tunnels, accompanied by leading Mexican archaeologist Sergio Gomez, but the energy there was

much lower and we felt depressed - wanting to get out into the sunshine as soon as possible. Look at the results - the energy in all the pyramids was significantly higher than in the hotel. However, in the tunnels the readings were low.

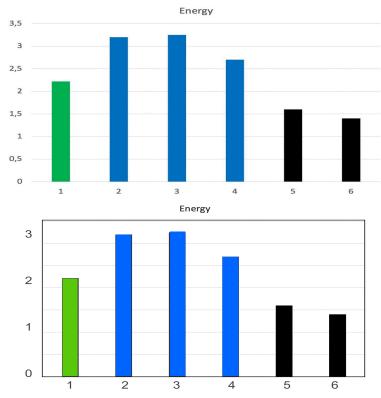


Fig.79. Energy parameters in Teotihuacan. 1- hotel, 2 - pyramid of the Sun, 3 - pyramid of the Moon, 4 - pyramid of Quetzalcoatl, 5,6 - tunnels.

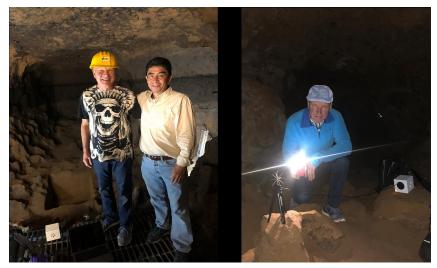


Fig. 80. In tunnels with Sergio Gomez.

## Mexico. Maya and Toltecs

In 2021 we travelled by car from Mexico City to the Yucatán, visiting a number of ancient sites along the way. All are beautifully restored and well maintained. The center of the Toltec civilization, Monte Alban, made a great impression, as did all the centers of the great Mayan civilization. As you can see from the graphs, the readings near all the pyramids were higher than those at the hotel. Interestingly, the energy readings varied from place to place in the complex, but almost everywhere they were higher than at the hotel. The values of energy at the Oaxaca Hotel and Monte Alban are determined by the altitude of these locations. Monte Alban is 1,940 m (5000 ft) above sea level and 400 m (1300 ft) above the valley.

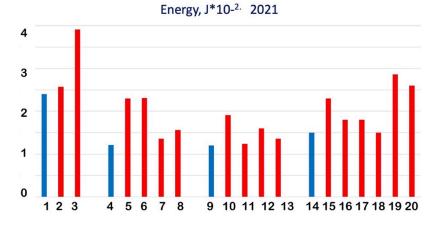


Fig.81. Energy parameters in ancient centers of Mexico. 1 - Oaxaca hotel, 2,3 - Monte Alban; 4 - Palenque hotel, 5 - Palenque temple of inscriptions, 6 - Palenque palace, 7 - Palenque Temple of the Condor, 8 - Temple of the cross; 9 - Ushmal hotel, 10 - Ushmal palace of the governor, 11 - house of strictures, 12 - house of turtles, 13 - pyramid; 14 - Chichen Itza Hotel, 15 - Chichen Itza Temple of Kukulkan, 16 - Chichen Itza Pilot Playground, 17 - Chichen Itza Tzompantil, 18 - Chichen Itza Table Temple, 19 - Chichen Itza Temple of Kukulkan (measurement 2019), 20 - Chichen Itza Synod.



Fig.82. The map of a travel.





Fig.83. Mayan pyramids

## Belize

Belize is a small country nestled between Mexico and Guatemala. It has mountains, waterfalls, caves, the world's second largest barrier reef and many beautifully restored ancient Mayan centers. Unlike Mexico, there are

few tourists in Belize and you can climb all the pyramids. The tallest is the Caana Pyramid in the Caracol complex – 43 m (141 ft). As you can see from the picture, the energy at all the complexes was higher than at the hotel. Interestingly, the high signal was recorded near the tomb of the ruler at Caracol, 5 meters below the summit. The signal at the base of the Caracol pyramid was lower than at the summit, but still higher than at the resort. Later we visited the Actun Tunichil Muknal cave. Its extensive network of underground chambers is known as a treasure trove for archaeologists, as sometime between 700 and 900 AD the cave became an important spiritual site for the Mayan people, and many objects, including the remains of human sacrifices, can be seen in the cave. The signal in the cave was very low at 1.63\*10<sup>-2</sup> J, and after a few minutes it dropped to 1.12\*10<sup>-2</sup> J.

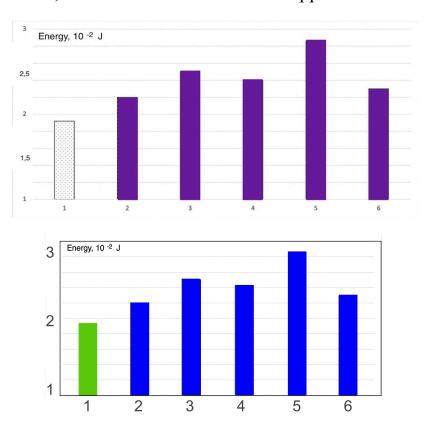


Fig.84. Energy parameters in ancient centers of Belize. 1 - hotel, 2 - top of the Cahal Pech pyramid, 3 - top of the Xunintunich pyramid, 4 - top of the Caracol pyramid, 5 - Caracol tomb, 6 - base of the Caracol pyramid.





Fig.85. Cahal Pech pyramid

## Bosnian pyramids

In the early 2000s, Bosnian archaeologist Dr. Sam Osmanagich suggested that the high triangular hills near the town of Visoko, Bosnia-Herzegovina, were ancient pyramids. The idea was absolutely fantastic - no one had ever discovered pyramids in Europe. Many menhirs and dolmens are known in various countries - from Corsica to England, but pyramids? Sam began excavations with his own money and discovered huge slabs of man-made origin on the slopes of the mountain. He named this mountain the Pyramid of the Sun. After a while the mountain was declared a national park and the excavations stopped. Then Dr. Osmanagich turned his attention to another mountain where excavations had revealed the presence of artificial slabs. Sam was able to buy a part of this mountain, named it "Pyramid of the Moon" and no one could stop him from excavating. There was no doubt about the artificial origin of the slabs of different sizes. However, it was not known whether it was entirely artificial construction or the lining of a natural mountain. Sam had no one to help him and his resources were quite limited.

Once, local children led him to a cave near the Pyramid of the Sun. With an experienced eye, he saw that the entrance to the cave was blocked with earth. He decided to excavate the cave, and once again his intuition was right. Over the years, with the help of volunteers, several kilometers of man-made tunnels have been dug under the pyramids. It is important to note that the Mexican tunnels were also filled with earth. Analysis has shown that in both cases it happened about 2,000 years ago. But no one knows when these tunnels were built. Unlike other tunnels and caves, in the Bosnian tunnels you feel great and you don't want to leave. There are many testimonies that visiting the Bosnian tunnels helps to get rid of health problems https://piramidasunca.ba/eng/home-en.html.

I have visited Bosnia several times at the invitation of Dr. Osmanagich and taken measurements. There is no doubt about the special energy of the pyramids and tunnels. Pyramids influence the surrounding space, and in the tunnels the readings are high.

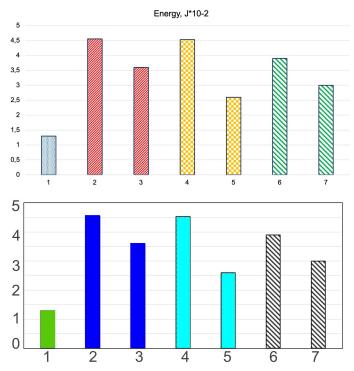


Fig.86. Bosnian pyramids and tunnels Energy. 1 - Visoko hotel, 2 - top of the Sun pyramid, 3 - foot of the Sun pyramid, 4 - top of the Moon pyramid, 5 - foot of the Moon pyramid, 6 - tunnel K2, 7 - main hall in the tunnel.











Fig.87. Moon Pyramid and Tunnels

# Egypt

The most famous and visited pyramids are undoubtedly those on the Giza Plateau in Egypt. For a long time, the Great Cheops Pyramid was the tallest structure in the world (138.75 meters - originally 146 meters), and its construction required more than a million blocks, each weighing between 2.5 and 15 tons. Thousands of books have been written about this engineering marvel, and the inner structure of the pyramid are still not fully understood. No doubt - it was not simply a tomb - the construction is too complex and it is unlikely that this structure was built in the time of the first pharaohs. Certainly not with bronze tools and simple brute force. We will not discuss this topic; you can find a huge amount of material on the Internet.



I have been to Egypt several times and have wanted to take measurements there for a long time, but the visits to the pyramids were very short and it is forbidden to take any instruments into the area. The Egyptian government does not allow any unauthorized measurements, and to get permission takes years of bureaucratic fighting. That's why the appearance of the Bio-Well Mini, which works with a telephone, opened up new possibilities. I thought that if I took out the device and the Sputnik sensor, no one would notice. But that wasn't the case. The guides warned us that we would be under constant surveillance, that there would be a special person near us whose job was to make sure that nothing unauthorized happened. In particular, it is forbidden to meditate or perform any ceremonies near the pyramids. So, I will tell you what we managed to do in Egypt.

On our first morning in Cairo, our group was allowed, for a fee, to visit the Sphinx at 6am for half an hour in the absence of other tourists. The Sphinx is large and you can find a corner to hide in from the guards. We did the same when we visited other Egyptian temples. Together with our American representative and good friend Nima Farshid, we succeeded to finding secluded corners and taking measurements in 'one finger' mode, recording 20 frames in a row. This was enough to determine the average energy level and the spread of variation. Of course, I calibrated and recorded the Sputnik signal every morning at the hotel.

After Cairo we flew to Luxor, where the grandiose complexes of Karnak and Luxor are located. It was difficult to measure something there because of the crowds of tourists who periodically created traffic jams in the narrow passages of the temples' galleries. We managed to take only one measurement when visiting Luxor temple in the evening.



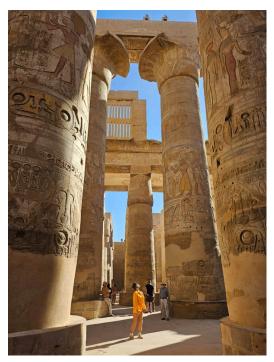
Fig.88. With Nima Farshid in Luxor.



In the morning, we went to the city of Dendera, not far from Luxor, where there is a temple of the goddess Hathor, patroness of love, fertility, music and dance. The temple was built during the Ptolemean dynasty, and completed by Cleopatra around 54-20 BC. It is one of the best-preserved objects of ancient Egypt with magnificent reliefs decorating all the walls inside and outside, columns and ceiling. The amount of detail and beauty of all the images and the colors preserved after thousands of years is amazing. One of the unique features is the Zodiac Chart on the ceiling, showing all the constellations known to the ancient Egyptians and their names, which we still use today as the signs of the Zodiac.



A must on any Egypt tour is a visit to the Valley of the Kings (where pharaohs and their attendants have been buried for centuries) and the Temple of Hatshepsut. These sites have been widely publicized in print and online.



Next stops were the Edfu Temple. It is impressive with its brutal architecture on the outside and exquisite finishes on the inside. It's hard to imagine that this complex, built over 2,000 years ago, could be so beautifully preserved. The temple is dedicated to Horus, the god of the sky and the sun, so images of a man with a falcon's head are central to the design. The foundation stone of the temple was laid in the 3rd century BC.

But construction was delayed for almost 200 years, and the time of its completion coincided with the disappearance of the Roman Empire. As a result, the Edfu temple was no longer needed by anyone and was literally covered in sand. The ancient walls were only discovered in 1860 by Auguste Mariette, a specialist from the Louvre. The sand perfectly preserved the building, even the smallest drawings were intact.

The Kom-Ombo temple, built during the Ptolemy VI reign, is unique in that it is a double temple dedicated to two triads of deities at once. The southern wing of the temple is dedicated to the god of abundance Sebek, who was worshipped in the form of a crocodile, his wife Hathor and his son Khonsu, and the northern wing is dedicated to the falcon-headed sky god Horus, his wife Tasenetnophret and his son Panebtaui. Much of the temple was destroyed by Nile floods and earthquakes, and later a quarry was built on the site, but amazing bas-reliefs in polychrome colors have survived. The brilliance of these two-thousand-year-old colors is astonishing.

The next day we sailed into Aswan and spent the whole day sightseeing.

Everywhere we went, as soon as there was a chance to hide from the omnipresent guards, Nima and I took measurements. Have a look at the results.

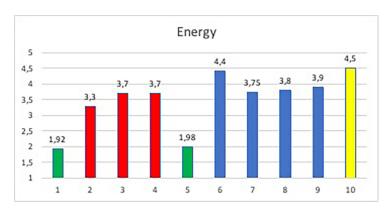


Fig.89. 1 - Cairo hotel. 2- Cairo Sphinx. 3, 4- Cairo Sphinx. 5- Luxor Hotel. 6-9 - Hathor Temple. 10 - Luxor Temple.

These results are a strong indication that all the ancient sites had significantly higher energy levels than a hotel nearby.

In the Aswan area all readings were high. The whole area is made up of pink granite with a high silica content. This granite was widely used by the ancient Egyptians for their structures. The size of the blocks ranged from 10 to 600 tons. Apparently, they believed that the pink granite from Aswan had special properties compared to granite from other deposits.

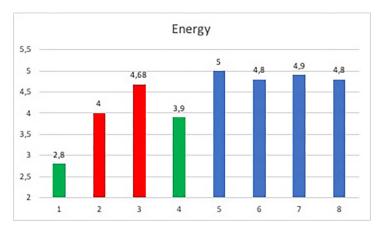


Fig. 90. 1 - Boat morning. 2 - Temple Horos Edfu. 3 - Kom Ombo Temple. 4 - Boat morning Aswan. 5 - Isis Temple. 6-8 - Elephant Island.

In the Aswan area all readings were high. The whole area is made up of pink granite with a high silica content. This granite was widely used by the ancient Egyptians for their structures. The size of the blocks ranged from 10 to 600 tons. Apparently, they believed that the pink granite from Aswan had special properties compared to granite from other deposits.

From Aswan we returned to Cairo and the next day we drove to the Saqqara area, about 25 km from Cairo. This area is not as popular with tourists, and there are none of the crowds as at Luxor or the Giza Pyramids, but we were very impressed.

Saquarah, also spelled Sakkara, served as the necropolis for the ancient Egyptian capital, Memphis. It contains ancient burial grounds of Egyptian royalty and numerous pyramids, including the famous Djoser Pyramid, known as the Step Pyramid - the oldest stone building in history, built during the Third Dynasty. Over time, sixteen Egyptian pharaohs constructed pyramids at Saqqara, with the site remaining significant for over 3000 years, used for non-royal burials and cult ceremonies.

This view is officially accepted and confirmed by numerous archaeological findings. But there are points that raise big questions. Let me quote from Mohamed Ibrahim Elbassiouni's book "Egypt Before the

Written History. The Lost Knowledge of Ancient Egypt." He gives numerous evidences contradicting the official version.

"Understanding the construction of Djoser's Step Pyramid isn't straightforward. The concept of staking six mastabas atop each other, gradually diminishing toward the top to create a step pyramid, becomes somewhere acceptable, especially given the genius of Imhotep, Djoser's chancellor. However, when delving into underground design, numerus questions arise:

Huge Shaft: Why was there a need for a colossal 28-meter-deep shaft under the pyramid? This shaft defies the pyramid's stability, posing risk of collapse.

Granite Box: The placement of a massive granite box precisely withing the shaft raises eyebrows. Comprising 32 large pieces of rose granite, the box has a small opening closed by a rounded granite block resembling a pestle. Strangely, another shaft similar to this one lies across the so-called open court at the pyramid's southern side".



Fig.91. Djoser Pyramid

Even more questions arise after visiting the **Serapium**, an underground corridor more than 500 meters long, 3 meters wide and 5 meters high, containing 24 granite boxes – "sarcophaguses" with lids. Each box weighs about 55-70 tons, and the lids 20-30 tons. They were all closed, but turned out to be empty. No mummies, no objects - no signs of looting. Only one box is covered with hieroglyphs, the surface of others are smooth.

Mohamed Ibrahim in his book presents a lot of enigmatic details about these boxes and the tunnel itself.

The Serapium had been buried by sand for thousands of years and was discovered by chance in 1850 by the French archaeologist Auguste Mariette. On closer inspection, it became clear that it was not a tomb but some sort of technical device. A similar gallery can be found under the Giza plateau at a depth of 28 meters, where a vertical shaft leads down. There are also empty granite sarcophagus weighing up to 100 tons. This site is closed

for the public.



Granit box.

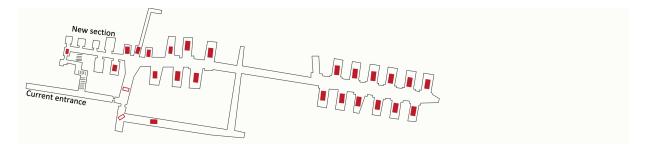


Fig. 92. Serapium plan. From the book Mohamed Ibrahim "Egypt Before the Written History. The Lost Knowledge of Ancient Egypt."

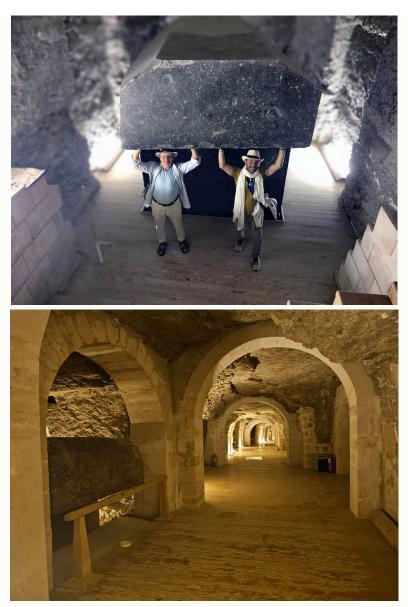


Fig.93. Serapeum

Interestingly, we were unable to take any measurements in the Serapium - the Bluetooth signal was blocked. This happened not only with the Bio-Well, but also with the video camera, where the audio was recorded via Bluetooth.

After Djoser's Pyramid we visited Red Pyramid and Bent Pyramid, located about 13 km away. These pyramids are not so popular, so you can come inside the Red Pyramid and nobody stops you in doing measurements.



Fig.94. Bent Pyramid

Very interesting was to climb inside the Red pyramid. A passage, 3 feet (0.91 m) in height and 4 feet (1.2 m) wide, slopes down at 27° for 200 feet (61 m) to a short horizontal passage leading into a chamber whose corbelled roof is 40 feet (12 m) high and rises in eleven steps. At the southern end of the chamber, but offset to the west, another short horizontal passage leads into the second chamber. The second chamber is similar to the first and lies directly beneath the apex of the pyramid. High in the southern wall of the chamber is an entrance, now reached by a large wooden staircase built for the convenience of tourists. This gives onto a short horizontal passage that leads to the third and final chamber with a corbelled roof 50 feet (15 m) high. The first two chambers have their long axis aligned north-south, but this chamber's long axis is aligned east-west. Unlike the first two chambers, which have fine smooth floors on the same level as the passages, the floor of the third chamber is very rough and sunk below the level of the access passage.





Fig.95. Inside the Red Pyramid.

These pyramids and the Serapium impressed us so much that Nima and I decided to go back the next day and take more measurements. Results on both days matched each other.

Sakkara March 28, 2024

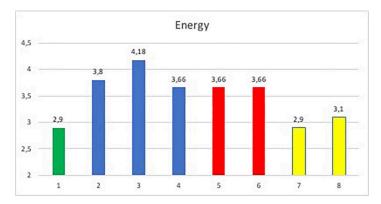


Fig.96. 1 – bus stop. 2 - in the tunnel. 3, 4 - down the shaft 28m near stone cube.. 5,6 - Red Pyramid. 7 - 200 m from the Bent Pyramid. 8 - near the Bent Pyramid.

## Sakkara March 29, 2024

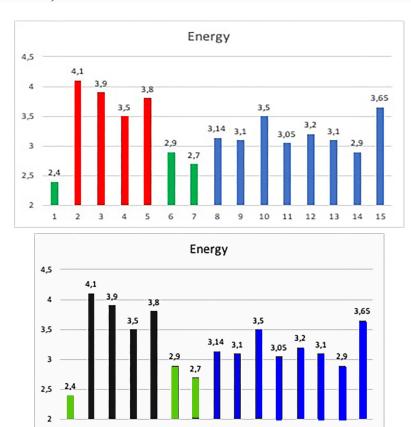


Fig.97. 1 - Bus stop near Djoser Pyramid. 2-5 - Djoser Pyramid. 6,7 - bus stop near Red Pyramid. 8 - Red Pyramid West 100m. 9 - near Red Pyramid West side. 10 - Red Pyramid West South corner. 11, 12 - Red Pyramid

South side. 13 - Red Pyramid East side. 14 - Red Pyramid North side. 15 - Red Pyramid inside.

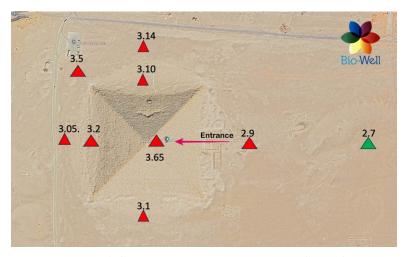


Fig. 98. Map with measurements around Red Pyramid.

On the last night we had a chance to climb inside the Great Pyramid without any other people. Unfortunately, it was forbidden to take measurements and make photos inside.



Fig.99. At the entrance to the Great Pyramid

# Enigmas of Egyptian Civilization

All the data we have received during our travels in Egypt leave no doubt that ancient structures have a special influence on the energy of the surrounding space. In some places, such as Aswan, it can be related to the energy of the place itself, but the difference between the data at a distance and near temples and pyramids confirms the view that it is caused by the influence of the ancient structure itself. Especially that similar results have been obtained at different ends of the world, near pyramids and temples built by different civilizations in different historical periods.

Thanks to Mohamed Ibrahim's explanations, we looked at the structures of ancient Egypt with different eyes. It became clear that the Great Pyramids could not have been built during the first dynasties of the Egyptian pharaohs with bronze tools and muscle power. In medieval Europe, great cathedrals were built over several generations. In St Petersburg, in 1830, the architect Montferrand erected the 600-tonne granite Alexander Column, which took three years to build. The pyramids contain several million blocks of stone weighing from 2 to 70 tons. A simple calculation shows that their cutting and transporting by thousands of people would have taken several thousand years. Many of the blocks show signs of mechanical work and strange notches. After Ancient Kingdom, pyramid building stopped completely - the technology was lost. None of the surviving Egyptian drawings show the process of building the pyramids, although the Egyptians drew many scenes from everyday life.

All this leads to the conclusion that the technologies of pre-historical civilizations were used, especially antigravity. This possibility was demonstrated by Edward Lidskalnien (1867-1951), who single-handedly built the so-named Coral Castle from limestone blocks weighing from 2 to 15 tons each. The monoliths fit together so precisely that it is impossible to slip a piece of paper between them. The total weight of the structure is over 100 tons. Edward did it in total secrecy, no one saw him working on his project. The castle is situated in South Florida and is open to the public (https://en.wikipedia.org/wiki/Coral Castle).

Obviously, the ancient Egyptian kingdom had technology of which we have no idea. Nor why it was all built. This is one of the great mysteries of Human Civilization and it is not clear if it would ever be solved.



# Siberian pyramids

In 2012, a complex of pyramids made of concrete was built in Tomsk https://newpyramids.store/ by the project of Valery Uvarov. Complex consists of a central pyramid 18 m (60 ft) high and 8 smaller pyramids of 7 m (23 ft) and 3.5 m (11 ft) located around the central pyramid. When designing the pyramids, the principles of the golden section were taken into account, and many quartz crystals were used in the design, with the largest crystal set in the top of the pyramid. Central pyramid has 4 levels inside, designed for exercises and meditations. In 2020 we visited the complex and took measurements.

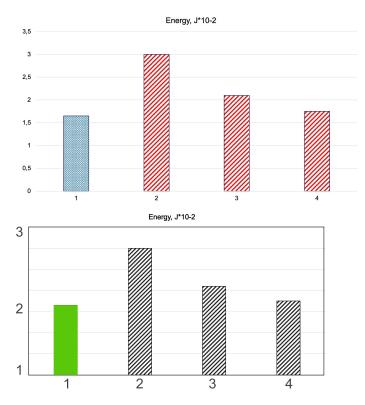


Fig. 100. Siberian pyramid Energy. 1 - hotel, 2 – at the base of the pyramid, 3 - level 4 inside the pyramid, 4 - levels 1 and 3 inside the pyramid.



Fig.101. Siberian pyramid.

# Part 4. INTERPRETING BIO-WELL DATA

This section will present a selection of cases to help you understand the principles of analyzing Bio-Well data. All these cases are present at open account **medic/medic**. So, you can see what it looks like in real programs. Many of these cases fall under the four pillars of our health. We thank our colleagues and friends who submitted their analyses and allowed us to use them for this book. Let us consider the application of the principles outlined using examples.

All examples are from the free account medic/medic, so we do not provide pictures. We expect you to look at all the examples on this account.

# People with different psychophysiological states

## 00 Healthy

Example of type 1 field - no discontinuities or outliers; parameters are optimum. Energy reserve 92-100%. When overlaying Diagrams, they do not cross - an indicator of high luminescence frequency. The diagrams are in the optimum zone, but pay attention to the sectors in the yellow zone - especially the thyroid area. We see non-aggressive patterns on the thumbs - a zone of increased attention. The Organ Energy tab can be interpreted as the four pillars of health. At reasonable stress levels, we see the dominance of the sympathetic ANS. The charms are somewhat equalized with a shift to introversion.

# 00 Healthy1

Type 1 field; parameters in optimal zone, as are the charts; On Organ Energy, almost all in the green zone. Energy Reserve 52-75%. But the chakras vary significantly daily, from perfectly centered to severely imbalanced. This is a practically healthy woman, but her emotions strongly influence her condition, as reflected in the Balance.

# **00 Healthy Problems**

Fields of different people of type 2. The field has many outliers, reflected in the Charts - each peak in the yellow area shows a problem organ. When overlaying the Diagrams, there are many colored sectors – which indicates low luminescence frequency. The energy reserve for all is high enough.

Chakras are strongly unbalanced, which indicates emotional problems. These are people with chronic health problems that can be controlled with appropriate interventions. No aggressive patterns are seen, indicating the absence of acute situations.

#### 05 Israel 3

The entire 05 Israel group are people with various serious problems who were rehabilitated at the Center for Integrative Medicine. Image 04-30 is the initial condition, 05-04 is after a week of rehabilitation, and 06-05 is one month later. This woman has fibromyalgia. She initially had low energy, elevated stress levels, sympathetic dominant ANS, and Charts in the red zone with strong outliers. Organ energy - most in the red zone. Energy increased after rehab, but stress levels increased as well. ANS is balanced, although many organs are out of Balance. After a month, the condition improved - parameters were in the optimal zone, there were no emissions on the charts, and this was reflected in the energy of the organs. Energy reserve is low. Chakras are imbalanced, and on Balance, many organs are imbalanced. This shows the strong influence of the psycho-emotional state on the physical state. There are known examples of people coping with fibromyalgia through mental exercises.

#### 05 Israel 4

The above description can be repeated for this woman with fibromyalgia—a similar response to rehabilitation after one month.

#### 05 Israel 5

Non-curable oncology. The woman does not want to undergo chemotherapy. Note the Fingers - reproducible patterns on many sectors, indicating a fairly severe situation (even if we didn't know she had Oncology). This is reflected in the Energy of the Organs, especially in the pelvic organs. One month after rehabilitation, her emotional state improved – Alignment of Chakras increased from 83% to 87%, and only Anahata Chakra is out of balance. (a chapter on the approach to cancer cases follows).

#### **05** Israel 6.

Cured breast oncology, complete remission for one year. The woman leads a healthy lifestyle; all parameters are optimal, but the Energy Reserve is low. We pay attention to the thyroid area - it is recommended to check hormones and ultrasound to test hair for trace elements—optimal Balance of the ANS. Chakras are unbalanced but are in the central zone. 05-04, a woman menstruates, which is reflected in the Bio-Grams of the fingers and Balance. At the same time, Chakras are balanced, except Chakra 1, which is associated with anxiety about her future life. After a month, the condition has stabilized, but the Energy Reserve is low; special attention is paid to the endocrine system - regular monitoring by an endocrinologist is necessary.

#### Ayahuasca

Quite a popular topic - many participants report about the transition to Altered State of Consciousness (ASC) and the positive effects of this procedure on the state of mind. In this example, we see the transformation of the Bio-grams of the fingers from Type 1 in the initial state to Type 3 during the ceremony, with a significant imbalance of the Chakras. Numerous measurements have shown that the reaction to this ceremony is very diverse, depending on the psychotype of the person and the conditions of the ceremony. It varies from complete rejection to transformation into ASC.

#### **Bladder Stone**

An example of a bladder stone is an aggressive blemish on the ring fingers. Energy reserve is low; there is a Strong ANS imbalance, and many organs and systems need attention.

# Child 7 yo

Two examples of child Bio-grams. The example of a seven-year-old child shows that the organism is in the process of transformation - transition from childhood to school age. This transition is accompanied by the reorganizing of the brain's structure, endocrine system, and all body tissues. We see heterogeneous finger patterns, very low reserve, and Diagrams in the orange zone. Children are prone to various diseases in this condition, as parents are well aware. Complete imbalance of ANS and Chakras, which

indicates a strong emotional component - children are very sensitive and prone to stress because of small, in our opinion, events.

## Child 11 yo

The body becomes more robust, and the fingers and Chakras have a Type 1 appearance. There is a strong influence of emotions - sympathetic dominance on the Balance and imbalance of Chakras.

## Chronic fatigue 1

An example of three men in a state of chronic fatigue. The physical body is in good condition, with optimal parameters and high reserve. Complaints of constant fatigue, drowsiness, and lack of energy. When questioning, it turns out that the person has experienced severe stress coping with the situation. Still, after some time, there were pains of unknown origin, and fatigue began to develop, interfering with daily life. Standard medical tests did not reveal any impairment. From the Balance program, we see that everyone has a strong sympathetic dominance.

The body entered a state of stress and could not escape it. Anti-stress therapy, the use of BioCor, and meditation allowed the situation to be resolved within a month.

# **Depression**

Two very similar examples of depression. Sympathetic dominance in the Balance program. A large number of functional problems - Charts in the red zone. Type 2 has pronounced issues in all four pillars of health. The main problem is the state of the psyche. The person is completely fixated on his experiences - Chakras are shifted to the right. Improvement is possible only if a person cares for his state and psyche.

As we can see, in two different people, all indicators practically coincide. These conditions are pretty typical; they are caused by constant anxiety and the inability to get rid of intrusive thoughts. There may be a genetic predisposition. Such people need professional help; otherwise, the condition can turn into clinical depression.

## Diabetes type 1

Type 1 diabetes. Charts are in the orange zone, the Energy Reserve is low, and all systems are in deficit on Organ Energy. A typical example of

functional problems is in the systems of all four pillars of health. Diabetes is the extreme stage. Chakras are shifted to the left - difficulties with communication, a person cannot "place" himself in the world. Complex work is needed to change lifestyle attitudes toward oneself and others.

#### **Drossinakis** mother

Female 102 years old. Energy is deficient, diagrams are in the red zone, and many functional problems exist, but the spirit is calm. Chakras are well-balanced. The person lives in harmony with herself and the world. Unfortunately, in 2013, we did not have a program of Balance and Organ Energies.

# Ecuador Vilcobamba Valley.

The Vilcobamba Valley in Ecuador is known for its many long-lived people. While traveling to Ecuador, we measured the number of elderly people. An example is a 91-year-old man. Bio-grams of the fingers without significant gaps (the cropping on the thumbs is a pattern in taking pictures; the man's fingers would not bend due to arthritis, and it was necessary to work in threes: one held the finger, one held the device, and the third covered the screen from the light). The charts are in the orange zone, the Energy Reserve is low, but the overall condition is not bad. Chakras are equalized, except for Chakra 5 - the person has difficulty communicating with the world, although his family said he responds quite adequately to everything.

#### E01

Male. 79 years old. Prostate Adenoma. Acute respiratory viral infections. Leads an active lifestyle. Engaged in sports, ballroom dancing. Goes with

friends to the sauna once a week.

At the time of the scanning, he had a little cold. Worried about his relatives, who were far away from him.

The Balance program shows that the man has imbalanced organs and sectors related to the prostate and the respiratory system. Inflammation is also viewed in the Area diagram.

In the Organ Energy program, you can look more closely at the condition of these organs: in the Urogenital System, problems with the prostate are visible. The prostate sectors show a cellular, heterogeneous glow pattern, indicating a sluggish, chronic form of the disease. However, a small beginning branching at the edges (sector five on the left index finger) suggests that the process has not been entirely suppressed. Such signs of adenoma should not be left unattended; it is necessary to consult a doctor.

The urogenital sector shows small dots on the edges of the glow. This indicates that there may be a hidden infection in the urogenital system, which is a fairly common with prostate problems. Voids at the base of the glow (right ring finger sector 5) indicate that the problem with the urogenital system is quite old (at least several years). However, it is essential that there is not a lot of branching or large drops in the prostate sector, meaning that there are no serious complications and no rapid deterioration of the situation.

In the Respiratory System section on the Larynx, Pharynx, and Trachea sector, you can see that the glow is irregular, it has a cellular structure with numerous dots on the edges of the glow. It speaks that the organism is weakened, the throat is not cured yet, and infection is active. On the Respiratory system sector, responsible for lower respiratory tracts, you can see an excessive glow and the same dots on the edges of the glow. Such signs indicate that the lower respiratory tracts have also been affected by colds, although not as much as the upper ones. All this suggests that treatment should be continued even when the symptoms of a cold will be gone.

#### E02

Female. 42 years old. Good condition. Her favorite job is as a teacher at a professional development center. This is an example of a person who has found a favorite job in her life. If you look at the Chakra program, you can see that the woman is in harmony. Only Vishudha and Ajna are slightly shifted towards social activity. Vishudha is responsible for verbal activity (communication), and Ajna for intuition. Such insignificant shifts of one or two chakras in the direction of social activity often speak about a person's passion for their work, even about professional deformation.

This woman likes to share knowledge with people, invent interesting ways of presenting material. She is very passionate about what she does.

Unfortunately, as it often happens, when we are passionate about something, we do not notice that we begin to overload our bodies. The

Balance program clearly shows that the body is starting to have problems, and some of them - vision and spine problems (points 27, 28, and 10) are probably related to a lot of work at the computer. And upper respiratory imbalance (item 17) is one of the most common problems for anyone whose job involves a lot of socializing.

#### E03

Female. 70 years old. Cured cervical cancer. Post-cured breast cancer. Three years of chemotherapy with short breaks. The woman is exhausted, she is under constant stress. The Analysis program shows she has very little energy. This is also evident on the Energy chart - energy reserve 8%.

She was almost resigned to her serious illness. She reaches out to her loved ones for support. This can be seen in the Chakra program by the shift of Anahata towards the environment.

In the Balance program, one can see that the immune, nervous, endocrine, and excretory systems are also in imbalance.

If we consider Bio-grams in the Organs Energy program, we can see that almost all organism functions are suppressed and are in hypofunction. These are the consequences of a long severe illness and no less severe treatment.

#### E04

A boy. 8 years old. Autism spectrum disorder. He was outwardly calm, and showed an active interest in Bio-Well. Wanted to be checked. There were no problems with placing fingers on the electrode and rescanning the data when needed. This was due to a high degree of trust in the operator and the presence of the child's mother nearby.

It can be seen from the Analysis program, that the child's stress level is increased, and a very large imbalance in the activity of the parasympathetic system. This imbalance can be related to the period of hormonal restructuring of the organism.

At the same time, the Chakra program shows that the child is in an unstable, unfocused state. He cannot concentrate on one task. There is a great need for comfortable communication, but only with close people.

At the same time, he has a great need to master and "conquer" the outside world, which is a significant progress for children with such diagnoses. This

can be seen in the shift of the lower three chakras towards society. The most significant shift is in the Manipura chakra, indicating that the boy requires quite a lot of willpower for such actions. Nevertheless, the shift of the lower two chakras indicates that he wants to show and prove himself in this world.

#### E 05

Female. 29 years old. Chronic stress. Chronic cystitis. Chronic pyelonephritis. Chronic gastritis. Irritable bowel syndrome (IBS).

Changed four jobs in the last year. Very high level of anxiety. She has very high demands on herself.

Here are three scannings over the last six months.

Program Analysis shows that psycho-emotional exhaustion peaked by the end of the year. This resulted in prolonged exacerbation of cystitis, and on the background of antibiotics in exacerbation of gastritis and IBS. By the time of the last scanning, the woman was on the verge of an emotional breakdown due to ongoing illness, disruption of plans, and emotional overload at a new promising job.

The Chakra program shows that during the first shoot, the most important thing for her was the support of her loved ones (Anahata Chakra shifts to the right). During the second shoot, she was working on her last most successful job. Here we can see that in addition to the support of her loved ones, she had another critical need - to show herself as a professional (Muladhara chakra shifts to the left). The third image shows that the woman has an apparent crisis - she does not want to lose her job and is ready to fulfill her duties both intellectually (Sahasrara shifts to the left) and energetically (Svadhisthana shifts to the left), but her condition does not allow her to compete and show leadership and professional qualities at work. She is in dire need of rest and a safe, accepting environment, or perhaps just solitude (Muladhara shifts to the right outside the corridor of norm). At the same time, the energy level of all chakras is high enough, which means that she has the strength to realize her tasks; she just needs to stop panicking and let her body recover.

In the Organs Energy program, in all three scannings in the sector of the urogenital system one can see excessive pathological glow and dots on the

edges of the glow. This indicates that there was bladder inflammation and infection.

The woman was diagnosed with chronic pyelonephritis in her youth. And, although at the time of all three scannings, pyelonephritis was not in the exacerbation phase, it can be seen that there were inflammatory processes in the kidneys, too.

Due to constant stress and frequent antibiotics, the woman's digestive system is in a state of irritation and hypofunction. Only the rectum (the consequences of frequent diarrhea) and the liver (the result of the excretion of antibiotics and other drugs from the body) are in hyperfunction.

#### E 06

Female. 50 years old. Conference organizer.

The Chakra program clearly shows how the woman is mobilized and focused on her work. This is especially clear when the work is related to public, socially significant activities. All chakras except one are shifted into the social side. Only Anahata chakra, responsible for love and mental warmth is shifted to the other side as she focused on the family. At the same time, Anahata has sufficient energy; that is, the needs associated with attachment to loved ones without negativity. This is not anxiety for loved ones but simply a desire to be nearby.

At the moment of scanning there was an essential event for her at work, so she is focused on it. High level of stress in the Analysis program related to situation when for the first time in her life she has been fully responsible for a big conference, and she is very worried about it.

#### E 07

Female. 29 years old. Years of chronic stress. Depression.

Her husband died three years ago. She moved to another city, changed jobs, and is raising two children alone. She thinks she's coping. She knows that her life is getting better; she just needs to be patient a little longer. However, the measurements show that she is on edge. Stress level is very high, energy deficiency, energy reserve at 0%. Almost all organs and systems are in a state of hypofunction. The state of chronic stress prevents her from adequately assessing the situation. This is seen in the Chakra program. All chakras are in the green zone, close to the center. This suggests that she has

no pronounced needs or meaningful goals. It's like she doesn't want anything. But low energy of chakras - 2,6 J x 10<sup>-2</sup> shows that she simply does not have mental and soul forces for any desires.

#### Healer E 08

Male. 39 years old. Osteopath. Healer. Scanning in the process of working with a client. This psychic has his style of work, in the process of which he works simultaneously as an osteopath and as a healer. Measurements took place right in the process of work. He started healing processes in the client's body while the bio-grams were taken. In this case, it was interesting that his stress level went up relatively high. He commented that he needed to increase his sensitivity to concentrate on the client and transfer energy to her at all times. It is also interesting that almost all the chakras shifted in the direction of society. The strong shift of Vishudha chakra towards the environment was because his wife was assisting him for the first time and he was often distracted by her explaining what to do.

The fingers bio-grams indicate that the healer was in an altered state of consciousness (ASC). This can be seen in the following fingers: right middle finger - sectors 1,7; right ring finger - sectors 1,9; right little finger - sector 6; left middle finger - sector 1.

# **EMF** sensitivity

A case of high electromagnetic sensitivity - in the presence of EMF, a woman experiences headaches and poor health. Quite common syndrome nowadays, practically not amenable to classical treatment. Only complete isolation from EMF in shielded rooms saves.

Although several fingers have strong internal lighting, we see an almost perfect picture of the Field, Finger, and Diagrams. The very low stress factor value is alarming - similar to a metal cylinder measurement.

Chakra imbalance indicates that this is a human being, after all. Naturally, no analysis of the condition is possible from such pictures.

#### **Healer Chumak**

Footage of the famous Russian healer Alan Chumak. In the initial state, all parameters are in the optimal zone. Still, ANS is strongly unbalanced (program Balance), and Chakras are strongly shifted to the right - the

person is completely immersed in himself. The following picture was taken an hour later after Chumak had finished working with the client. Chakras are in perfect Balance (Alignment 98%), and there are only 4 bars in the Balance program.

#### Healer Chumak's client

Chumak's Healer Chakra session. As a result of the session, the energy increased dramatically, the Charts went from orange to green, the ANS improved dramatically, and the Chakras balanced (except for the first Chakra, which remained in the same place; this Chakra is related to a person's anxiety about their place in practical life). Alan Chumak was a powerful healer, successfully working with the most severe diseases. We were friends and repeatedly conducted experiments on remote influence on water and sensors. Alan Vladimirovich wrote several books and passed away in 2017 at 82.

#### **Healer Drossinakis**

Christos Drossinakis is widely known in Germany as an effective healer. His society is made up of thousands of people whom he has helped to regain their health. We meet annually at his seminars, as written in my book "The Wizards of the Quantum World" (2024). There is no outward change in his condition when he conducts healing sessions. The impression is that he is dozing. In fact, powerful work is taking place. In the example, we can see the change in the picture of his field in the process of entering the ASC. Pay attention to the strong internal noise on the fingers in this state. This factor indicates active energy production of the body.

# **Kidney colic**

A 40-year-old female patient with kidney colic. This manifests as urolithiasis, which refers to urinary system diseases. The main sign of this disease is the deposition of various lumps (stones) in the urinary system. Most often, stones are formed in the bladder and kidneys. The disease is dangerous not only because it affects the internal organs but also significantly reduces the standard of living. It is also fraught with several extremely undesirable complications. The disease occurs in young people in their 20s and adults after 50 years. It happens more often in men, but the

stones are larger in women, so for them the disease is more complicated. More severe for people living in cities, which is associated with ecology and water quality. The disease can be chronic, with periodic relapses, or it can manifest itself only once, and after recovery, the problem never returns. On fingers Bio-grams, there are many aggressive patterns in the area of pelvic organs, in particular, kidneys on the middle fingers. We have to remember that the sectors' position is not a rigid fixation but an indication of a specific zone, a particular body area. Therefore, aggressive patterns on the middle fingers can be attributed to two contiguous sectors. The intuition of the practitioner determines the choice. On the Energy Diagram, there are many peaks in the yellow zone - an indicator of active inflammatory processes. This shows that urolithiasis is a disease of the organism, not of a separate organ. For treatment, it is necessary, first of all, to reconsider the nature of nutrition and pay attention to the quality of water.

#### Marihuana

When analyzing the parameters of this girl of 19 years old, the first thing that catches the eye is the number of aggressive emissions on all fingers. High stress levels, peaks on the chart, and completely unbalanced Chakras exist. I asked her: "What drugs do you take, and how long have you been taking them?" She replied, "Marijuana and sometimes synthetics. For two years now." I explained that she has 3-4 years to live if she doesn't stop. There won't be any further problems if she can get over it. Her body is young and healthy; her energy reserve is high. Unfortunately, it is not a rare case when we detect drug use at BioWell. Naturally, this requires some experience and intuition.

# Menopause

46 years old. Menopause. Hormonal problems, allergies. Aggressive patterns on fingers in the pelvic organ area. Lots of peaks on the Energy Chart. Increased stress and energy levels. Chakras in imbalance. Presence of problems on the functional and psychological plane.

#### Menstruation

Patterns on ring fingers are associated with the menstruation period. It does not make sense to analyze during this period.

#### Mobile

Examples of stress test by reaction to a cell phone.

## **Thyroid**

Examples of different people with thyroid problems of varying degrees of severity. All have patterns on their thumbs. The severity of the pattern indicates the severity of the problem. Patterns are seen even with the thyroid gland removed. It does not relieve the problem.

#### Victoria 1 and 2

An example of two people with almost identical parameters and matching Diagrams. The only difference is the Balance program: Victoria 1 has optimal, and Victoria 2 has strong sympathetic dominance. We can expect insomnia, depression, and the development of negative symptoms.

#### Vladimir

Example of a successful businessman. His health has deteriorated over five years, but the Balance of Chakras is impressive - the man can control his condition, which allows him to manage a large business and remain a kind and pleasant person, loved by all employees.

# Water Gey

Example of influence of 1 glass of structured water. Nine people before and after taking water.

# **Neurological diseases**

Neurological diseases are pathological conditions of the brain, spinal cord, spine (including vascular disorders), and peripheral nervous system. Neurology is the science that deals with diagnosing and treating these diseases; these diseases should not be confused with psychiatric diseases, which are dealt with by psychiatry. The following classification of neurological diseases is accepted:

- Infectious neurologic diseases - develop against the background of the pathogenic influence of viruses, bacteria, fungi, and worm infestations.

Symptoms are associated with damage to the CNS (brain and spinal cord). Examples: encephalitis, meningitis, malaria.

- Gene and chromosomal pathologies result from damage to genetic material through mutations of individual genes (diseases of amino acid, lipid metabolism) or chromosomal abnormalities (Down syndrome, Edwards syndrome). Hereditary predisposition is characteristic of epilepsy, Alzheimer's disease, and multiple sclerosis.
- Traumatic neurological disorders are associated with central or peripheral damage. Characteristic examples: concussion of the brain, injuries with damage to the spinal cord, and compression of the sciatic nerve (sciatica).
- Tumor diseases of the CNS are a particular case of traumatic pathologies. Benign or malignant structures with overgrowth press on nerve tissue, causing damage.
- Vascular neurological pathologies are associated with impaired blood supply and nutrition of nerve structures, mainly of the brain. Over time, they can cause strokes and paralysis.

According to statistics, neurology is experienced by 10% of the population. Of these, the most significant percentage are neuroses, brain injuries, and strokes. Slightly less common are epilepsy, neuralgia, and degenerative and tumor processes of the brain. Neurological pathologies are the leading cause of disability in both children and adults.

At Bio-Well, these diseases manifest themselves in the form of characteristic patterns. The task of the examination is not to detect the disease (the analysis is almost always known) but to support the treatment and rehabilitation process.

Here are examples from the practice of our Indian colleague, Dr. Rajeev Peshawaria. The data were taken in 2014-2015 when the number of programs was limited.

#### **RJ 1GV17**

54 years old. Hirayama's disease has been gradually progressive since the age of 3 years. Hirayama disease is a rare neurological disorder characterized by unilateral or bilateral muscle atrophy and weakness of the forearms and hands without sensory or pyramidal signs. The disease primarily affects males in the second to third decade of life. The disease is initially progressive, but spontaneous arrest is known to occur several years

after onset, unlike motor neuron disease, with which it is commonly confused. Hirayama disease is characterized by focal ischemic changes in the cells of the anterior horn of the lower cervical spinal cord that result in amyotrophy, which is usually unilateral but can be bilateral. Most neurological diseases are characterized by specific patterns of fingers biograms typical of the 4<sup>th</sup> image type. This results in high stress levels (which characterize this person) and a "butterfly" energy pattern. Interestingly, that the chakras, except for the top two, are perfectly balanced.

#### **RJ Anant SS.**

54 yrs. Hypertension since 12 yrs. Angioplasty twice - in 2002 and 2006. left-sided hemiparesis in July 2014. borderline hyperglycemia. MOSS MRI - cerebral atrophy with small vessels, chronic ischemic changes in the periventricular and deep matter of both cerebral hemispheres, multiple old infarcts in the cerebral hemifield, deep white matter of the frontal lobe, and radial corona. Two actual ischemic foci in the left cerebral midbrain and left cerebellum. chronic lacunar infarcts in the radial corona. centrumesemivalis, chronic ischemic changes in the white matter of the periventricular, otherwise radial corona. Fingers bio-grams have strong internal glow. There are pronounced patterns on the left fingers. Sharp imbalance on the Energy Diagram, low energy reserve. Four chakras shifted to the right - concentration on one's own experiences. The prognosis is unfavorable.

#### **RJ Anita SP**

36 years old. Leukorrhea since 1.5 years old. Pelvic inflammatory disease? Low back pain, anemia. Leukorrhea is a thick, whitish, or yellowish discharge from the vagina. There are many causes of leukorrhea, usually estrogen imbalance and vaginal infection. Treatment is complicated. Fingers bio-grams have strong internal glow. Pronounced patterns in the corresponding areas. Chakras are severely imbalanced.

#### RJ Aruna SS

54 years old. Epilepsy since 30 years, recurrent tonic and clonic seizures. Paroxysm of seizures is mild. After medication, seizures decreased, had

mild seizures. Fingers bio-grams have strong internal glow. Energy diagram in the yellow zone. 1,2, and 6 chakras are highly unbalanced.

#### RJ Deepa RS.

19 years old. Anemia, loss of appetite; frequent abdominal pain with diarrhea; headache with periods of dizziness; irritable, loses temper very easily. Fingers Bio-grams with a strong internal glow. Pronounced patterns in the corresponding zones. Energy Diagram of the "butterfly" type. Sympathetic dominance on Balance. Chakras shifted to the right - concentration on their own experiences. High probability of neurological disease of the brain. (Bio-grams are taken with significant errors, so the Energy Field pictures does not make sense. It is essential to pay attention to the nature of the images when taking them!)

#### RJ JaP N

22 years old. Migraine since 5-6 years, persistent congestive headache for almost a day and a half, each episode is accompanied by stuffy eyes and lacrimation. Tearing headache. During menses often had back pain and shortness of breath. After two months of complex therapy, the pain has significantly decreased. Migraine is a frequent symptom in women of a neurological nature. It usually goes away with age. Fingers bio-grams of the 4<sup>th</sup> type. Lack of luminescence in the head area of the thumbs. Diagram of energy in the orange zone. Severe imbalance. Chakra imbalances show difficulty in communicating with outsiders.

#### **RJ Jeet KP child**

Seven years old. Muscular dystrophy; uncles died at 14 and 16 years old for the same clinical reason. Due to cramping and stiffness of calf muscles, difficulty in getting up from a sitting position. Anemia. bio-grams demonstrate a specifi 4<sup>th</sup> type that determines all other parameters.

#### RJ Rohan MC child

Six years old. This is a case of a mentally retarded child with a developmental disorder - mental and physical. Child with a low birth weight (1.5 kg), for the first three days of his life, had to be kept in the

incubator. His mother says he had a poor Apgar score; at the age of 1 year, atonic generalized seizures started, at least for a few minutes, when he lost consciousness. He was given anticonvulsant medicine, but his mother stopped it after two weeks. There were no further episodes after that. Brain MRI and EEG (at that time) were normal. He has been taking homeopathic treatment for the last 14 months and has shown good progress in pronouncing words, walking a few steps without support, playing, and socializing. He is lagging in his development - physically and mentally. He was diagnosed with global developmental disorder. He had microcephaly, frontal-parietal bulge, flat feet, and hypotonia. Fingers bio-grams are typical of the 4<sup>th</sup> type.

#### RJ Sakshi SP child

Eight years old. case of cerebral palsy, severe developmental delay, inability to stand/walk, speak - only a few words. Brain scans (conventional and contrast): bilateral symmetrical hypodensity in the cerebral hemispheres' subcortical and deep white matter with cystic areas in the bilateral parieto-occipital region. Fingers bio-grams are typical of the 4<sup>th</sup> type.

#### RJ Shobha C

24 years old. Epilepsy seizures start from the right leg and then spread to the whole body. Fingers bio-grams are typical of 4<sup>th</sup> type.

# RJ Sunny r K

26 years old. Mental retardation. Fingers bio-grams are typical of the 4<sup>th</sup> type.

#### RJ Surekha AM

32 years old. Head injury: fell from a moving scooter the year before. Severe headache followed by weakness in extremities as if there was no life in them. History of cortical vein thrombosis on September 4. A neurologic disease of traumatic origin. Any bumps to the head can lead to neurologic development! Be careful! Fingers bio-grams are typical of 4<sup>th</sup> type with many discontinuities. Butterfly type diagram. Energy reserve is high. This is something you will have to live with!

# RJ Varsha B.

27 yrs. Bilateral migraine, recurrent since 10-11 yrs. Lymphadenopathy - cervical, bilateral migraine with Waldeyer's ring, prenasal bilateral, occipital. Recurrent cyst formation in right cervical areas for last three years - had to drain pus three times. Fingers bio-grams are typical of 4<sup>th</sup> type.

# Statistical analysis of children with developmental delays

Data collected by Dr Rajeev Peshawaria in India. Data for 44 ADHD patients was analysed in the Bio-Well program and Bio-gram parameters were calculated. Age 14 +/- 5, 40 boys and 27 girls. Parameters were compared with the parameters for a group of 44 apparently healthy children.

Statistical difference between ADHD group and healthy group was found for the following parameters:

Energy (p<0.001);

Stress coefficient (p<0.04);

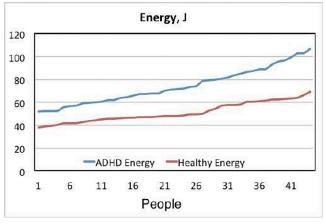
Inner noise coefficient (p<0.001);

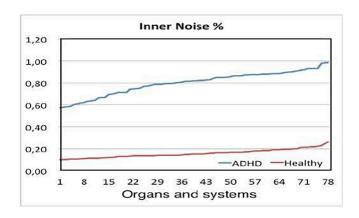
Entropy (p<0.001);

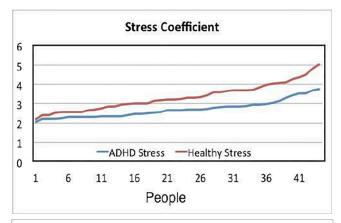
Analysis of data demonstrated that for ADHD patients, the energy parameter both for the whole image and for different organs and systems of the body were higher than for healthy people. Same for inner noise

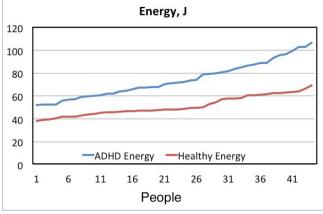
parameter.

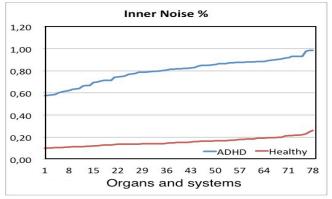
Entropy coefficient for the ADHD group was lower than for the healthy group. This may be interpreted as evidence of lower level of psychic activity related to lower conduction of nerve processes for ADHD people compared with the healthy ones. This manifests as difficulty in communication, difficulties with the assimilation of information and slow psycho-motor reactions.











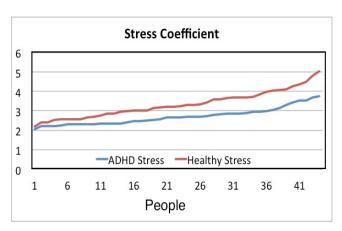
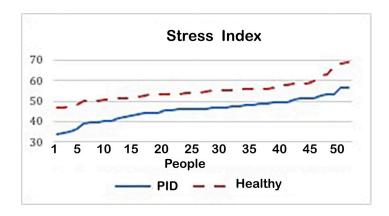
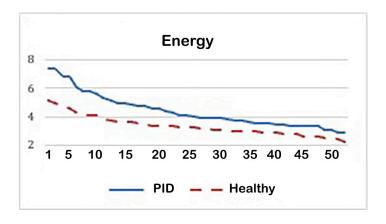


Fig. 102. Bio-Well parameters for ADHD and healthy children.

Since 2022, the scientist of the St. Petersburg Research Institute of Physical Culture and Sport have been developing the project: "Development and testing of methods for assessing and monitoring the psychophysiological state of persons with intellectual disabilities" under the guidance of Dr. of psychological sciences Korotkova A.K.

At the Championship of Russia in sports of persons with intellectual disabilities (PID - athletics discipline), the psychophysiological state of athletes was assessed using the Bio-Well device. 43 young athletes with PID participated in the study. As we can see from the graphs, the trends in parameters are similar to those in India.





People

Fig. 103. Comparison of the Bio-Well parameters for persons with intellectual disabilities (PID) and healthy groups.

# Oncology

At our seminars, the issue of cancer cases are regularly raised. Often, Bio-Well analysis does not show any specific markers, images may even look like perfectly normal, although the analysis of cancer is confirmed. We have extensive experience in the analysis of cancer with GDV and Bio-Well.

Since the end of the 90th research has been conducted at the Oncology Institute of Georgia, in Tbilisi, under the guidance of Professor Eliso Gedevanishvili. A series of articles was published, PhD theses were defeated, and the GDV method used in daily practice. Cancer of breast, colon, stomach, and lungs was studied, and in all cases, statistically significant differences between patients and healthy population were demonstrated. The results of GDV evaluation and monitoring of the functional status of the organism were correlated with the data of clinical laboratory and instrumental studies in 80–96% of cases.

At the St. Petersburg Research Center of Radiology and Surgery Technologies, Professor Gennady Zharinov conducted a series of GDV studies of patients with prostate cancer. It has been shown that it is possible to monitor the patient's condition and identify the risk of cancer process complications. In recent years, extensive work has been carried out at the Russian National Research Medical University named after NI Pirogov, in Moscow, headed by Associate Professor Ekaterina Yakovleva [The Open Biomedical Engineering Journal, 2016,10,72–80. J of Alternative Complementary Medicine 2015, 21(11), 720–724].

A total of 137 people, including 49 men and 88 women, aged between 45 and 86 years, were\ studied. Based on the results of the colonoscopy and histological findings, all subjects were divided into two groups: control group of 55 people (43.3 ± 2.2 years); 9 males, 46 females; and patients with tumours (benign or malignant) of the colon—82 people (64.2 ± 1.3 years); 40 males and 42 females. Then all subjects were divided into smaller groups based on: morphology (hyperplastic polyps—23 people, adenoma—41 people, cancer—13 people); size (tiny 1–5mm—21 people, small 5–10 mm—34 people, medium 10–25 mm—5 persons); the number of tumours (single—33 people, multiple—30 people); localization (right half of the colon—21 people, left divisions—34 people, both sides—9 persons).

The differences between the control group and all patients with neoplasms of the colon were revealed. Statistically significant differences (p<0.05) had 76 of 216 indicators, 21 of which had a very high level of significance (p<0.001). The differentiating parameters are the radius of the inscribed circle, normalized area, percentage of internal noise and shape form characterizing the irregularity of the outer contour of the GDV images. 38

Differences were largely found for the sectors 'transverse colon' and 'ascending colon.' This can be explained by the fact that the majority of the patients surveyed had pathological changes in these parts of the colon. Table 1 shows the averaged values of the parameters and the relative frequency of their occurrence between all significant parameters in the different groups studied with increase in the degree of tumour neoplasia.

As one can see from Table 1, parameters have different tendencies in the line Control => Polypus => Cancer. In order to evaluate the effectiveness of using the method of gas discharge visualization for the detection of neoplasms of the colon, 69 of the most significant parameters for the pathogenesis of the colon tumours were selected using T-student criterion. Stepwise discriminant analysis in the SPSS Statistics 17.0 package was then carried out, using data of patients with neoplasms of the colon and the control group. Included in the result of stepwise discriminant function analysis were the most significant parameters affecting the assignment of patients to one group or another: Namely, the parameters associated with the descending colon, lumbar, sacrum and coccyx.

The specificity of the resulting function, after cross-verification, is 78.2%, and the sensitivity is 76.8%. We can conclude from these data that the separation between sick and healthy individuals has a fairly high level of precision for screening studies. Similar results were obtained for different types of gastric pathology.

The stage of neoplasia correlates with decreased luminescence intensity. Furthermore, decreasing percentages of internal noise characterizes the level of scattered biophotons radiating from the skin. The lower the activity of physiological systems, the weaker the biophotonic radiation. The value of the parameter Normalized Area, which reflects the extent of adaptation of the organism, decreases as well. The smaller this value is, the fewer the bodily resources for adaptation. As the stages of neoplasia progress, entropy increases; this reflects the balance of regulation. So, it can be argued that the distinguished regularities of the GDV parameters dynamically reflect a feature of the physiological systems of the body.

At the same time, we need to point out that these high values of the radius indices may be specific not only for cancer, but for other health issues as well. Further research will demonstrate whether it would be possible to distinguish cancer based on multiple GDV parameters.

The sensitivity of various non-invasive diagnostic methods for colon polyps detection ranges from 30 to 95%. However, these methods miss the small non-bleeding polyps. Often, they produce false-positive and false-negative results.

Table 1. Patterns of change in the parameters of the study groups with increasing degree of tumour.

Parameter	Control	Polypus	Cancer	
Control > Polypus > Cancer				
Normalized Area	$1.41 \pm 0.12$	1.27 ± 0.06*	1.09 ± 0.04**	

Table 2. GDV Sectors statistically distinguish between a control group and patients with gastric pathology, (p<0.05)

Inner noise	40.90 ±	31.11 ±	23.32 ±	
	3.00	2.51*	2.01*	
Isoline radius	14.21 ±	11.46 ±	$10.45 \pm$	
	0.45	0.32*	0.42*	
Intensity	$86.65 \pm$	$78.04 \pm$	$75.19 \pm$	
	0.12	0.08*	0.05*	
Control < Polypus < Cancer				
Inner circle	$46.05 \pm$	54.45 ±	59.37 ±	
radius	1.53	1.63*	1.04*	
Form	$11.14 \pm$	$17.46 \pm$	20.52	
Coefficient	0.54	0.60*	±0.45**	
Isoline	$1.60 \pm 0.021$	1.63±	1.71 ±	
fractality		0.04*	0.01*	
Isoline entropy	11 57 + 0 03	1.65±	$1.74 \pm$	
		0.02*	0.01*	
Isoline length	$950 \pm 27$	$1025 \pm 16*$	$1105 \pm 40*$	
Area	$9620 \pm 225$	10760	11427 ±	
		±21 <b>*</b>	11*	

Groups	Sectors
Control vs. all patients	Liver, Pancreas, Whole finger 3 and 4
Control vs. chronic gastritis	Liver, Gall bladder, Pancreas
Control vs. all cancer	Liver, Gall bladder, Pancreas, Whole finger 3 and 4
Chronic gastritis vs. cancer	Liver, Gall bladder, Whole finger 3 and 4

The sensitivity of various non-invasive diagnostic methods for colon polyps detection ranges from 30 to 95%. However, these methods miss the small non-bleeding polyps. Often, they produce false-positive and false-negative results.

Colonoscopy screening is referred to as the gold standard in some countries. Colonoscopy allows inspection of the whole colon and removal of the detected polyps. However, 'the method is time-consuming, rather expensive, requires bowel preparation, and is unpleasant for the patients. Virtual colonoscopy avoids painful bowel preparation performed in conventional colonoscopy. The sensitivity of this method in the analysis of polyps larger than 10 mm is 90%, while 80% for polyps of 5–9 mm in size, and 67% when the size of the polyp does not exceed 5 mm. Specificity of the method depends on the size of the tumours. However, along with the method of virtual colonoscopy has advantages, shortcomings, such as financial inaccessibility and the inability to perform a biopsy, thereby resulting in a standard colonoscopy. With GDV technology, we obtained sensitivity from 74% to 85%, and specificity from 66% to 77%. Thus, the results have proven the ability to identify patients with tumours of the colon using GDV technology, as well as use it for differential analysis of tumours of the colon by their morphology, size and quantity. Of course, this is only a preliminary study, and much research is required to find a reliable method for detecting colon tumours using the GDV technique. We need to point out that GDV testing in non-invasive, takes less than five minutes, and the equipment is relatively cheap and accessible. This opens up good prospects for further research for implementation of Electrophotonic Imaging analysis as a first step of the screening process.

We can draw the following conclusions based on the results of the cancer study with the GDV technology:

- 1. The results confirm the validity of the Bio-gram sector analysis: the most significant differences in the case of intestinal pathology were identified for sectors 'transverse colon' and 'ascending colon,' and in the case of intestinal pathology, for 'Liver' and 'Pancreas' sectors.
- 2. Identification of the difference between cancerous cases and noncancerous states is only possible on the basis of the complex analysis of different parameters, as a simple review of Bio-gram does not allow any conclusions.
- 3. E. Yakovleva's group constructed mathematical models, with an 80% chance to detect the presence of cancer of the intestine or stomach.

These models use all the identified options.

- 4. In 20% of cases, oncology is not detected, and in 20%, false conclusions are possible. This suggests that even in the case of suspected oncologic process, we can only recommend further detailed studies.
- 5. Bio-Well analysis allows one, in a few minutes, to give an opinion on the likelihood of having cancer process, while all the other studies (the most accurate—colonoscopy) occupy a lot of time, require special preparations for a few days, and are quite expensive.
- 6. Implementation of the methods developed in the complex Bio-Well programs requires passing a difficult, lengthy and expensive certification, which, moreover, has to be held separately in different countries.

The most important point is that oncology is not one disease, but many different ones. They are the same in the fact that in all cases the cells begin to proliferate uncontrollably, organize their own blood system, and begin to live within the body as a quasi-independent entity, until the death of the host. Cancer cells occur in the body all the time, and the immune system tracks and destroy them. But if the immune system is unable to do so, the tumour begins to grow.

The growth of the malignant tumour in the beginning is going on by multiplication of the primary germ cells, often as a result of breeding a primary tumour cell. Therefore, during a certain time, tumour growth remains a local process, and is in preclinical latent state. During this period, surgical and radiation therapy in many cases leads to complete recovery. Only after reaching a certain development, overcoming local tissue barriers, the tumour penetrates into the surrounding tissues, infiltrating and destroying them. At this stage, excision of the tumour does not always guarantee its recovery, since it is difficult to establish the boundary of the tumour. Of the remainder, even single tumour cells can resume malignant growth (relapse). If further growth of the tumour is not subjected to the treatment, a significant number of patients have secondary tumour nodules in other tissues and organs—metastases.

Stages of the malignancies defined by the Roman numerals (I, II, III, IV) reflect both tumour size and spread within the body (typically, germination depth) or its boundaries. The following classification of tumours was adopted in 1956, acting for the moment.

**Stage 0.** This stage describes cancer in situ, which means 'in place.' Stage 0 cancers are still located in the place they started and have not spread to nearby tissues. This stage of cancer is often highly curable, usually by removing the entire tumour with surgery.

**Stage I.** This stage is usually a small cancer or tumour that has not grown deeply into nearby tissues. It also has not spread to the lymph nodes or other parts of the body. It is often called early-stage cancer.

**Stages II and III.** These stages indicate larger cancers or tumours that have grown more deeply into nearby tissue. These may have also spread to lymph nodes, but not to other parts of the body.

**Stage IV.** This stage means that the cancer has spread to other organs or parts of the body. It may also be called advanced or metastatic cancer.

This generalized classification define tumours in stages. For specific locations (eyes, tongue, larynx, bronchi, etc.), the size of the tumour and the prevalence may be others. The variety of malignant tumour spread and growth is difficult to fit into these four stages. In order to develop an individual treatment plan, a more precise definition of the tumour incidence is required. For this, some locations are divided into subgroups: IIa, IIb, IIIa, IIIb, etc. Alphabet letters indicate the absence ('a') or the presence ('b') of the regional and distant metastases.

An international classification system of three letters—TNM—is widely used as well. The letter 'T' plus a number (0 to 4) describes the size and location of the tumour, including how much the tumour has grown into nearby tissues. The letter 'N' plus a number (0 to 3) describes whether cancer has been found in the lymph nodes. It may also describe how many of the lymph nodes contain cancer. The letter 'M' indicates whether the cancer has metastasized, or spread, to other parts of the body. For example:  $T_1N_0M_0$ —complies with Stage I;  $T_2N_1M_0$ —with Stage II;  $T_3N_2M_0$ —with Stage III; and  $T_4N_2M_0$  or  $T_1N_0M_1$ —with Stage IV.

Naturally, in each stage, the health status of patients is significantly different. In the last months of life for cancer patients, it is often seen that there is an increase in energy, people start feeling a lot better, their mood gets uplifted. In this state, the Bio-grams may look almost perfect. However, after a short time, people die. Apparently, this is the last attempt of the body to gather all forces and try to cope with the problem. Possibly,

sometimes it does help. For decades, scientists have been looking for the cause of cancer, and, in the end, all are agreed on the fact that there is no single cause. A lot of carcinogenic factors provoking the occurrence and development of tumours were found, and they include all hazardous environmental factors, which we mentioned earlier. Oncology is the reaction of the whole organism, and tumour occurs in the most vulnerable part of the body. In smokers and miners, it can be the lungs; in women, breast or pelvic organs; in overweight people, stomach and intestines.

Therefore, we strongly object to any conclusions about cancer on the basis of Bio-grams. The picture may depend on many factors that are difficult to take into account: cancer stage, treatments used, the level of human energy, and so on. In the analysis of cancer patients, the main task is to encourage the person to use additional methods of support by choosing the right food, minerals and dietary supplements. We know many cases when through meditation, exercise and special nutrition, people managed to stop the oncologic process, and we always advise patients to use all possible methods. But this does not guarantee results. We know cases where persons had been using all possible means, including the assistance of the best psychics—it delayed the process of development, but at the end, they had to resort to the standard treatment. What is without doubt is the contribution of stress in the occurrence and development of cancer. Permanent stress, as we have already discussed, weakens all the protective systems of the body, and acute stress may be a trigger for the development of cancer cells. First aid for cancer patients comprises reduction of stress and resolution of internal conflicts. As we will see in the example below, in some cases even regression therapy (return to previous lives) can play a pivotal role in the treatment process.

Modern medicine has made significant progress in the treatment of many types of cancer, using surgery, radio-, and chemotherapy, as well as special medications. In the early stages of many types of cancer, it may be almost completely cured, and people lead a normal life for many years. But, of course, more questions remain than answers. So, the task of the expert—not the oncologist—is to support the patient with additional methods (food and water are the key ingredients) during and after a standard course of treatment.

#### **YA KUT**

Age 85.

Malignant tumor in the ascending colon, polyps in the sigmoid colon. Chronic pyelonephritis on the right side, chronic cystitis, cyst in left kidney, and non-specific chronic gastritis. Stage 2 hypertension, high risk.

Stress 3.22 anxiety. Energy 60.4 normal. The energy reserve is 76% optimal, with emissions in areas of sigmoid colon mammary glands. 14 organ imbalances. Fingers: many cyst-like masses on fingers, especially in the kidney zone, and very aggressive on 2L. There is a high level of internal luminescence on the little finger. Conclusion: health problems for many years, described according to the principle of 4 bases of health, with a high reserve level, the prognosis is favorable. In many cancer cases, we can identify the primary problems and the level of chronic anxiety leading to the development of the cancer process. As noted above, energy is often increased before death - see the example below.

## **CANCER CASE FROM ANA OLIVA**

Age 72. Analysis: Leukemia, died of stroke two days after analysis. Stress 3.9 anxiety. Energy 53.5 normal. The energy reserve is 46% optimal, with emissions in vascular areas, mammary glands, and the liver. 12 organ imbalance. Bio-grams 4 types.

#### CANCER C

Similar situation. A woman died a month after this analysis.

#### **PROSTATE V**

Age 62. Prostate oncology was diagnosed one year ago. Palliative treatment. Stress 2.7 normal. Energy 46.9 normal. The energy reserve of 17% is very low, with several outliers. Bio-grams: in prostate oncology, patterns are evident on 2R 2L fingers. The severity of the patterns characterizes the stage of the disease.

# The danger of the electromagnetic environment and what to do with it

#### **Christian Bordes**

#### INTRODUCTION

As we practitioners all know, measuring living energy through a human being is certainly one of the most subtle existing practices. It is therefore essential to do everything possible to minimise what we might call parasitic influences. Of course, it is important to maintain a stable and non-excessive hygrometry, and to take into account barometric variations when there is a significant change in distance or altitude between 2 measurements, but one of the essential factors to control is the electromagnetic environment in which the Bio-Well measurement is carried out.

With over 40 years' clinical experience and 25 years' research in the field of electro-magnetism, I have to say that Bio-Well is a very interesting piece of technology for investigating this field. Indeed, we can compare the individual to a kind of ultra-sensitive antenna that will pick up many signals from the surrounding environment. In today's increasingly connected world, we feel it is essential to remind bioelectrographic practitioners of a few basic rules and a simplified procedure. It is only in this way, and by respecting these fundamental rules, that the biograms taken will prove to be the most accurate and the most significant of the patient's actual condition. To this end, we are going to review a few basic concepts linked to the most commonly used modern technologies, so that the reader realises just how much all these cumulative effects can ultimately impact on the person on whom we are taking measurements.

# ALL THE WAVES THAT SURROUND US... Wi-fi

The 802.11 technology was born in 1999 and was named Wi-Fi or Wifi (Wireless Fidelity) in 2019. You no longer need an Ethernet or USB cable to stay permanently connected to the Internet, whether at home or at work. The problem with Wi-Fi is that it radiates constantly, even when no device is using it. What's more, it emits microwave waves pulsed at 10Hz in

extreme low frequency (ELF), which are transmitted up to several metres from the transmitter (box, smartphone, etc.), depending on the speed and the environment. These waves are therefore different from hertzian radio and television waves. The frequency of Wi-Fi is the same as that of a microwave oven, i.e. 2.45 GHz (the frequency at which water molecules vibrate). Would you like to put your head in a microwave oven?

You may have heard the story of Bethany Rosser, a young British woman who nearly lost her eye while cooking eggs in a microwave oven. The 10 Hz frequency emitted by Wi-Fi disrupts our brain rhythms. There are a number of free applications that allow you to analyse the Wi-Fi networks around you, such as "Wifi Analyser" on Android. If you decide not to use Wi-Fi in your home or office, you may well be affected by your neighbours' Wi-Fi. Wi-Fi is therefore invisible, yet it is there. It passes through our bodies. People who are sensitive to the waves experience discomfort, pain and headaches. If you need to have a wireless connection, you can switch on the Wi-Fi only when you need it. In this way, you can reduce the impact on your body, that of your loved ones, your neighbours, your animals and plants. We need to remember that if Wi-Fi is activated during the Bio-Well measurement, the patient will feel it and the image will potentially be modified according to the individual sensitivity.

# **DECT / Cordless telephones (often used in the office)**

DECT (Digital Enhanced Cordless Telecommunications) is the cordless phone you may have in your office. It is so named because DECT is the European standard for digital wireless communication systems. This telephone is certainly very practical for its user, but the pollution it creates inside the home is 3 to 4 times greater than that emanating from relay antennas outside. It operates at high frequencies from 1.88 -1.9 Ghz. It has a range of around 200 metres. It uses the same Wi-Fi technology. DECT is a major source of high-frequency interference. The symptoms it causes for sensitive people are headaches, fatigue, heart palpitations and problems with concentration and sleep. In October 2010, Dr Magda Havas and colleaguesin a double-blind study, published in the European Journal of Oncology Library, demonstrated that radiation from a DECT base station affects the heart. Some people are more sensitive to microwave radiation and have an irregular or rapid heartbeat when they come into contact with it. Professor Lennart Hardell, a cancer specialist at Örebro University

Hospital in Sweden, says that DECT is just as dangerous as a mobile phone: "Although people treat a DECT phone as if it were an ordinary landline, its base station emits radiation with health risks that are the same as for a mobile phone". Dr Andrew Goldsworthy, professor of biology at Imperial College London, explains that "when you have a DECT in your home the effect is double, because the base station is powered up emitting radiation 24 hours a day and every time you pick up the handset you are also sending more radiation into your skull".

We therefore advise extreme caution when using it held against the ear for prolonged periods. In this case, it is preferable to use the loudspeaker during a conversation. We have personally carried out laboratory tests using various instruments, including the Bio-Well camera. During a conversation on a GSM or DECT mobile phone, we have observed that the body's energy can be severely damaged in just a few minutes for sensitive subjects. Practitioners equipped with Bio-Well can easily verify this using the One Finger programme by scanning the left ring finger.

#### Bluetooth

Bluetooth was created in 1994 by Jaap Haarsten. The Swedish company Ericsson had given him the task of finding a solution for short-range radio connections that would enable the company to differentiate itself from its competitors by adding new functionalities to mobile phones. A well-known 10th-century Viking king, Harald Ier of Denmark who managed to conquer and unify Norway and Denmark, known as "Harald the Blue Tooth", gave his name to this technology. Bluetooth is a frequency hopping technology that operates in a 2.45 GHz. To avoid the risk of interference with other technologies such as Wi-Fi, the system changes frequencies every two seconds. That's why Bluetooth constantly searches for any devices that want to communicate with it. In 2010, Bluetooth LE technology, also known as BLE, Bluetooth Low Energy or Bluetooth Smart, the low-power variant of standard Bluetooth was introduced. Using BLE the battery in the device last longer.

#### The 5G mobile network

5G technology (mobile phone + fast voice and data) has a frequency band between 3.5 and 100 GHz. The US army's millimetre-wave weapons radiate at a frequency of 95 GHz. After 3G, we had 4G, which we all know, and now in certain towns and cities they are experimenting with 5G until it

can be deployed nationwide. Other countries are doing the same, despite strong resistance from the general public, as in Switzerland, where associations made up of doctors, engineers and researchers are united in their opposition to this supposedly cutting-edge technology. The federal state of Florida has passed a law authorising mobile phone operators to install 5G antennas everywhere, without authorisation, with the exception of Palm Beach, home to Bill Gates and Donald Trump. For the record, Bill Gates, the person who is "very into" new technologies, in an interview with MIRROR told that he had forbidden his three children to have a mobile phone before the age of 14. He also warned them against using the computer late at night. The same goes for meal-times: no mobile phones at the table... The article on France TV info47 clearly shows that other Silicon Valley bosses limit their children's use of new technologies, believing that this could influence their development. In 2010, Steve Jobs confessed in the New York Times interview: "At home, we limit the use of technological gadgets".

# Power Line Communication (PLC), used in Linky meters and other devices

It transforms the domestic electrical network into a computer network without drilling holes in the walls to run network cables. All you need is plug a powerline plug into a mains socket and connect it to the box via an Ethernet cable. The problem with PLC is that it sends a high-frequency signal between 3 and 30 MHz, superimposed on the home's 50-60 Hz electrical network. This generates dirty electricity or environmental exposure to high-frequency voltage transients (HFVT). This difference will induce a radiative effect that will spread from all the electrical wiring built into the walls of the house. Just for information, a house or flat of 100 square metres on the ground has around 600 linear metres of sheathing and cables in the walls. This creates a huge electromagnetic loop, a real induction circuit, which people are constantly subjected to day and night. PLC is not the only culprit in the production of this dirty electricity. It is also the source of electricity from household appliances, dimmers, smart meters (Linky, for example), compact fluorescent lamps, plasma televisions, computers, photocopiers, photovoltaic panel inverters and many others. Electricity network cables are rarely shielded. The cost is our longterm health.

# WHY ELECTROMAGNETIC WAVES AFFECT OUR BODIES The blood-brain barrier (BBB)

Aubineau, Professor Pierre leading a neuroscience and neurophysiology researcher and director of research at CNRS, has demonstrated the harmful effects of mobile phones on the brains of rats. The experiment revealed the presence of mini oedemas and inflammation of the meningeal system. Professor Aubineau took the experiment down to 0.12 W/kg. At this intensity, the BBB (blood-brain barrier) remained completely impermeable. He points out that the rupture of the BBB is a transitory phenomenon, but despite this, the major risk is that the toxic substances that have reached the meningeal structures will remain there for a long time. The same applies to potentially carcinogenic cells that could remain trapped in the brain. On the basis of these experiments, mobile phone manufacturers should ensure that they only produce models emitting less than 0.12W/kg. Very recently, the SARs (Specific Absorption Rates) of certain models have been revised downwards.

#### **Cell function**

The cell is a veritable oscillating circuit. It is made up of 2 membranes (cell and nuclear) and between the 2 membranes the cytoplasm and protoplasm (nuclear) housing the DNA. According to the experts, this circuit "vibrates" at frequencies ranging from 7 to 72 Hz. The cell functions by means of EMFs that allow the passage of ions from the internal environment to the external environment and vice versa, to remove waste products from the cell's metabolism. These fields, which are specific to the cell, are disturbed by artificial EMFs. Particularly if they are very powerful and prolonged. After 2 hours' exposure to EMF, the BBB (blood-brain barrier) opens up. The vascular wall of the vessels in the dura mater becomes permeable. An oedema is formed due to the increase in proteins thermal shock.

# **ELECTROMAGNETIC HYPERSENSITIVITY (EHS)**

With almost 40 years' clinical experience with my patients to date, I would like to share some of my experiences over the last 25 years of research into EHS. Among the many symptoms mentioned by patients, the ones that come up most often are: frequent headaches, tiredness, insomnia, nervous breakdowns for no known reason, an 'empty' head, loss of balance,

neck pain, multiple aches and pains, concentration problems, feelings of tightness, heart rhythm disorders, neurodegenerative disorders, tinnitus, fibromyalgia syndrome.... As this non-exhaustive list shows, we are all potential EHS sufferers! This correlates with the **WHO definition:** "EHS is characterised by a variety of symptoms that affected individuals attribute to exposure to EMFs. The symptoms most frequently presented include dermatological symptoms (redness, tingling and burning sensations), neurasthenic and vegetative symptoms (fatigue, lassitude, difficulty concentrating, dizziness, nausea, heart palpitations and digestive problems). This set of symptoms is not part of any recognised syndrome".

## **Protocol for assessing EHS**

The major problem with differential analysis for doctors and carers is that these symptoms can often be "linked" to other causes or pathologies. And if EHS is not diagnosed right away, patients can lose months or even years of precious time in medical wandering, 'bouncing' from doctor to doctor and specialist to specialist, multiplying the number of costly tests and putting a further strain on the social security deficit! All this is because this approach to EHS is not yet known in "official" academic circles. Here we quote the title of a book by Dr Georges Pourtalet (a Parisian surgeon): "The body has its reasons that medicine ignores". Given the obvious lack of diagnostic approach in this field, here is the protocol I have developed over the years.

1. Medical history. 2. Testing. 3. Measurement of muscle tone or neurotonus. 4. Joint amplitude test. 5. Blood oxygen saturation and pulse measurement. 6. Induced body tension test. 7. Bio-Well electrophotonic imaging. 8. Blood tests on darkfield microscope. 9. Blood bioassays. 10. Pulsed cerebral Eco Doppler imaging.

Of course, biolelectrography practitioners who have not been trained in these different tests may initially be satisfied with the medical history and Bio-Well.

## Electrosmog in your workplace during Bio-Well measurements

In our opinion, it's important to check the ambient electro-smog regularly: bear in mind that NOTHING is set in stone, and that everything moves or may move in the near future. To do this, you can also check the ambient electrosmog yourself using reliable measurements, with or without the help of a professional. For measuring high frequencies, and after having

Acoustimeter to any other model. It covers frequencies from 200MHz to 8GHz. This field strength meter, used by many experts and private individuals for part of their investigations, is ultra-easy to use. This type of measurement gives us an immediate indication of the level of nuisance and lets us know whether our bodies are potentially at risk. As its name suggests, it produces a sound that becomes louder as the nuisance increases, so we don't have to keep looking at the screen when we need to cover large areas of floor space. The body's energetic, circulatory, nervous and glandular systems compensate for as long as they can, then eventually 'give out', creating an unbearable sense of unease for some people. Without getting to that point, we're going to try and look together at the simplest and most suitable solutions to this kind of situation. Even if you don't feel the physical impact of these waves, it's better to be cautious and take action beforehand to reduce them.

#### **Solutions**

Once all these contaminants have been diagnosed, solutions are proposed to eliminate or reduce the pollution. You can find some of them at the end of this chapter, but there are many more. New technologies and new types of pollution require new solutions to be developed. The most important thing is to find those that will reduce pollution inside your office and/or home.

- 1-Reduce sources (switch off, unplug, etc.)
- 2- Eliminate sources (PLC, light bulbs, Wi-Fi, Bluetooth, etc.)
- 3- Move away from sources (move furniture, desk, etc.)
- 4- Add protection (Absoplug, Absomagnet, filters, IAC, etc.)

## Simple steps to reduce exposure

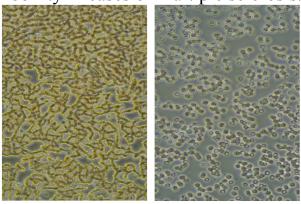
- Turn on your Wi-Fi only when you need it and ground it.
- Ground your laptop or desktop computer.
- Connect the power supplies for your lights in the direction that will cut off the phase.
- Replace DECT telephones with Eco versions or corded telephones.
- Opt for the right reflexes when using a mobile phone.
- Walk barefoot on grass or conductive ground whenever possible.

### Laptop or desktop computer

When using a laptop or desktop computer, it is preferable for it to be grounded. The computer should therefore have a power cable with an grounding plug. You should also make sure that the socket where the computer is plugged in is grounded. To more efficient protect yourself, the use of a wired keyboard and a wired mouse is strongly recommended. The electronic components (motherboard, hard disk, processor, etc.) of the computer below the keyboard and pad radiate a magnetic field. The electric field is reduced or cancelled out by grounding, but the magnetic field persists.

#### The effects of earthing

This imaging enables us to see the impact of EMFs and how these effects are cancelled out by earthing. Among the clinical cases we have observed are the following: Improved sleep; Reduction in chronic fatigue; Disappearance of headaches, muscle and joint pain, sleep apnoea, and snoring; Improved mobility in cases of multiple sclerosis.



# Blood dark field microscopy before and 5 minutes after earthing **PARAMETERS THAT SHOULD ALERT US ON BIO-WELL ANALYSIS**

One of the biggest advantages of Bio-Well technology is the fact that we can detect early signs in patients. In fact, the subtlety of electrophotonic measurement allows us to screen for the energy of specific points, of which there are 6 in all.

#### 1- The vessels in the cerebral zone

These will generally appear in the central pink zone (energy void) on both the zone and energy diagrams. The phenomenon will generally be more marked on the energy diagram. The most recent scientific studies on the subject tell us that electrosensitivity leads to long-term cerebral hypoperfusion. This has been amply demonstrated by the work of Paris' radiologist Dr Lebar.

### 2- The epiphysis (or pineal gland)

Epiphysis or pineal gland is our body's internal clock, when its functioning is disrupted, it leads to insomnia or hyperactivity. Certain types of electromagnetic field could interfere with the nocturnal production of melatonin via the pineal gland. Tiny magnetite and apatite crystals, present in large quantities in the brain, influence the epiphyseal zone under the influence of EMF. A full scientific dossier on this subject is available in www.electrosensible.solutions website. Dr Klinghardt (<u>www.klinghardtinstitute.com</u>) has produced a number of videos explaining the impact of EMFs on the pineal gland. For us bioelectrography practitioners, after a certain period of exposure we observe a collapse in the energy of the pineal gland, both on the zone diagram and on the energy diagram. When we ask our patients about this, they regularly report recurrent sleep problems, even to the point of insomnia.

### 3- The adrenal glands

The function of the adrenal glands is adaptation to the stress situation. At the very start of exposure to EMFs, the adrenal glands will show hyperfunction in the histograms of the balance programme. This will indicate orthosympathetic dominance in relation to activation of these two glands. After an indeterminate period of time, depending on the individual, the adrenal function will eventually be exhausted, and will go into parasympatonic state. We will then see histograms with a dominant right-hand blue column (n°8). This indicates a state of exhaustion with reduced reactivity of this system.

#### 4-Internal noise

Noise (which corresponds to a pixelation inside the inner circle) generally constitutes an accumulation of electromagnetic field inside our body. This electrostatic phenomenon ends up disturbing all the energy systems. This is a reflection of hyperactivation of the body systems, which can end up over the long term exhausting the mitochondrial system, the body's energy reserve. In such cases, we recommend systematic earthing, combined with electromagnetic pollution control systems such as absomagnet and absoplug.

### 5- A sometimes unexplained increase in stress

Often, when we question the patient, it is not clear what is a cause of the excessive stress. The patient's stress scale values are generally higher than 4, which should alert us. Stress hormones such as histamine generally rise sharply, and can reveal abnormal values in an apparently unstressed individual.

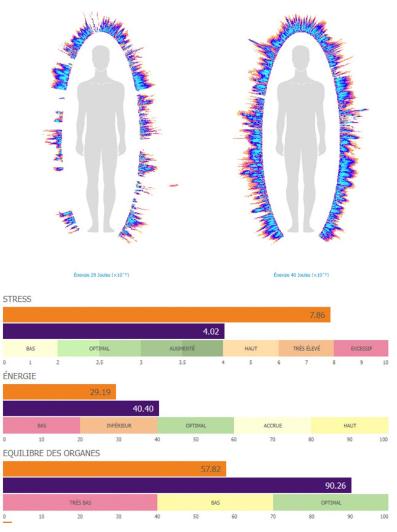
### 6- High energy

The notion of energy in the Bio-Well system must be interpreted logically. If we observe a high energy level of over 60 in a sedentary individual with a rather lymphatic temperament, we should immediately ask ourselves what could justify such a high energy level. To put it simply, high energy in a marathon runner or sprinter is justifiable and logical. Whereas high energy levels in a sedentary, asthenic type of person are not to be expected. This can be explained by a phenomenon of activation of the body's energy systems, as if the body is "under tension". In this case, the advice is the same as above. If we observe a rapid and significant reduction in stress, we can conclude that this high energy level was the result of an equally high level of electromagnetic stress. Pictures present two cases of patients seriously affected by hyper electrosensitivity.

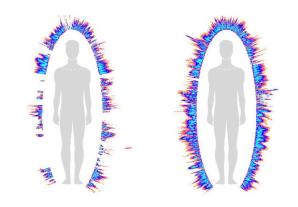
### Conclusion of this chapter

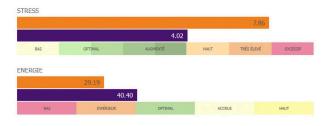
Here is a summary of the important points to consider in the Bio-Well analysis. In fact, the fusion of this measurement tool, incomparable in its finesse and responsiveness, enables the experienced practitioner to be informed of any energetic imbalance which may subsequently lead to more serious functional disorders. Prevention first and foremost. Bio-grams can reveal functional energy imbalances well in advance, gradually affecting the body's homeostasis. If these phenomena are not identified early enough, they can lead to a veritable pathology referred to by some as "wave illness" and by others as "electro-hypersensitivity". Whatever the name, the symptoms experienced by people suffering from this condition make it impossible for them to lead a normal life, reducing them to a state of great suffering and, above all, incomprehension on the part of the medical world, which is still untrained in this approach. It is therefore essential for us, bioelectrography practitioners, to detect the early warning signs of the six points above.

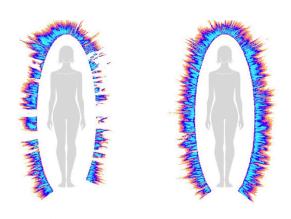
# For more information on pollution control systems see <a href="https://www.quantumprevent.com">www.quantumprevent.com</a> <a href="https://www.alti-sante.com">www.alti-sante.com</a> <a href="https://www.alti-sante.com">bordes.christian@gmail.com</a>

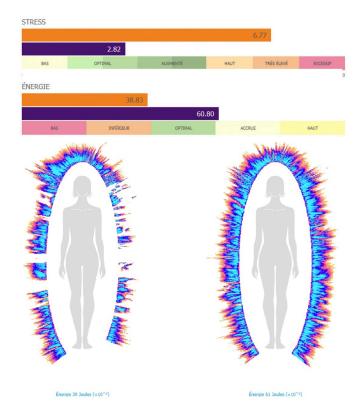


Cases before and after earthing













# Conclusion

The GDV method has been in development for almost 30 years. In 1995 the first GDV machine was produced and immediately sold to England. We built it at home with our own hands and the first software was made by my friends. The interest in the device was due to the fact that it was a digital version of the Kirlian effect, which was very popular in the world. At the beginning of the 90s, the Internet appeared and it became possible to develop a new line of instruments and communicate with colleagues all over the world. As a result, the appearance of the first GDV device became widely known and interest was quite high. Encouraged by the initial success, I founded the company KTI (Kirlian Technologies International) and we started production of GDV devices in Russia. But the principles of analysis and the reliability of the results were very questionable. We had to build a clinical base, but where? And here we were lucky. An eminent doctor, Academician Gleb Borisovich Fedoseev, Head of the Department of Hospital Therapy at St Petersburg Pavlov Medical University, became interested in the device. He conducted research on bronchial asthma at the department under the supervision of Professor Rosalia Alexandrovna Alexandrova. The method proved its effectiveness, articles were published, PhD theses were defended and a manual on the use of the GDV method in medicine was published. Unfortunately, when Gleb Borisovich left the chair because of his age, the work stopped. But research continued at other Universities and research institutes. An incomplete list includes:

- Medical Moscow University
- Medical Novosibirsk University
- Rostov Institute of Obstetrics and Gynecology
- Military Medical Academy St. Petersburg
- ITMO University, St. Petersburg
- Polytechnic University, St. Petersburg
- Human Brain Institute, S. Petersburg
- Research Institute of Physical Culture, S. Petersburg
- Belarusian National Institute of Sport
- National Institute of Oncology, Georgia

- National Institute of Health, USA
- University of London, GB
- University of Alabama, USA
- Osteopath Institute, France
- Kazakhstan Research Institute of Oncology and Radiology,

#### Kazakhstan

- International Institute of Postgraduate Education, Kazakhstan.

In all these organizations interesting results have been obtained, articles have been published and PhD theses have been defended. In general, it should be noted that in all these years there has not been single negative feedback about the operation of the device. Some people liked it or disliked it, that is a personal matter, but everyone who started working with it found it interesting.

So, all our conclusions are based on solid science. Many publications can be found at www.iumab.club.

Attempts have been made to introduce the GDV method into the health care system. However, they have not been successful. The point is that the interpretation of the results is based on the ideas of Traditional Chinese Medicine, Ayurveda and the Korean Su-Jok method. Therefore, if a person does not accept the idea of energy meridians and biologically active points, he will consider the GDV method as pseudoscience (despite all the publications and dissertations). We had to face this for many years at the highest level. But we have continued to develop despite all the obstacles, and it is good that there are many people who are open to new ideas. The processing of information on the server and the creation of the Bio-Well device in 2014 opened up new perspectives for the application of the method. This project we are running together with the company Gaia (www.gaia.com).

At present, thanks to the efforts of many specialists, we have achieved a good understanding of the principles of results analysis, and the effectiveness of the method in various fields is beyond doubt. The main fields of application of Bio-Well GDV devices have been formed.

This is first of all the **analysis of the psychophysiological state** of a person. There is a lot of experience in this field. An experienced Bio-Well user can identify the weak zones of the organism, determine the degree of their aggressiveness and advise a person on further steps. Psychological

analysis with identification of the type of nervous system activity is quite accurate.

Equally important is the **monitoring of the body's reactions** to various influences, from taking medication to meditation and mental training. This approach allows you to monitor your condition and identify moments that require attention.

Consciousness Research. We have been developing this field for many years, experimentally investigating the effects of consciousness, directed attention, meditation, remote healing, and other processes that lie beyond the boundaries of the scientific paradigm. Developed techniques allow many interested people to participate in this process on their own.

**Sport**. The Ministry of Sport of Russia has recognized Bio-Well as one of the basic devices for researching the state of athletes of Olympic and Paralympic teams. Many papers have been published, mostly in Russian, but some materials can be found in English.

**Environment**. The Sputnik sensor has shown high sensitivity in the study of geoactive zones, ancient monuments, geophysical phenomena. This is a new approach to study Mother-Earth and our interaction with it. We still have a lot to understand and learn, but it is a fascinating process of unravelling the mysteries of the world around us.

**Liquids and Materials.** The Bio-Well Water Sensor allows us to compare different types of water and identify the possible influence of different devices on water. We get even more information with the Bio-Well Element device, which allows us to study not only different liquids, but virtually any object that is placed on the electrode. In particular, cats and dogs.

Our main centers are in the USA and Spain, while new developments and testing of ideas are carried out in Russia. Bio-Well devices are manufactured in China thanks to our friends and partners. We are constantly developing and trying to stay one step ahead of potential competitors.

Bio-Well is a method that has proven its effectiveness in many directions, but the main achievement is our representatives in more than 75 countries and thousands of users who use Bio-Well in their daily practice. There is no doubt that recognition will grow in the coming years and more and more professionals will join our team.