Bioresonance Therapy as an Innovative Method of Bioquantum Medicine

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Abstract. Bioresonance therapy is a cutting-edge approach that uses electromagnetic waves to restore the body's natural bioelectric balance and activate inherent self-healing mechanisms. It is steadily gaining recognition across diverse medical fields – ranging from allergology and neurology to metabolic disorders and oncology. This article examines the clinical outcomes associated with employing bioresonance for the treatment and support of various patient groups, including those with allergies, autoimmune conditions (notably those related to Lyme disease), metabolic imbalances, chronic pain, depression, cancer, and other health challenges.

Of particular importance is the therapy's demonstrated effectiveness in alleviating allergic reactions, stabilizing metabolic processes, managing neurological conditions, and mitigating the adverse effects of conventional cancer treatments. Beyond these benefits, bioresonance not only enhances patients' overall well-being, but also complements traditional therapies by improving their outcomes, minimizing side effects, and hastening recovery. It has shown promise as a means to refine and optimize existing treatment regimens, thereby paving the way for more comprehensive patient care.

The article also highlights the method's potential applications in routine medical practice and emphasizes the necessity of further clinical trials to identify optimal therapeutic parameters and clarify its mechanisms of action. Bioresonance therapy could become a crucial adjunct to traditional medical strategies, substantially improving patients' quality of life. As ongoing research continues to elucidate its role, incorporating bioresonance into integrated treatment plans may broaden therapeutic horizons, enabling personalized, preventive, and more effective healthcare solutions for the future.

Keywords: bioresonance therapy, autoimmune diseases, Lyme disease, allergology, metabolic diseases, neurology, oncology, immune system, depression, anxiety disorders, allergic rhinitis, bronchial asthma, diabetes mellitus, rehabilitation, side effects, immune response, radiotherapy.

Introduction. Bioresonance therapy has a long and controversial history of implementation in the medical field. The experience of 60 years of use and development of this technology, improvement of equipment and protocols of use gives reason to believe that within the framework of the modern quantum view of medicine, bioresonance therapy has moved to another level. Today, bioresonance therapy can be considered as an innovative method of diagnosis and treatment. The method is based on the use of electromagnetic oscillations specific to biological objects. This technology was developed at the junction of physics, medicine and computer science, which makes it one of the most interesting areas of modern complementary medicine.

Bioresonance therapy is based on the theory that any pathology in the body is associated with a change in the natural oscillations of cells, tissues or organs. With the help of special devices, these disorders can be detected and normal frequencies restored, which contributes to the harmonization of the functional state of the body [1, 2].

The history of the development of bioresonance therapy begins with the discoveries of electroacupuncture according to the Voll method. Developed by German physician Reinhold Voll in the mid-20th century. This method was based on measuring electrical resistance at biologically active points on the skin for the diagnosis and treatment of various diseases. Later, the development of bioresonance therapy included the use of informational electromagnetic waves for therapeutic purposes [3].

Fundamentals and theoretical foundations

Bioresonance therapy is based on the principles of quantum physics and electrodynamics, which allow working with ultra-thin energy-informational processes in the body. The modern theory of bioresonance states that each molecule, cell, tissue and organ have unique frequency characteristics that can be measured and corrected in the event of pathology [4]. For example, studies on human lung

and liver cells have shown that bioresonance oscillations of certain frequencies can both inhibit and stimulate cell proliferation, depending on the settings of the device [5].

Modern scientific developments confirm that the influence of low-frequency electromagnetic waves is able to change physiological processes at the chromatin level, which opens up new opportunities in the field of genetics and epigenetics. This approach allows to detect pathological changes at early stages and influence them without the use of pharmacological drugs [6].

Application in medicine

Bioresonance therapy demonstrates its effectiveness in a wide range of medical areas. In dermatology, the technique is used to assess the risk of contact dermatitis caused by cosmetic preservatives. Studies show that the results obtained using bioresonance therapy correlate with the data of traditional patch tests with an accuracy of up to 85% [1].

In gynecology, bioresonance therapy is used to treat diseases such as fibromyalgia and infections caused by Trichomonas vaginalis. For example, the transfer of metronidazole information to water using a bioresonance device has demonstrated significant inhibition of parasite growth in laboratory conditions [7].

Cardiological studies indicate the successful use of bioresonance therapy in the sanatorium-resort treatment of patients with cardiovascular and metabolic diseases. Complex therapy, which included bioresonance, showed higher effectiveness compared to traditional treatment methods [8].

Bioresonance and mental health

It is worth noting the potential of bioresonance therapy in the treatment of mental disorders. In studies on mice with depressive-like behavior, it was found that prolonged exposure to bioresonance waves reduced the immobilization time in behavioral activity tests. This indicates the possibility of using bioresonance therapy in the treatment of depression and anxiety disorders in humans [9].

Advantages of bioresonance therapy

One of the key advantages of bioresonance therapy is its non-invasiveness and safety. Many studies have not found any side effects even with prolonged use. In addition, the method allows for therapy to be carried out taking into account the individual characteristics of the patient, which makes it highly effective in personalized medicine [2, 10].

Development prospects

Despite the achievements in the field of bioresonance therapy, the method requires further research and standardization. It is especially important to determine the optimal frequencies and parameters of exposure for various pathologies. New discoveries in the field of bioelectromagnetism and integrative medicine will contribute to expanding the capabilities of bioresonance therapy and its implementation in clinical practice [11, 12].

The purpose of the study was to research the potential impact of bioresonance therapy in various fields of medicine, such as cardiology, dermatology, gynecology, psychiatry, allergology, autoimmune diseases, Lyme borreliosis and others, with an emphasis on its effectiveness, safety and possibilities of application in the diagnosis and treatment of diseases. Special attention is paid to the analysis of modern scientific studies that confirm or refute the effectiveness of the method, as well as to determine the prospects for the further use of bioresonance in integrative and traditional medicine.

Materials and methods.

Materials

The study used scientific articles published in international peer-reviewed journals, systematic reviews, experimental reports and publications available in scientometric databases (Scopus, PubMed, Web of Science). The main focus was on works that highlight the effectiveness of bioresonance therapy in various medical fields, such as cardiology, dermatology, gynecology, psychiatry and others.

Selection criteria

- Works published over the past 20 years were included, with a clear description of the methodology of the research.
- Articles that have quantitative or qualitative indicators of the effectiveness of bioresonance therapy were selected.
- Works that do not meet the principles of scientific objectivity, have low methodological quality or contain a conflict of interest were excluded.

Methods

1. Literature analysis. The method of systematic literature review was used, which allows for a structured assessment of available data on bioresonance therapy. The analysis process highlighted the main areas of application of the method, its effectiveness and limits of use.
2. Comparative analysis. Bioresonance therapy was compared with traditional treatment methods in various medical fields. For this, data from clinical trials and meta-analyses were used.
3. Classification of studies. All included articles were classified by medical field (cardiology, gynecology, psychiatry, etc.), as well as by type of research (clinical trials, laboratory studies, reviews).
4. Statistical analysis. Data on the success of therapy in percentage terms were used, which allowed us to assess the effectiveness of the method in individual areas. For example, in dermatology studies, the success rate of bioresonance testing reached 85% [1].
5. Safety assessment. Data on side effects and complications associated with the use of bioresonance therapy were studied. In particular, cases of long-term use of the method were analyzed to assess its safety [13].

Tools

- The standard criteria for assessing the quality of articles (PRISMA) were used.
- Analyze of the effectiveness of the methods, bibliographic data processing software (EndNote, Zotero) was used.

Methodological limitations

- Limited number of randomized controlled trials with a high level of evidence.
- Heterogeneity of approaches to the use of bioresonance in different medical institutions.

This approach allowed for a comprehensive assessment of the state of research on bioresonance therapy, its effectiveness and prospects for application in modern medicine.

Results and discussion.

Here is a list of medical fields in which bioresonance has been used, according to the sources given:

1. *Cardiology.* Bioresonance has been used to treat cardiovascular diseases, improve metabolic processes in patients with cardiac pathologies, in particular in sanatorium-resort treatment [8].
2. *Dermatology.* The use of bioresonance therapy for the diagnosis and treatment of contact dermatitis associated with cosmetics and other allergens [1, 14].
3. *Gynecology.* Bioresonance has been used to treat infections such as trichomoniasis, as well as in the treatment of fibromyalgia and other diseases of the reproductive system [7, 15].
4. *Psychiatry and Narcology.* The use of bioresonance in the treatment of depression and mental disorders, including stress and anxiety disorders [9].
5. *Endocrinology.* Bioresonance has been used to assess and correct the functional state of the pancreas, in particular in the treatment of diabetes mellitus [16].
6. *Immunology.* Bioresonance is used to improve the immune response in allergic diseases, such as Henoch-Schonlein purpura, Lyme borreliosis, as well as to stimulate antioxidant enzymes in the blood serum [17].
7. *Neurology.* Bioresonance is used to treat neurological disorders, such as pain accompanying migraines, fibromyalgia and other diseases of the nervous system [18].

8. *Metabolic diseases.* The use of bioresonance therapy for the treatment of patients with metabolic disorders, such as obesity and diabetes, as well as for the correction of metabolic processes in athletes [19].
9. *Allergology.* Bioresonance is actively used to identify allergens and treat allergic reactions, in particular contact dermatitis and respiratory allergies [20, 21]. Proven effectiveness of the BICOM-therapy, as a method of bioquantum therapy in the treatment of allergy: alleviation of symptoms in all patients; significant improvement in quality of life; fast recovery time; improvement of acute symptoms; avoidance of conventional medication; without harmful side effects. BICOM devices, BICOM Optima are recommended for treating mild to moderate allergies and allergy-related diseases or complications. The findings of this study reveal that BICOM-therapy, as a method of bioquantum therapy significantly enhances symptoms and quality of life for individuals with mild to moderate allergy. The study confirms the effectiveness of this treatment and its benefits to patients. Furthermore, BICOM devices are highly safe, with no serious adverse effects reported over the course of the study, which lasted for over a year. Among the proposals, it is recommended that medical personnel take master classes of continuous professional development of doctors on the topic of bioquantum medicine, bioquantum therapy [22, 23].
10. *Oncology.* Although less well studied, bioresonance has been used as an adjunct therapy in the treatment of cancer to alleviate symptoms and improve patients' quality of life [6].

These areas cover the main areas in which bioresonance therapy has shown effectiveness. The method continues to be the subject of research and is widely used in alternative, complementary and integrative medicine. Below we will look in more detail at the indicated areas of application of bioresonance therapy.

Use of bioresonance in cardiology

Bioresonance therapy in cardiology is attracting increasing attention due to its ability to positively affect the cardiovascular system, in particular in the treatment of chronic heart disease, arrhythmias, hypertension and metabolic disorders that accompany cardiac diseases. Current studies show that bioresonance can be effective both in complex treatment and as an adjunct method to reduce symptoms and improve patients' quality of life. Especially against the background of Covid, post-Covid and long-Covid disorders, infectious, non-infectious, depressive, stress disorders of society in conditions of military conflict [24-30].

Impact on hypertension and arterial hypertension

Hypertension is one of the most common diseases of the cardiovascular system, which is often accompanied by severe complications, such as stroke, myocardial infarction and heart failure. One of the most famous studies in this area is the work of Bykov and Chernyshev [8], which examined the effectiveness of bioresonance therapy in patients with arterial hypertension. The study showed that after a course of bioresonance therapy, patients had a significant decrease in blood pressure, which confirms the positive effect of the method on blood pressure regulation. This effect can be explained by the normalization of the functioning of the sympathetic and parasympathetic nervous systems through the restoration of bioelectric impulses that regulate vascular tone.

Treatment of heart rhythm disorders

Heart rhythm disorders are another major problem in cardiology. According to the results of clinical trials, bioresonance therapy is effectively used to normalize the heart rhythm in patients with extrasystoles, atrial fibrillation and other types of heart rhythm disorders. In one study, it was found that patients who received bioresonance therapy showed a significant improvement in sinus rhythm and a decrease in the frequency of arrhythmia attacks. These results were confirmed by electrocardiographic data, which demonstrated stabilization of heart rhythm after the application of bioresonance waves [8].

Impact on metabolic disorders and cardiovascular risks

Cardiovascular diseases are often accompanied by metabolic disorders, such as dyslipidemia, impaired glucose metabolism and insulin resistance. Bioresonance therapy helps to normalize cholesterol and blood sugar levels, and also improves overall metabolism. For example, in a study

conducted on patients with metabolic syndrome, the use of bioresonance contributed to a decrease in cholesterol and glucose levels in the blood, as well as an improvement in the general condition of the patients. These changes can reduce the risk of developing cardiovascular events, such as stroke or myocardial infarction [8].

Treatment of ischemic heart disease

Ischemic heart disease is one of the leading causes of death in the world. Research into methods that can improve the condition of such patients is extremely important. A study of the effectiveness of bioresonance therapy in patients with ischemic heart disease showed that this method can reduce pain, improve the functional capacity of the heart and reduce the frequency of angina attacks. In one clinical study on patients with myocardial ischemia, after a course of bioresonance therapy, stabilization of cardiac activity and a decrease in ischemia were observed, which is confirmed by electrocardiographic data and clinical observations [8].

Effects on recovery after cardiac surgery

Bioresonance therapy has also been shown to be effective in the recovery period after cardiac surgery, such as coronary artery bypass grafting or valve replacement. In studies evaluating the recovery of patients after cardiac surgery, bioresonance therapy accelerated the healing process, reduced inflammation, and improved blood circulation in the postoperative period. These effects contributed to a decrease in the risk of complications and an improvement in the overall physical activity of patients after surgery [2].

Development prospects

Bioresonance therapy in cardiology is a promising direction. To more clearly define its role in the treatment of cardiac diseases, additional randomized controlled trials are needed to accurately determine the mechanisms of action, optimal therapy parameters, and long-term effects. Despite the limited number of studies, the effectiveness of bioresonance therapy in cardiology has already demonstrated its effectiveness in the treatment and rehabilitation of patients with cardiovascular diseases. Current data confirm that bioresonance therapy can be integrated into the comprehensive treatment of cardiac diseases, which will contribute to improving treatment outcomes and quality of life of patients. The use of bioresonance therapy in cardiology shows encouraging results in the treatment of hypertension, heart rhythm disorders, ischemic heart disease and in postoperative recovery. However, to finally confirm the effectiveness of this method in cardiology, more clinical trials and comparisons with other therapeutic methods are necessary.

The use of bioresonance in dermatology

Bioresonance therapy is gaining increasing recognition in dermatology due to its effectiveness in the treatment of various skin diseases, including allergic reactions, dermatitis, eczema and acne. The use of bioresonance therapy in dermatology allows not only to eliminate external symptoms, but also to influence the internal biological processes underlying the development of skin diseases. Studies confirm that this method is safe, non-invasive and highly effective, which makes it a promising direction in the treatment of skin pathologies.

Treatment of allergic reactions

One of the most popular areas of application of bioresonance therapy in dermatology is the treatment of allergic skin diseases, such as allergic dermatitis and urticaria. According to studies, bioresonance helps to reduce the manifestations of allergies on the skin, normalizing the immune system's response to allergens. In particular, the use of bioresonance in patients with allergic dermatitis allows to reduce itching, redness and swelling, which are typical symptoms of allergic reactions [10, 20]. The effect of electromagnetic waves corresponding to the frequencies of allergens allows to correct the adverse reaction of the immune system and alleviate the condition of patients without the use of medications.

Studies also show that bioresonance therapy reduces the level of histamine in the blood, which is a key factor in the development of allergic reactions. This allows the method to be used as an alternative to traditional antihistamines, reducing the number of side effects and dependence on medications [14].

Treatment of acne and other skin infections

Acne is another pathology in which bioresonance can demonstrate high effectiveness. Studies show that the use of bioresonance therapy helps to normalize the work of the sebaceous glands, which is an important factor in the development of acne. The use of bioresonance allows you to reduce inflammatory processes, improve microcirculation and normalize the balance of skin microflora. This, in turn, leads to a decrease in the number of rashes, the disappearance of inflammatory elements and an improvement in the general condition of the skin [1, 13].

It is also important that bioresonance not only improves the appearance of the skin, but also affects the internal mechanisms of acne development, such as hormonal disorders and reduced immunity. Bioresonance therapy allows you to restore the natural balanced work of the body, which has a significant impact on reducing relapses of this disease.

Treatment of psoriasis and eczema

Psoriasis and eczema are chronic inflammatory skin diseases. They are accompanied by prolonged relapses and significant physical and psychological suffering for patients. Bioresonance therapy has shown promising results in the treatment of these diseases due to its ability to reduce inflammation, normalize blood circulation, and improve skin regeneration.

In studies on psoriasis patients, a significant reduction in the severity of inflammatory elements, such as plaques and erosions, was observed after several sessions of bioresonance therapy. During treatment, both internal and external skin regeneration improves, and itching and soreness, which are important symptoms for patients with psoriasis, are reduced [2, 31, 32].

Similar results have been obtained in the treatment of eczema, where bioresonance has been shown to reduce inflammatory reactions, improve wound healing, and relieve pain, which significantly improves the quality of life of patients [20].

Treatment of skin infections

Bioresonance is also used to treat skin infections, including fungal and bacterial infections, which often cause rashes and inflammation of the skin. It is known that bioresonance can be effective in destroying pathogenic microorganisms, in particular, such as Staphylococcus aureus and Candida albicans, Leishmania, which are common pathogens of skin infections.

Studies have shown that bioresonance therapy, using specific frequencies, is able to destroy microorganisms that cause skin infections, and also stimulates the body's natural defense mechanisms, which contributes to a faster recovery [14, 33].

Safety and effectiveness of bioresonance in dermatology

Bioresonance therapy in dermatology is a safe and non-invasive alternative to traditional methods of treating skin diseases. One of the main aspects that stands out in numerous studies is the absence of serious side effects when using bioresonance. In addition, the method allows you to effectively reduce symptoms without the need for the use of potent medications, which can be especially useful for patients with chronic skin diseases that require long-term therapy.

Development prospects

Despite numerous positive results, bioresonance in dermatology still requires additional research to accurately determine the optimal parameters of therapy and the mechanisms of its action. However, today it can already be stated that this method is a promising addition to traditional methods of treating dermatological diseases, especially for patients who do not have the desired results from the use of drug therapy.

Bioresonance therapy in dermatology has demonstrated its effectiveness in the treatment of various skin diseases, such as allergic dermatitis, acne, psoriasis, eczema and skin infections. Due to its safety, non-invasiveness and ability to act on biological processes at the cellular level, bioresonance can become an important tool in the complex treatment of these diseases, increasing the effectiveness of therapy and reducing the risks of side effects.

The use of bioresonance in gynecology

Bioresonance therapy has gained recognition in gynecology due to its potential in the treatment of numerous diseases of the reproductive system, such as inflammatory processes, infections, hormonal disorders, as well as in postoperative recovery. Modern research and clinical observations confirm that bioresonance can be an effective addition to traditional treatment methods.

It allows you to restore physiological functions, reduce inflammatory processes and improve the general health of women.

Treatment of infections of the reproductive system

One of the main areas of application of bioresonance in gynecology is the treatment of infections, in particular trichomoniasis, chlamydia and thrush. Bioresonance therapy allows not only to improve the general condition of the patient, but also to directly affect pathogenic microorganisms, reducing their activity or completely eliminating them from the body. Bioresonance can be effective in the treatment of infections caused by Trichomonas vaginalis and Entamoeba histolytica. In particular, the use of bioresonance waves to transfer metronidazole to water significantly inhibited the growth of these pathogens. Bioresonance therapy can be used as an alternative or adjunct to traditional antibacterial therapy for the treatment of sexually transmitted infections [7, 34].

Other clinical studies have also shown that bioresonance therapy helps reduce the symptoms of genitourinary tract infections, such as pain, itching, swelling and inflammation, lymphedema, which allows to reduce the need for antibiotics and reduces the risk of complications [20, 35].

Hormonal disorders and menstrual disorders

Bioresonance therapy in gynecology is also actively used to correct hormonal disorders and menstrual disorders, such as dysmenorrhea, amenorrhea and premenstrual syndrome. The effect of bioresonance waves can help restore the balance of hormones, in particular estrogens and progesterone, which is important for the normalization of the menstrual cycle.

Clinical studies have shown that bioresonance therapy can help correct menstrual irregularities in women with chronic diseases such as polycystic ovary syndrome. After a course of bioresonance therapy, women noted a decrease in pain, normalization of the cycle, and improvement in general condition. This indicates the ability of bioresonance therapy to influence hormonal levels, stimulating the normal functioning of the endocrine system [2].

Treatment of infertility and improvement of reproductive function

One of the most promising areas of bioresonance therapy use in gynecology is the treatment of infertility. Bioresonance therapy allows you to stimulate the female reproductive system, normalizing the functioning of the ovaries, uterus, and other organs involved in reproduction. In particular, in patients with polycystic ovary syndrome, which is one of the main causes of infertility, the use of bioresonance therapy leads to a decrease in the number of cysts, normalization of the menstrual cycle, and an increase in the likelihood of conception.

Studies show that bioresonance can be effective in correcting hormonal imbalances, which are often the main cause of ovulation disorders and infertility. For example, women who underwent bioresonance therapy had normalized estradiol and progesterone levels, which helped restore ovulation and facilitate the process of conception [7].

Bioresonance therapy also helps reduce stress and anxiety disorders, which are frequent companions of infertility. This can have a positive effect on a woman’s reproductive function, as stress is an important factor affecting hormonal levels and ovulation [20].

Treatment of pelvic inflammatory diseases

Pelvic inflammatory diseases, such as adnexitis and endometritis, peritonitis are common among women of reproductive age and often lead to serious complications such as infertility or chronic pain. Bioresonance can be useful in the treatment of these diseases due to its ability to reduce inflammation, improve microcirculation and accelerate healing processes [36].

One study in patients with chronic adnexitis found significant improvement after several sessions of bioresonance therapy, including a reduction in pain and improvements in laboratory tests such as leukocyte and C-reactive protein levels, which are markers of inflammation [2].

Postoperative recovery

Bioresonance therapy is also widely used to accelerate postoperative recovery in gynecological patients. Recovery after surgical interventions on the uterus or ovaries using bioresonance therapy reduces swelling, accelerates healing processes, and reduces the risk of infections. Studies have shown that patients who underwent a course of bioresonance therapy after surgery recover faster, have less pain, and are less likely to develop adhesions and scars [16, 37].

Safety and effectiveness of bioresonance therapy in gynecology

Bioresonance therapy in gynecology is recognized as a safe and non-invasive alternative or addition to traditional treatment methods. Bioresonance therapy has a low level of side effects, which makes it attractive for patients who do not want to use hormonal or chemical drugs. However, additional clinical trials and studies are needed to confirm the long-term effects and safety of the method in the context of gynecology. Bioresonance therapy is a promising treatment method in gynecology, in particular for the treatment of infections, hormonal disorders, infertility, pelvic inflammatory diseases and postoperative recovery. It demonstrates high effectiveness and safety, which makes it a useful addition to traditional therapy in the complex treatment of gynecological diseases.

The use of bioresonance therapy in psychiatry and narcology

Bioresonance therapy in psychiatry, narcology has significant potential in the treatment of a number of mental and emotional disorders, in particular depression, anxiety disorders, post-traumatic stress disorder, nicotinism, stress reduction and improvement of the general psycho-emotional state of patients. The use of this method in psychiatric practice allows for treatment without the use of traditional pharmacological drugs, which is an advantage for patients who do not tolerate drug therapy or have concerns about its side effects. Studies conducted on clinical groups of patients have demonstrated the significant potential of bioresonance as an additional method of treatment of mental illnesses [38, 39].

Treatment of depression and anxiety disorders

Depression is one of the most common mental disorders, which significantly affects the quality of life of patients. Anxiety disorders, such as generalized anxiety disorder and panic attacks, are also frequent reasons for seeking help from psychiatrists [29]. Bioresonance therapy has shown its effectiveness in treating depression and anxiety disorders due to its ability to correct imbalances in the nervous system and normalize the production of neurotransmitters such as serotonin and dopamine, which are involved in emotional regulation.

Studies conducted using bioresonance have shown a reduction in symptoms of depression and anxiety in patients who received this treatment method as part of complex therapy. Trials on patients with depressive conditions have shown a significant improvement in the psycho-emotional state after several sessions of bioresonance therapy. Patients noted a decrease in anxiety levels, improved mood and a decrease in depressive symptoms such as apathy, fatigue and hopelessness [40].

The effect of bioresonance on post-traumatic stress disorder (PTSD)

PTSD is a serious mental illness that develops after experiencing traumatic events such as disasters, violence or military conflicts. This disease is characterized by prolonged stress, flashbacks, nightmares, and other symptoms that significantly affect the quality of life of those affected [28].

Bioresonance therapy has been shown to be effective in reducing symptoms of PTSD, in particular in eliminating experienced emotional trauma and reducing stress levels. In studies conducted with participants who had experienced traumatic events, the use of bioresonance therapy helped to reduce anxiety levels, improve sleep, and overall emotional state. The effect on the brain's bioelectric impulses through bioresonance helps stabilize the nervous system and improve psycho-emotional balance [9].

Treatment of insomnia

Insomnia is a common companion of mental illnesses, and can also be a major problem on its own, affecting overall health and emotional stability. Bioresonance therapy is used in such cases to normalize the body's biorhythms, improve sleep quality, and reduce emotional stress. The use of bioresonance therapy in patients with sleep disorders leads to a significant improvement in sleep quality, a decrease in the frequency of night awakenings and the duration of time spent falling asleep. Studies show that bioresonance therapy helps patients restore a normal sleep rhythm, which has a positive effect on the general psycho-emotional state and reduces the level of stress [2].

Psychoemotional state and general well-being

Bioresonance therapy is also used to improve the general psychoemotional state in people who do not have pronounced mental disorders, but are experiencing stress, overload or emotional burnout. This method helps to reduce stress levels, increase energy levels and improve mood.

As a result of studies on patients in a state of chronic stress, after the use of Bioresonance therapy, a decrease in anxiety symptoms, improved concentration, decreased irritability and emotional tension were noted. These changes, in turn, contribute to improved social adaptation, increased motivation and improved overall physical health [2].

Mechanisms of action of bioresonance in psychiatry and narcology

The main mechanism of action of bioresonance is the normalization of bioelectric processes in the body. With the help of this method, it is possible to correct disorders that occur in the nervous system, stabilize the level of stress hormones, such as cortisol, and normalize the functioning of nerve cells. The effect of bioresonance on the oscillations of the nervous system allows activating the mechanisms of self-healing of the body, thus improving the psycho-emotional state of the patient.

Prospects for the development of bioresonance therapy in psychiatry and narcology

Despite the successful results, the use of bioresonance in psychiatry and narcology requires further research. Additional clinical trials, which will include larger controlled groups of patients and long-term observations, will allow us to more accurately determine the mechanisms of action of this method, its effectiveness and optimal parameters of therapy. However, today we can confidently say that bioresonance can be an effective addition to traditional methods of treating mental disorders, especially in the context of complex therapy.

Bioresonance therapy has promising results in the treatment of depression, anxiety disorders, PTSD, insomnia and improving the general psycho-emotional state of patients. Due to its ability to normalize bioelectric processes in the body, reduce stress and improve psycho-emotional balance, bioresonance can become an important addition to traditional psychiatric and narcological practice. However, further clinical studies and improvement of treatment methods are necessary to finally confirm its effectiveness.

Use of bioresonance in endocrinology

Bioresonance therapy in endocrinology is a promising method used to correct functional disorders of the endocrine system, treat hormonal imbalances, as well as for the treatment of various endocrine diseases. Due to its ability to restore the bioelectric activity of organs and tissues that regulate hormonal balance, Bioresonance therapy can be effective in the treatment of diseases such as diabetes mellitus, hypothyroidism, hyperthyroidism, polycystic ovary syndrome and others. Studies conducted in recent years confirm the high potential of this method as an additional therapy or as an alternative to traditional treatment approaches in the treatment of endocrine diseases [41].

Treatment of diabetes mellitus

Diabetes mellitus is one of the most common endocrine diseases. It is characterized by impaired glucose metabolism and insulin resistance. The treatment of this disease traditionally consists of controlling blood sugar levels and taking medications to normalize pancreatic function. However, many patients face the problem of side effects from drug therapy and the need for long-term medication. Bioresonance therapy has shown its effectiveness in improving pancreatic function and normalizing blood sugar levels.

Studies conducted on patients with type 2 diabetes mellitus have shown that the use of bioresonance therapy contributed to a decrease in blood glucose levels and improved metabolic parameters. Bioresonance therapy helps stimulate insulin production in the pancreas and improves the sensitivity of cells to insulin, which is an important aspect in the treatment of insulin resistance. In addition, improvements in the general condition of patients have been recorded, including a decrease in symptoms such as fatigue, thirst and frequent urination, which are characteristic of diabetes [42].

Treatment of thyroid disorders

The thyroid gland regulates important processes in the body, including metabolism, energy balance and thermoregulation. Disorders of its function, such as hypothyroidism and

hyperthyroidism, can have serious health consequences. Hormone drugs are traditionally used in the treatment of such diseases, but bioresonance therapy also shows encouraging results.

In patients with hypothyroidism (decreased thyroid function), the use of bioresonance helped restore normal thyroid hormone levels and alleviate symptoms such as fatigue, depression, weight gain and cold intolerance. Bioresonance therapy stimulates the activity of the thyroid gland, which can lead to improved hormone production and normalization of metabolic processes in the body [2].

The use of bioresonance therapy in patients with hyperthyroidism (increased thyroid function) has also shown positive results. The method helps to normalize thyroid hormone levels, reduce symptoms such as anxiety, tachycardia and increased sweating, which are characteristic of hyperthyroidism. Studies show that bioresonance therapy can help stabilize thyroid function, reducing the need for high doses of medications [16].

Treatment of polycystic ovary syndrome

Polycystic ovary syndrome is one of the most common hormonal disorders in women of reproductive age, which can lead to infertility, menstrual irregularities and increased androgen levels. Bioresonance therapy in this case can be an effective method that helps to normalize hormonal balance and stimulate ovulation.

In studies conducted with patients, bioresonance has shown a positive effect on reducing cyst size, normalizing insulin and testosterone levels, and restoring menstrual regularity. The effect of bioresonance waves on the ovaries stimulates the normalization of hormonal levels, which allows to improve women's reproductive function and increase the likelihood of conception [43].

Mechanisms of action of bioresonance in endocrinology

The mechanism of action of bioresonance therapy in endocrinology is that bioresonance waves interact with bioelectric processes occurring in the cells and tissues of the endocrine glands, normalizing their functioning. This helps restore hormonal balance, stimulate hormone production, and improve the interaction between various endocrine organs. Thus, bioresonance not only improves the symptoms of endocrine disorders, but also helps the body return to a normal functional state.

Prospects for the development of bioresonance in endocrinology

Bioresonance therapy in endocrinology continues to develop, and although research results already indicate its effectiveness, additional clinical trials are needed to accurately determine the mechanisms of its action and optimal treatment regimens. However, today bioresonance can already be considered as a promising additional method in the complex treatment of endocrine diseases, especially for patients who have limitations in the use of traditional drug therapies [44].

Bioresonance therapy has demonstrated its effectiveness in the treatment of a number of endocrine diseases, such as diabetes mellitus, hypothyroidism, hyperthyroidism, polycystic ovary syndrome, and obesity. It helps normalize hormonal levels, improve metabolic processes, and reduce symptoms of endocrine disorders. However, for a wider implementation of this method in clinical practice, additional research and improvement of therapeutic regimens are necessary.

Use of bioresonance in immunology

Bioresonance therapy demonstrates great potential in correcting immune disorders and strengthening the immune system. It is used to treat numerous immunological diseases, such as allergic reactions, autoimmune diseases, Lyme borreliosis, infections, as well as to increase overall immunity. Bioresonance therapy aims to normalize the functions of the immune system by influencing bioelectrical processes in the body, which allows activating self-healing mechanisms and restoring a normal immune response.

Treatment of allergic diseases

Allergic diseases are one of the main problems in modern immunology. They occur when the immune system overreacts to substances that are safe for the body, which leads to inflammatory reactions such as allergic rhinitis, bronchial asthma, allergic dermatitis, and others. Bioresonance therapy has the potential to reduce the sensitivity of the immune system to allergens and reduce allergy symptoms.

Studies have shown that bioresonance therapy can be an effective method for correcting allergic reactions by normalizing the body's immune response. For example, in studies on the

treatment of allergic rhinitis and bronchial asthma, patients who underwent a course of bioresonance therapy noted a decrease in symptoms such as sneezing, nasal congestion, coughing and shortness of breath. Bioresonance allows you to reduce the level of IgE (immunoglobulin E), which is responsible for the development of an allergic reaction, which helps reduce the body's sensitivity to allergens [22]. One example of the use of bioresonance therapy in immunology is the treatment of food allergies. As a result of the course of therapy, patients note a decrease in the intensity of allergic reactions to products such as milk, gluten or nuts, which confirms the ability of bioresonance to correct the immune system and reduce the body's hyperreactivity to external stimuli [45].

Treatment of autoimmune diseases

Autoimmune diseases are characterized by the fact that the immune system begins to attack healthy cells and tissues of the body, which leads to inflammation and organ damage. Such diseases include rheumatoid arthritis, systemic lupus erythematosus, Crohn's disease, Lyme disease and others. Treatment of autoimmune diseases traditionally includes the use of immunosuppressants, which suppress the activity of the immune system, but this can lead to side effects.

Bioresonance therapy offers an alternative approach to the treatment of autoimmune diseases, helping to normalize the immune response without the need for medications that suppress the immune system. Studies show that bioresonance therapy can help reduce inflammation and reduce autoimmune reactions, stimulating the restoration of normal immune system function.

For example, patients with rheumatoid arthritis after a course of bioresonance therapy showed a significant reduction in inflammation, a decrease in the level of inflammatory markers (such as C-reactive protein) and improved joint mobility. This indicates the ability of bioresonance to correct immune system dysfunction and reduce the activity of autoimmune processes [16].

Treatment of infectious diseases

Infectious diseases are the result of the entry into the body of pathogenic microorganisms, such as bacteria, viruses and fungi, which can cause numerous diseases. Restoring and strengthening the immune system is a key point in the fight against infections. Bioresonance can stimulate the body's immune response, increase the activity of leukocytes and other cells of the immune system, which contributes to the faster destruction of infectious agents.

Studies have shown that bioresonance therapy is an effective method for correcting immune disorders that occur in infectious diseases, such as herpes, influenza, hepatitis and other viral infections. After the use of bioresonance therapy, a significant improvement in the condition of patients, a decrease in symptoms and a faster recovery from infectious diseases were observed [46].

Improving general immunity

One of the main areas of application of bioresonance therapy is strengthening general immunity, which is especially relevant for patients prone to frequent respiratory infections or those with a weakened immune system due to stress, chronic diseases or age. Bioresonance allows you to restore the balance between the various components of the immune system, which helps to increase its ability to fight infections and diseases.

Studies have shown that bioresonance therapy stimulates the production of cytokines and other molecules that are important for activating the immune response. After bioresonance therapy courses, patients usually note an improvement in general well-being, a decrease in the frequency of diseases and an increase in energy.

Prospects for the use of bioresonance in immunology

Bioresonance therapy in immunology continues to develop, and today it already demonstrates significant achievements in the treatment of allergic, autoimmune diseases, Lyme borreliosis, infections, as well as for increasing general immunity. However, for a wider introduction of this method into clinical practice, additional studies are needed that will help to more clearly determine the mechanisms of its action and optimal treatment regimens.

Bioresonance therapy has significant potential in immunology, especially for the treatment of allergic diseases, autoimmune disorders, infectious diseases and increasing general immunity. Due to its ability to restore normal function of the immune system, bioresonance can become an important

addition to traditional immunological practice, which allows to significantly improve the effectiveness of treatment and reduce side effects of drug therapy.

The use of bioresonance in neurology

Bioresonance therapy in neurology is a promising method used to treat various neurological diseases, such as migraines, chronic pain, sleep disorders, depression, anxiety disorders, as well as for the rehabilitation of patients after strokes, brain injuries and other disorders of the nervous system. This method uses electromagnetic oscillations to influence bioelectric processes in nerve cells, which allows to restore normal function of the nervous system and reduce the symptoms of various neurological disorders.

Chronic pain management

Chronic pain is a major problem in neurology, often resulting from trauma, degenerative diseases such as osteoarthritis, or nerve disorders. This can include pain from neuralgia, myositis, and pain associated with nervous system diseases such as multiple sclerosis or strokes. Bioresonance therapy has been shown to be effective in reducing chronic pain due to its ability to regulate nerve activity and restore normal nerve cell function.

Studies show that the use of bioresonance therapy in patients with chronic pain can significantly reduce pain intensity, improve mobility, and reduce the need for painkillers. This is due to the normalization of electrical impulses passing through nerve fibers, which helps reduce inflammation and activate the body's natural pain-relieving mechanisms [2].

Migraine and headache treatment

Migraine is a chronic disease characterized by intense headaches, often accompanied by nausea, vomiting, and sensitivity to light and sound. These attacks can significantly impair the quality of life of patients. Bioresonance therapy has shown its effectiveness in treating migraines due to its ability to regulate brain activity and reduce the hyperactivity of nerve cells that cause pain.

In clinical studies, patients who underwent bioresonance therapy noted a significant reduction in the frequency and intensity of migraine attacks. Bioresonance therapy helps normalize blood circulation in the brain, reduces the level of tension in nerve cells, and reduces inflammatory reactions, which are among the main factors in the development of migraines [9].

Treatment of sleep disorders

Sleep disorders, such as insomnia, are a common problem among patients with neurological disorders, including stress, depression, anxiety disorders, and chronic pain [30]. Bioresonance therapy has been shown to be effective in normalizing sleep, helping patients fall asleep faster, improve sleep quality, and reduce the number of nighttime awakenings.

Studies show that bioresonance can normalize the body's circadian rhythms by stimulating the production of melatonin, a hormone that regulates the sleep-wake cycle. Patients who have received bioresonance therapy for the treatment of insomnia have reported improved sleep quality, reduced stress and anxiety, and significantly improved overall psycho-emotional well-being [2].

Treatment of depression and anxiety disorders

Depression and anxiety disorders are among the most common neuropsychiatric disorders that negatively affect the quality of life of patients [29]. Bioresonance therapy has shown its effectiveness in treating these disorders due to its ability to influence bioelectrical processes in the brain, stabilizing the levels of neurotransmitters such as serotonin and dopamine, which regulate mood and emotional state.

Studies have shown that bioresonance therapy can reduce stress, anxiety, depression, and panic attacks. The effect on the nervous system helps restore balance in the brain structures that regulate the emotional background, which leads to an improvement in the psycho-emotional state of patients [9]. Bioresonance helps normalize the work of the hypothalamic-pituitary-adrenal axis, which is key in combating chronic stress and depressive symptoms.

Rehabilitation after stroke and traumatic brain injury

Stroke and traumatic brain injury often lead to impaired motor functions, cognitive disorders, as well as problems with speech and memory. Recovery from these diseases requires an integrated approach, including physical, speech, and cognitive rehabilitation. Bioresonance therapy has shown

its capabilities in the rehabilitation of patients after strokes and brain injuries, stimulating nerve cells to restore and improve their function.

Studies have shown that bioresonance can help restore neuroplasticity, which can improve motor function and cognitive abilities. Stroke patients who underwent bioresonance therapy reported improved coordination, language skills, memory, and reduced levels of depression that often accompanies stroke [16].

Prospects for the use of bioresonance in neurology

Bioresonance therapy continues to develop, and although it has already shown positive results in the treatment of numerous neurological diseases, more clinical studies are needed to confirm its effectiveness and determine the optimal treatment regimens. It is also important to study the mechanisms of action of bioresonance on various structures of the nervous system, which will allow creating more personalized approaches in the treatment of neurological diseases.

Bioresonance therapy demonstrates encouraging results in the treatment of a number of neurological diseases, such as chronic pain, migraine, depression, anxiety disorders, sleep disorders and rehabilitation after strokes and traumatic brain injuries. It can be effective as an addition to traditional treatment methods, helping to improve the functional state of the nervous system, reduce symptoms and improve the quality of life of patients. However, for the wider implementation of this method in clinical practice, additional studies are needed to confirm its long-term effectiveness and safety.

Use of bioresonance in metabolic diseases

Metabolic diseases are one of the greatest medical problems of our time. This group includes diseases such as diabetes, obesity, dyslipidemia, metabolic syndrome, gout and other metabolic disorders, which have a serious impact on the overall health and quality of life of patients. Bioresonance therapy has been shown to be effective in the treatment of various metabolic disorders due to its ability to influence bioelectrical processes in the body and restore normal metabolic regulation. Studies and clinical observations indicate the positive effect of bioresonance therapy on normalizing metabolism, reducing blood sugar levels, improving lipid profiles, as well as on weight regulation and reducing inflammatory processes.

Treatment of obesity and metabolic syndrome

Obesity is one of the main causes of the development of metabolic syndrome, which includes disorders such as elevated blood pressure, dyslipidemia and insulin resistance. Obesity is also a risk factor for the development of cardiovascular diseases, type 2 diabetes, and cancer. Obesity treatment traditionally consists of changing eating habits, physical activity and drug therapy.

Bioresonance therapy has shown its effectiveness in reducing body weight and normalizing metabolism in obese patients. The use of bioresonance therapy helps to reduce the level of adipose tissue, stimulates thermogenesis processes and improves metabolic processes, which leads to weight loss. Patients who underwent a course of bioresonance therapy noted not only weight loss, but also an improvement in the lipid profile, a decrease in the level of "bad" cholesterol and triglycerides, as well as normalization of blood pressure [2].

Treatment of dyslipidemia

Dyslipidemia is a disorder of lipid metabolism, which is characterized by elevated levels of cholesterol and/or triglycerides in the blood. This is one of the main risk factors for the development of cardiovascular diseases, such as atherosclerosis, myocardial infarction and stroke. Bioresonance therapy has been shown to be effective in reducing levels of "bad" cholesterol (LDL) and triglycerides, and in increasing levels of "good" cholesterol (HDL).

Studies conducted on patients with dyslipidemia have shown that the use of Bioresonance therapy helped to reduce cholesterol and triglyceride levels, which confirmed the effectiveness of the method in correcting lipid metabolism disorders. Bioresonance also helps to normalize blood pressure, which is an important aspect in the prevention of cardiovascular diseases in patients with dyslipidemia [16].

Treatment of gout

Gout is a disease characterized by the deposition of uric acid crystals in the joints, which leads to painful attacks of inflammation. Bioresonance therapy is used to normalize the level of uric acid in the blood and reduce inflammatory processes in the joints.

The use of bioresonance therapy allows you to reduce the concentration of uric acid, which helps to reduce the number of gout attacks. In addition, bioresonance therapy has the ability to reduce inflammation and joint pain, improving patients' mobility and quality of life [2].

Mechanisms of action of bioresonance in metabolic diseases

The mechanism of action of bioresonance in metabolic diseases is that bioresonance waves affect bioelectric processes in the body, correcting the functioning of the endocrine and metabolic systems. They stimulate the normal functioning of organs such as the pancreas, liver, thyroid gland, and also improve blood circulation, normalizing the supply of oxygen and nutrients to tissues. This contributes to the normalization of hormonal levels, reducing the level of sugar, lipids and uric acid, which are the main indicators of metabolic disorders.

Prospects for the use of bioresonance in metabolic diseases

Despite the positive results of research, bioresonance therapy in metabolic diseases requires further clinical trials and improvement of treatment methods. Accurate determination of optimal therapy parameters and mechanisms of action will allow more effective use of this method for the treatment of metabolic disorders.

Bioresonance therapy is an effective method of treatment and correction of metabolic diseases, such as diabetes mellitus, obesity, dyslipidemia, gout and metabolic syndrome. It helps to normalize metabolism, reduce sugar, lipid and uric acid levels, as well as improve the general condition of patients. However, for the introduction of this method into clinical practice, additional studies are needed to confirm its effectiveness and safety on a long-term basis.

Use of bioresonance in allergology

Allergic diseases are one of the most common problems in modern medicine, which significantly affect the quality of life of patients. Allergic reactions occur when the body's immune system overreacts to certain substances that are usually safe, such as pollen, animal hair, food or medications. Bioresonance therapy in the field of allergology is becoming increasingly popular due to its ability to influence the body's immune response, reducing sensitivity to allergens and normalizing the functioning of the immune system without the use of pharmacological agents [22].

Allergic rhinitis treatment

Allergic rhinitis is one of the most common allergic diseases, accompanied by symptoms such as nasal congestion, sneezing, itching, runny nose and watery eyes. This disease is usually caused by pollen, dust, animal hair or other allergens. Traditional treatment includes antihistamines, which can have side effects such as drowsiness and dry mouth. Bioresonance therapy is an alternative method that has shown effectiveness in reducing the symptoms of allergic rhinitis.

Studies on the use of bioresonance for the treatment of allergic rhinitis have shown significant improvement in patients after several sessions of therapy. Patients noted a decrease in nasal congestion, a decrease in the number of sneezing and easier breathing. Bioresonance therapy allows you to adjust the immune response to allergens by reducing the level of immunoglobulin E (IgE), which is the main marker of allergic reactions. As a result of therapy, a decrease in allergy symptoms is observed, which allows you to reduce or even abandon the use of antihistamines [20].

Treatment of bronchial asthma

Bronchial asthma is a chronic disease characterized by airway obstruction, shortness of breath, cough and wheezing. This disease is allergic in most cases and can be triggered by allergens such as pollen, dust, tobacco smoke, chemicals, etc. Traditional treatment includes the use of bronchodilators and corticosteroids, which help relieve symptoms, but do not cure the disease itself.

Bioresonance therapy has been shown to be effective in the treatment of bronchial asthma, in particular in reducing the frequency and intensity of asthma attacks, reducing symptoms of shortness of breath and cough. Studies have shown that bioresonance therapy helps normalize the sensitivity of the immune system to allergens, reduce inflammation in the respiratory tract and reduce the level of

allergic reactions, which leads to an improvement in the condition of patients with asthma [10]. This allows for reduced dependence on medications and improved quality of life for patients.

Food allergy treatment

Food allergies are another common form of allergic disease that can cause serious reactions such as anaphylaxis, rashes, abdominal pain, nausea, and other symptoms. Bioresonance therapy is used to reduce sensitivity to certain foods such as milk, eggs, gluten, nuts, etc. Studies have shown that bioresonance therapy can be an effective method in reducing allergic reactions to food allergens, as well as in restoring normal immune system function in such diseases.

After several sessions of bioresonance therapy, patients with food allergies have noted a decrease in symptoms such as rashes, itching, and abdominal pain after consuming certain foods. An important advantage of bioresonance therapy is that it does not have the side effects characteristic of traditional antihistamine therapy and allows you to safely reduce sensitivity to food allergens without medical interventions [22].

Treatment of allergic dermatitis

Allergic dermatitis is an inflammatory skin disease that occurs as a result of an excessive immune response to allergens, such as pollen, chemicals, or certain foods. This disease is accompanied by redness, itching, rash, and pain. Traditional treatment includes the use of creams and ointments containing corticosteroids. Bioresonance therapy is an effective alternative for the treatment of allergic dermatitis.

Bioresonance therapy helps to reduce inflammation, restore a normal immune response, and reduce sensitivity to allergens, which helps to alleviate the symptoms of dermatitis. Patients who have undergone a course of bioresonance therapy have noted a decrease in itching, improved skin condition, and a decrease in redness and swelling. Thus, bioresonance is a safe and effective method of treating allergic dermatitis, which allows you to reduce dependence on traditional medications [22].

Mechanism of action of bioresonance in allergology

The mechanism of action of bioresonance therapy is that special devices transmit electromagnetic waves that correspond to the natural frequencies of the body. These waves interact with the cells of the immune system, correcting their functioning and normalizing the body's immune response to allergens. Bioresonance can reduce the level of inflammation and hyperreactivity of the immune system, which helps reduce the symptoms of allergic reactions.

Prospects for the use of bioresonance in allergology

Bioresonance therapy continues to develop as a promising method of treating allergic diseases. However, for a wider implementation of this method in clinical practice, additional studies are needed to confirm its effectiveness and mechanisms of action. Further clinical trials and improvements to the technique will make bioresonance more accessible and effective for the treatment of allergic diseases, especially in patients who cannot use traditional drug therapy.

Bioresonance therapy has demonstrated its effectiveness in the treatment of various allergic diseases, such as allergic rhinitis, bronchial asthma, food allergies and allergic dermatitis. The use of this method allows to normalize the body's immune response, reduce sensitivity to allergens and reduce inflammatory processes [22]. Bioresonance is a safe and effective addition to traditional methods of treating allergies, which allows patients to reduce the use of medications and improve the quality of life.

Use of bioresonance in oncology

Oncological diseases are one of the main causes of mortality worldwide, and the fight against them requires an integrated approach. Traditional methods of treatment, such as surgery, radiotherapy and chemotherapy, are the main ways to combat cancer. However, these methods have numerous side effects and often do not allow for a complete cure, especially in the late stages of the disease [47]. In this regard, many patients and doctors turn to Bioresonance therapy, which is aimed at correcting bioelectric processes in the body, improving the general condition of patients and increasing the effectiveness of traditional treatment.

Bioresonance therapy is a promising method that can stimulate the body's self-healing processes, improve the immune response, reduce stress and pain, and reduce the toxicity of traditional cancer treatments. Although scientific research into the use of bioresonance in oncology is still in the development stage, preliminary results indicate its potential as a complement to traditional cancer therapy.

Support of the immune system in cancer

One of the main areas of use of bioresonance in oncology is the stimulation of the immune system. It is known that in cancer, the immune system is often unable to effectively fight the tumor, which contributes to its growth and metastasis. Bioresonance therapy can help activate the body's natural defense mechanisms, strengthen the immune response and increase the effectiveness of other treatments.

Studies show that bioresonance helps stimulate the production of cytokines, which are important for the activation of immune cells, such as T-lymphocytes and macrophages. This allows you to increase the body's ability to fight the tumor, as well as reduce the risk of developing metastases. Patients who undergo bioresonance therapy in combination with traditional treatment may have a higher level of immunity and improved overall well-being [48].

Palliative therapy and reduction of side effects

Bioresonance therapy has also shown its effectiveness in palliative therapy for patients suffering from terminal stages of cancer. It is used to relieve symptoms such as pain, nausea, fatigue, stress and depression that often accompany cancer. Bioresonance therapy helps to reduce the intensity of pain and improve the quality of life of patients, providing significant psychological and physical support [23].

An important advantage of bioresonance is its ability to reduce the toxicity of chemotherapy and radiotherapy. These treatments, although effective against tumor cells, often have serious side effects such as fatigue, nausea, hair loss and a weakened immune system. Bioresonance therapy can help reduce these side effects by reducing stress levels, normalizing the body's energy balance and stimulating recovery processes after chemotherapy and radiotherapy.

Accelerate recovery after surgery

Surgeries to remove tumors are an important part of cancer treatment. However, the postoperative recovery period is often accompanied by pain, inflammation and a decrease in the general physical activity of patients. Bioresonance can be effective in accelerating recovery after surgery, as it stimulates tissue regeneration processes, reduces inflammation and improves blood circulation.

Patients who have received bioresonance therapy after surgery often report a shorter recovery time, less postoperative pain and an improvement in their general condition. This can reduce the need for painkillers and improve the quality of the recovery period [16].

Using bioresonance to detoxify the body

Cancer therapy, including chemotherapy and radiotherapy, is often accompanied by the accumulation of toxins in the body. Bioresonance therapy can help eliminate these toxins, as it stimulates the elimination of harmful substances through the lymphatic system and improves the function of the liver, which is the main organ of detoxification. This helps to cleanse the body more quickly and improve the general condition of patients after aggressive medical procedures.

Prospects for the use of bioresonance in oncology

Despite the positive results shown by early studies, bioresonance therapy in oncology requires further clinical studies. Additional trials and studies of its mechanisms of action are needed to fully implement this method in clinical practice. However, it can already be stated today that bioresonance is a promising method for supporting patients during traditional cancer treatment, as well as for alleviating symptoms and improving the quality of life of patients.

Bioresonance therapy has the potential as an additional treatment method in oncology, helping to stimulate the immune system, reduce side effects of chemotherapy and radiotherapy, accelerate recovery after surgery and improve the general condition of patients. This method may be useful in palliative therapy to relieve pain and other symptoms accompanying cancer [49]. However, further

scientific studies are needed for the further implementation of bioresonance in oncology practice to confirm its effectiveness and mechanisms of action in the context of cancer treatment.

Conclusions. Bioresonance therapy is a promising method that opens up new opportunities in the treatment and support of patients with various diseases. Although this method is at the stage of active research, today it can already be stated that bioresonance therapy demonstrates significant potential in the treatment and correction of numerous diseases in cardiology, dermatology, gynecology, psychiatry and narcology, endocrinology, immunology, etc. The main advantages of bioresonance are its safety, non-invasiveness, ability to stimulate the body's natural self-healing mechanisms and reduce side effects from traditional treatment methods.

In particular, in neurology, bioresonance is successfully used to reduce chronic pain, treat migraines, depression, anxiety disorders, as well as for the rehabilitation of patients after strokes and traumatic brain injuries. This allows to significantly improve the quality of life of patients and reduce dependence on painkillers.

In metabolic diseases such as diabetes, obesity, dyslipidemia and metabolic syndrome, bioresonance therapy helps to normalize metabolism, improve lipid profile, lower sugar levels and helps to reduce the manifestations of concomitant diseases. Bioresonance therapy can significantly facilitate the course of treatment and increase the effectiveness of traditional methods.

In allergology, bioresonance has shown its effectiveness in reducing the body's sensitivity to allergens, reducing the symptoms of allergic diseases and alleviating the general condition of patients. This makes bioresonance therapy an important addition to traditional allergy therapy.

In oncology, bioresonance therapy is used to support patients during traditional treatment, reduce side effects of chemotherapy and radiotherapy, as well as to improve the immune response and accelerate recovery after surgery.

In the future, additional studies are needed to expand the use of bioresonance therapy in clinical practice, which will help to accurately determine the mechanisms of its action and optimal therapy parameters. However, we can already confidently speak about the great potential of bioresonance therapy as an effective and safe method of treatment and patient support, which can be integrated into modern medical practice to improve treatment outcomes and quality of life of patients.

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