TMB-01 (OLM-01)
THERAPEUTIC MULTILAYER BLANKET

APPLICATIONS FOR CLINICAL TREATMENT, REHABILITAION, PREVENTION AND HEALTH ENHANCEMENT

Guidelines for Medical Personnel

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Victory-TM, L.L.C., Taganrog, Russia.
English Edition

These Guidelines describe the application of the TMB-01 Therapeutic Multilayer Blanket for health enhancement, preventive care, rehabilitation and clinical treatment.

The TMB-01 therapeutic multilayer blanket changes an initially unfavorable functional condition of the human body towards a more favorable state. This is achieved by optimizing the functioning of the regulatory and protective subsystems and enhancing the economy of energy exchange that essentially determines the state of health, emotional and mental state, and resistance to diseases and stresses, the severity of disorders, and even the efficiency of specific clinical treatments.

TLM-01 blanket has a wide range of medical applications due to its non-specific action aimed at the overall improvement of the integral functioning of the body.

This manual combines the experiences of many practical physicians and is based on the theory of stress and other non-specific adaptive responses.

The guidelines are recommended for practical health professionals (i.e. Doctors, physiotherapists, balneotherapists, pediatricians, etc.) providing medical services in clinical and preventive care environments, psychiatric, educational, preschool, and sports facilities or in the home.

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FOREWORD

The period of the late 20th century through to the early 21st century brought about widespread environmental, demographic, economic, and social problems in Russia. Under these circumstances, the domestic Health Care providers saw a dramatic decline in both the physical and mental health of the population as well as a shortage of means and ability needed to deliver health care of sufficient quantity and quality. Without exaggeration it can be said that the nation's gene pool and health of the future generations are at stake.

It is generally agree that the solution to these problems is mostly dependent of he provision of the effective preventive measures. Therefore great importance is attached to the promotion of restorative medicine and preventive care.

Therapeutic Multilayer Blanket Therapy (TMB Therapy) is a new non-pharmaceutical and sanitary approach to restorative and corrective medicine aimed at recovery from illness and prevention of further illness.

TMB Therapy is based on the theory of stress and other non-specific adaptive (NARs) of the human body. The TMB exerts multiple specially selected, concerted subtle physical factors to elicit serial changes in the non-specific adaptive responses. This results in sequentially more favorable functional states associated with enhancing the adaptive capacity of the body. This harmonizes the functioning of the body's subsystems (i.e. increases self-regulation of the body), activates the protective forces and improves the overall economy of energy exchange.

The effect of a restorative TMB treatment is appraised using the Over-all Functional Status Test based on assessing the type of NARs and the body reactivity level at which these NARs develop.

The NAR is reliably determined according to the lymphocyte percentage of the white blood count (WBC). In practice, however, the therapeutic effect of TMB treatment can be adequately monitored by the improvement of the psycho-emotional state.

The application techniques for the TMB were established by collecting together the experiences of many multi-disciplinary clinical physicians who use the TMB in their treatment. The development of these TMB techniques was necessary because the choice of a particular TMB application method depends not only on the signs and manifestations of a specific condition (in the traditional disease classification) but mainly on the impairments of vital systemic physiological functions. The main purpose of the described therapeutic techniques is the efficient correction of these impairments.

TMB-01 Therapeutic Multilayer Blanket has a wide scope of applications:

Health Enhancement Applications:

- Enhancement of health reserves
- Maintenance of good physical shape, workability, mental and emotional state.

Primary Prevention Applications:

- Enhancement of mental resilience and physical performance in children and adolescents
- Disease prevention in people under psycho-emotional stress
- Prevention of occupational and health breakdowns in people exposed to high levels of physical and mental stress
- Reduction of the harmful effects of damaging factors
- Injury prevention and performance enhancement in athletes
- Prevention and treatment of diseases in people with functional abnormalities and with preclinical conditions

Secondary Prevention Applications:

- Preventing complications/exacerbations of disease and enhancing the functional reserves of the body

Applications in Clinical Treatment and Rehabilitation:

- Supplementary treatment to specific rehabilitative and therapeutic treatment of somatic diseases or irreversible morphologic changes in tissues and organs with the purpose of increasing the therapeutic or rehabilitative effect of a specific therapy.
- Improving the quality of life in people approaching death

- Improving the quality of life for incurable patients
- Preparation for surgical intervention.

The TMB-01 included as a supplementary treatment in the 'Homeland Concern for Children' program co-developed by the Russian Scientific Center of Restorative Medicine and Balneotherapy of the RF Health Ministry and the "Nation's Health" Department of the Federal Advisory Council for Public Security Problems of the RF SD.

For the development of the "The Method and Device for Multifactorial Therapeutic Action Using TMB-01 Therapeutic Multilayer Blanket", its author was awarded the Mechnikov Medal "For Practical Contribution to Strengthening the Nation's Health" from the Russian Academy of Natural Sciences.

The TMB-01 Blanket has been awarded a seires of diplomas and the Paul Ehrich Medal by the European Academy of Clinical Immunology, Hanover, Germany.

The TMB-01 Blanket is approved for use and fully certified by the RF Health Ministry. The developer and manufacturer of the TMB-01 blanket is Victory-TM, L.L.C. Company, Taganrog, Russia.

The TMB method of treatment acting on the body with multiple combined subtle physical factors using the TMB therapeutic multilayer blanket is a new non-pharmaceutical, sanitary, preventive and recovery approach to restorative medicine.

The wide scope of the TMB applications is due to its integral, non-specific effect directed towards enhancing the overall functioning of the body as a single unit. The specifically selected , acting biophysical factors allow the initial functional condition of the human body to change towards a more favorable state by reducing discrepancies in the biological rhythm of physiological functions and harmonizing the functioning of regulatory and protective subsystems.

1. HISTORY

The origins of this technology go as far back as the long disappeared civilizations of ancient Schumer, Egypt, Babylon and Assyria.

Devices implementing this technique were used in various religious cultures. Priests used them to know the will of the gods and to revive strength for the embodiment of the gods' desires.

Such devices are mentioned in the cuneiform tablets stored in the fund of Pennsylvania University Museum that belonged to the Schumer - Accadian civilization of 2350-2150 BC. However, a more detailed description of such a device is given in the Bible – a unique collection of religious legends, scriptures and historical chronicles.

The book of Exodus describes events that happened in the 14th century BC. Moses led the Hebrew people from Egypt towards the Promised Land. After passing the north-western bay of the Red Sea, the Lord and Moses entered into the Covenant at Mount Ras es-Safsafeh that was inscribed onto stone tablets. The sacred tablets were to be kept in the Ark of the Covenant, which was a box made of shittim-tree wood, overlaid with gold both inside and outside and decorated with a gold crown and rings. Its length was 2.5 ells, the width and height were 1.5 ells. Whilst being intended as the keeping place for the stone tablets of the Lord's Covenant, the Ark of the testimony was also the place where God revealed His will to Moses.

"And there I will meet with thee, and I will commune with thee from above the mercy seat, from between the two cherubims, which are upon the Ark of the Covenant, of all things which are upon the Ark of the Covenant, of all the things which I will give thee in commandment unto the children of Israel…" (Exodus 25:22).

For a long time the Israelites used the Ark in their war campaigns. After Solomon built the Great Temple in Jerusalem, the Ark of the Covenant had been

solemnly transferred to the “Holy of Holies”. Its further destiny is unknown. It was supposedly destroyed during the destruction and burning of the Great Temple. There is however a Christian legend that the Ark was hidden in a cave by the prophet Jeremiah.

Some centuries later, various people tried to reconstruct its equivalent. They believed that the Ark helped in the attainment of eternal youth and enabled the preservation and restoration of health. The Inquisition erased most of the names of these people.

That is why all current knowledge of this subject has been established during the first half of the 20th century. As is well known, Austrian psychoanalyst Wilhelm Reich came close to the recreation of the Ark of the Covenant.

Reich believed that there is a certain life energy, which he termed “orgone”, which circulates in a human being. The human body only functions if it can absorb, accumulate, make use of and emit this energy. The process of reception, accumulation and emission of the energy occurs in the form of a biological pulsation.

If this biological pulsation becomes disturbed then either the expansion or the contraction process prevails, which results in the development of abnormal processes (biopathies). Biopathies may appear as diseases: anemia, asthma, angina pectoris, cancer, multiple sclerosis, chorea, epilepsy, hypertension, neuroses, psychoses, and so on.

According to Reich, the purpose of therapy is to recover this natural biological pulsation. For this purpose, Reich developed several approaches. His main approaches included Clinical Bioenergetics, Orgonomy and ‘Orgone Accumulators’. For the purposes of these Guidelines, we need to consider orgone accumulators. Reich stated that such ‘accumulators’ can enhance energy currents in the human body and recover the bioenergetic pulsation.

As an orgone accumulating device, he used a wooden box with its sides proportional to the dimensions of the Ark of the Covenant. The box was lines inside with a special metal sheet. The patient was placed into the box. In Reich’s

opinion, orgone accumulated in the box and was transferred to the patient resulting in increased Bioenergy currents. With orgone energy supplied in this way for half an hour every day the biological pulsation was gradually restored. As a result the patient got better.

Using such a simple device, Reich successfully treated many diseases. Even chronic conditions incurable by conventional methods were treated successfully. He achieved encouraging results in cancer therapy. 'Orgone accumulators' had especially beneficial effects on children of various ages.

After Reich's death, the history of 'orgone accumulators' continued. The 'accumulators' are well-known in the International Institute for Bioenergetic Analysis, New York; American College of Orgonomy, Princeton, NJ; the Munich Institute for Parapsychology, Germany; etc.

Heiko Lassek, director of the Wilhelm Reich Institute, Berlin, applied 'orgone accumulators' to improve the quality of life in oncologic patients at stage IV of cancer. Significant improvement of condition was observed in 15 from 17 incurable patients. A prolonged remission with temporary return to working activity was achieved in 3 from another 15 patients.

In Russia, the attempts to reproduce an analogue of the Covenant's Ark began in the late 1980's – early 1990's. The most successful approach was achieved by Alexander Datchenko of Taganrog, Russia. Datchenko first revealed all the physical factors that could act on a person in an 'orgone accumulator' or in the vicinity of the Ark of the Covenant. Then, he endeavored to find out their optimal combination and the optimal density of each factor.

The diversity and availability of advanced materials have enabled the replacement of the cumbersome wooden constructions of old. The modern version of the Ark of the Covenant has been implemented as a blanket with embedded screens made of synthetic membranes known as the Therapeutic Multilayer Blanket (TMB).

This new version of the Ark of the Covenant proved to be more practical and convenient to use. The key advantage, however, is its efficiency in health enhancement, recovering, prevention and clinical treatment of diseases that exceeds the efficiency of other ‘orgone accumulators’.

2. TREATMENT METHOD

2.1. **Action of the TMB Blanket**

Every stimulus acting on the human body can be characterized in terms of its quantity (degree of biological activity) and its quality (specificity). IN the course of its evolution, the human body has learnt to react to different-specificity stimuli of the same degree of bioactivity by forming responses of the same type. Such typical responses of the whole body that involve all physiological levels and subsystems are called non-specific adaptive responses (NARs) of the body.

NAR’s were first revealed by the Canadian pathologist Hans Selye. Working with toxic hormonal preparations, Hans Selye found that potent irritants (e.g. toxins, overcooling, infection, traumas, bleeding, etc.) cause typical changes in the adrenal glands, thymolymphatic system, and gastro-intestinal tract. Using these observations, he proposed the theory of non-specific reactivity based on the stress concept. In his development of the stress concept, Selye added the notions of a general adaptation syndrome, of adaptation diseases, etc.

It is well-known that NARs provide the general non-specific background against which specific responses develop. Obviously, this general non-specific background provides the basis determining how specific responses will develop.

Currently, five types of NAR recognized; training response, mild activation, strong activation, overactivation and stress. These types of NAR differ according to the combination of physiological parameters found in the body and its subsystems (see Appendix I). Each type of NAR can develop at various levels of

reactivity of the human body. Presently, the total number of reactivity levels is unknown. However a satisfactory model describing overall NAR structure can be developed using four conventional gradations: high, medium, low, and ultra-low reactivity levels.

The NAR structure model is shown in Fig.1. Some features of the different NAR types on different reactivity levels are described in Appendix I. Considering that at any moment of time only one NAR type can develop in the body at a single reactivity level, we can assert that these 18 components com-

prise the full gamut of 18 possible functional states of the body. In a particular functional state of the of the body, it is the combination of a certain NAR type and a reactivity level that essentially determine the functional activity of the CNS, the endocrine and immune subsystems, the level of homeostasis and non-specific resistance, and the mode metabolism.

Multiple research done by Russian and International scientists show that different functional states related to the development of different NAR responses of the body provide the non-specific basis for the wellness state, intermediate states between diseases and wellness, and the disease state (see Fig.1).

Here we have briefly outlined only the basic points of the body adaptive activity theory. For details refer to works [1, 2].

Successful actions of the TMB-01 therapeutic multilayer blanket are based on re-establishing coordination of the biological rhythms of physiological functions, raising non-specific immunity and increasing functional reserves by changing the initial functional state of the human body towards a more favorable state. The arrows in Fig.1 show the consecutive course of improvement of the functional state.

The patient is exposed to a specially selected combination of subtle physical factors when wrapped in the TMB blanket. In designing the TMB blanket, the most biologically important factors, to which all living beings have developed a higher sensitivity in the course of evolution, were selected. These

selected factors possess another important feature – they are quasi-periodic in the natural environment, and therefore used by animal organisms for the synchronization of biological rhythms.

These acting factors allow the body to elicit multiple changes from an initial functional state of the body towards a more beneficial condition (Fig.1) by:

1) Reducing disagreements between the biorhythms of physiological functions,
2) Harmonizing the integration of the regulatory and protective subsystems and enhancing the economy of energy exchange.

The functional condition of the body essentially determines wellness, the emotional and mental state, resistance to stresses and diseases, the sever-

ity of disorder, and even the efficiency of specific clinical treatments, preventive care and rehabilitation.

TMB blanket treatment is based on the theory of stress, adaptation, and non-specific mechanisms of resistance and reactivity of a living organism. This theory was established by the brilliant Canadian scientists Hans Selye and further evolved by Russian Scientists Garkavi L.Kh., Kvakina E.B., and Ukolova M.A.

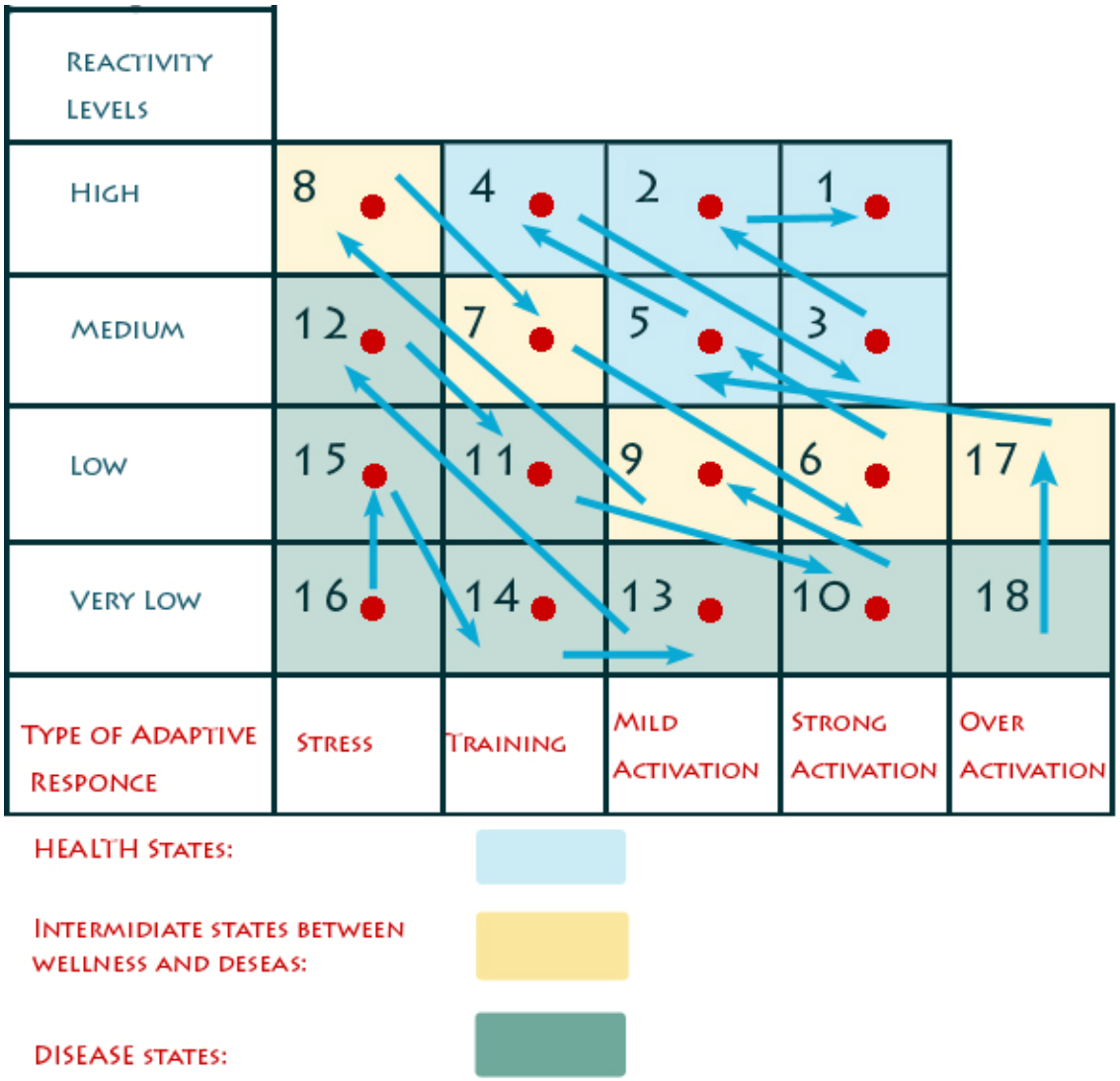

Fig.1 The structure of non-specific adaptive responses and functional states of the body.

2.2. **Operating Factors**

Wrapping the TMB blanket around the patient's body creates a local environment with the following active biophysical factors:

- Exposure of the patient to her or his own reflected infrared electromagnetic emissions.
- Exposure of the patient to her or his own reflected extra-high frequency electromagnetic emissions.
- Complete or partial shielding of the patient's body from external electrostatic and electromagnetic fields.

- Uniform redistribution of surface electric charge of the body in the environment protected from external electrostatic fields.
- Two confidential additional factors that Victory-TM Company currently will not disclose.

2.3 **Appraisal of the Therapeutic Effect**

The effect of a therapeutic, rehabilitative, preventive or health-enhancement procedure is appraised using an Overall Functional State (OFS) test by determining both the reactivity level and non-specific adaptive response (NAR) of the body (Appendix I). The NAR is reliably appraised according to the percentage of lymphocytes in the total white blood count (Appendix 2). He reactivity level is estimated by the tension degree in the white blood count (Appendix 3).

In most cases, however, the therapeutic effect of treatment can be adequately monitored by the improvement in the psycho-emotional state (Appendix 4).

2.4. **Pathways of Functional State Modification**

Predicting which better functional state (FSs) will be elicited in place of a previous funcinoal state is complicated because FSs can change along multiple paths. Decades of experience using TMB treatment confirmed the following three most likely paths of functional state alteration (see Fig.1).

Path 1: An initial FS can turn into another in either of the following sequences:

a) 16, 15, 14, 13, 12, 11, 10, 9, 8, 7, 6, 5, 4, 3, 2, 1.
b) 18, 17, 5, 4, 3, 2, 1.

Path 2: An initial FS alters such that the NAR type remains unchanged while the reactivity level increases. Changes proceed in either the following sequences:

a) 16, 15, 12, 8.
b) 14, 11, 7, 4.

c) 13, 9, 5, 2.
d) 10, 6, 3, 1.
e) 18, 17.

In most cases, Path 2 is more beneficial for the body in terms of energy economy because it requires fewer modifications that corresponds to a faster improvement of the FS.

The complication is that the new FS is less stable than it would be having been achieved following Path 1. There is a risk of returning to the initial FS because the reactivity level can alter several times during 24 hours whilst the NAR change follows a near-circadian rhythmicity and establishes itself during the morning hours between 07.00 and 09.00.

Path 3: An initial FS alters such that the reactivity level remains constant whilst the NAR changes into a more favorable type. Changes proceed in either of the following sequences:

a) 16, 14, 13, 10.
b) 15, 11, 9, 6.
c) 12, 7, 5, 3.
d) 8, 4, 2, 1.

NOTE:

Functional states can change along different paths dependent on many factors.
However, it is possible to increase the likelihood that the FSs will change along a more desired path:

1. The probability of Path 1 increases when TMB procedures are performed during the morning hours with the highest probability arising between 07.00 and 09.00 hrs (but no later than 11.00 hrs.).
2. The probability of Path 2 increases when the first TMB procedure is performed 14.00 hrs, followed by a second TMB procedure performed 3-5 hours after the first one.

3. Attempts to change the functional states along Path 3 are made in rare case at the final stages of preventive or therapeutic treatment. To raise the

probability of Path 3, TMB procedures should be longer by 20% and performed between 07.00 and 11.00 hrs.

2.5. **TMB Applications at Different Therapeutic Stages**

Functional state improvements occur many times during the course of TMB treatment. However, changing the whole gamut of functional states in a short time is impossible because each human organism only functions within a limited range of the most habitual non-specific adaptive responses (NARs).

The opportunity to improve the overall functional state an to enhance the adaptive capacities of the patient can only happen after first shifting the habitual range of FSs towards a higher reactivity level. Further FS improvement and enhancement of adaptive forces of the body are attained through performing additional courses of TMB treatment.

With regard to the described features of TMB treatment, the courses of TMB procedures are staged according to their purpose:

- Therapy and rehabilitation
- Preventive care
- Health enhancement

Courses of TMB procedures allow functional state improvements at all stages of disease treatment, rehabilitation, preventive care and health-enhancement.

3. APPLICATIONS OF THE TMB FOR HEALTH-ENHANCEMENT, PREVENTATIVE CARE, REHABILITATION AND CLINICAL THERAPY

3.1. **TMB Applications for Health-Enhancement are aimed at:**

- Enhancing health reserves of the body.
- Maintaining fitness, workability, and psycho-emotional state.
- Enhancing the efficiency of combined treatments and recovery methods.

3.2. TMB Applications for Primary Prevention Care is aimed at:

- Enhancing functional reserves of the body
- Improving the psycho-emotional state and preventing diseases and functional disorders in children and adolescents

- Preventing diseases and functional disorders in people exposed to psycho emotional stress
- Preventing occupational and health breakdowns in people exposed to high physical and mental stress through work
- Reducing the harmful effects of various damaging factors
- Preventing injuries and illness in athletes and increasing athletic performance
- Preventing the development of diseases in people with functional abnormalities and preclinical conditions
- Enhancing the efficiency of combined treatments and primary prevention methods.

3.3. **TMB Applications for Secondary Prevention Care is aimed at:**

- Enhancing the functional reserves of the body
- Preventing complications or exacerbations of diseases
- Enhancing the efficiency of combined treatments and secondary prevention methods.

3.4. **TMB Applications for Clinical Treatment and Rehabilitation is aimed at:**

- Enhancing the functional reserves of the body
- Increasing the therapeutic and rehabilitative effect of specific treatments and rehabilitative procedures for people with somatic disorders and irreversible morphologic changes in organs and tissues.
- Improving the quality of life for elderly people
- Improving the quality of life for disabled people
- Improving the quality of life incurable patients
- Preparation for surgical intervention

4. PSYCHIATRIC TREATMENT

The factors of social and economic problems within the population, the growth of anti-social trends in society, poor environmental condition, frequent psycho-emotional stresses all reduce the reactivity level of overall NARs of the body that leads to a general reduction in the level of health of the population.

A psychiatric TMB treatment course is aimed at:

- Enhancement and prolonged maintenance of health
- Mood improvement
- Improvement of workability in terms of accuracy, attentiveness, endurance and speed
- Reducing psycho-emotional strain, increasing learning abilities and expanding the adaptive body reserves in children and adolescents.

A TMB course consists of 10-20 procedures performed in the morning before
11.00 hrs.

Application method: Wrapping the whole body. The duration of a single procedure is determined according to section 9.1. It is recommended to repeat the whole course 2-3 times a year.

5. PRIMARY PREVENTION

The general decline in the population health level has led to the situation where most people live in intermediate states between wellness and disease. Sooner or later, this leads to the development of a disease. The TMB procedures help to rid the body of unfavorable intermediary functional states, to prevent diseases and to restore and maintain wellness.

5.1. **Improvement of the Psycho-Emotional State and Prevention of Diseases in Children and Adolescents**

Modern trends of allowing the next generation to bring themselves up impose stringent demands on the mental capacities and physiological functions of children. Exposure to negative social, domestic and other stress factors leads firstly to mental adaptive failures exhibited as abnormal sleep, higher levels of anxiety, impatience, some cognitive disturbances, autonomic system instability, etc. Mental adaptive failure reduces the overall adaptive forces in the child and lead to the arising and development of severe disorders. Mental adaptive failure significantly impedes preventative functions, social adaptation, restoration of the optimal functional state, and the elimination of signs of mental discomfort. Therefore, an integral part of all aspects of preventive care, rehabilitation and therapy should be the normalization, as much as possible, of the child's psycho-emotional state that has been impaired by the various stress factors.

The course of TMB procedures helps to significantly improve the psycho-emotional state, increase both physical and emotional resilience, decrease susceptibility to illness, and achieve an optimal performance in children and adolescents.

Preventative TMB course is aimed at:

- Preventing diseases and functional disorders
- Reducing impatience and aggression
- Relieving anxiety and depression
- Improving attentiveness
- Enhancement of health
- Improvement of learning capacities.

The preventative TMB course consists of 15-20 procedures performed in the morning before 11.00 hrs.

Application method: Wrapping the whole body. The duration of a single procedure is determined according to paragraph 9.1.

To achieve a better and longer effect, it is recommended at the end of the course to try and maintain either of the following NARs:

- Mild activation response at high reactivity level – if the main goal was reduction of impatience and aggressiveness
- Strong activation response at high reactivity level – if the main goal was reduction of anxiety and depression.

If required, repeat the course after 1-6 weeks. Later, it is recommended to perform psychological TMB courses 2-3 times a year.

5.2. **Disease Prevention in People under Psycho-Emotional Stress**

Stress is a NAR which forms the non-specific basis for the disease state or for intermediate states between wellness and disease.

The preventative TMB course is aimed at:

- Ridding the body of the stress state
- Health maintenance
- Improvement of the psycho-emotional state.
- Increasing workability.

The course consists of 5-15 procedures performed at any time of the day or night.

Application method: Wrapping the whole body. The duration of a single procedure is determined according to section 9.1. It is recommended to perform the TMB course when under sever stress or during a period of prolonged exposure to stress factors.

5.3. **Prevention** of **Occupational and Health Breakdowns in People under High Physical and Mental Loads**

The preventive TMB course is aimed at:

- Increasing tolerance to physical nad mental loads
- Health Maintenance
- Improvement of the psycho-emotional state.
- Increasing workability and professional performance.

The course consists of 15-20 procedures performed in the morning before 11.00 hrs (optimal time).

Application method: Wrapping the whole body. The duration of a procedure is determined according to section 9.1. The TMB course is periodically repeated 2-4 times a year.

5.4. **Reduction of Harmful Effects of Damaging Factors**

The preventive TMB course is aimed at:

- Increasing resistance to unfavorable factors
- Health maintenance
- Improvement of psycho-emotional state.
- Increasing workability.

The course consists of 15-20 procedures performed in the morning before 11.00hrs (optimal time).

Application method: Wrapping the whole body. The duration of a single procedure is determined according to section 9.1. The TMB course is periodically repeated 2-6 times a year.

5.5 **Prevention of Injury and Illness Breakdowns in Athletes and Increasing Athletic Performance**

The preventive TMB course is aimed at:

- Enhancement of health
- Improvement of the psycho-emotional state
- Improvement in the results of physical training
- Improvement of sports results.

The course consists of 10-20 procedures performed in the morning before 11.00 hrs. (optimal time).

Application method: Wrapping the whole body. The duration of a single procedure is determined according to section 9.1. The TMB is periodically repeated.

This line of TMB treatment needs a amore detailed elaboration. There should be significant differences in TMB treatment methods between physical training, contest-related, and restorative periods, as well as between different kinds of sports.

5.6. **Preventing Emerging and Developing Diseases in People with Sub-clinical States or at the Initial Stage of a Disease**

The preventative TMB course is aimed at:

- Removal of health related complaints
- Health maintenance
- Improvement of the psycho-emotional state.
- Increasing workability
- Revealing most probably people, having a disease in latent form.

The course consists of 15-20 procedures performed at any time of the day or night.

Application method: Wrapping the whole body. The duration of a single procedure is determined according section 9.1. The TMB course is periodically repeated 2 times a year (or as necessary).

NOTE:

Should the same health-related complaints re-emerge during the 6 months following he course of treatment there may be a latent form of disease.

6. SECONDARY PREVENTION

6.1. **Prevention of Exacerbations and Complications of diseases; Enhancement of Functional Reserves of the Body**

The preventive TMB course is aimed at:

- Extending the remission period
- Reducing the frequency and intensity of exacerbations
- Enhancing overall health
- Improving the general state
- Increasing workability

The course consists of 10-20 procedures performed at any time of the day or
night.

Application method: Wrapping the whole body; or other method at the physician's discretion (see section 8 "TMB-01 APPLICATION METHODS"). The duration of a single procedure is determined according to section 9.1. The treatment courses are recommended before aggravations or 2-3 times a year during the autumn to spring period.

7. CLINICAL THERAPY AND REHABILITATION

The common cause of any disease is a reduction in immunity and impaired adaptive activity of the body. The non-specific basis of diseases are NARs to stress and other NARs of the low and very low reactivity levels.

TMB procedures allow an initially unfavorable NAR state to change to a more favorable NAR state, thereby establishing functional states associated with restoration of the integrity and harmonization of physiological functions of different subsystems of the body and enhancement of the body resistance to unfavorable internal and external factors. Recovery is brought about by activation of the internal forces of the body itself.

Therapy and rehabilitation in somatic disorders or irreversible porphologic changes in organs and tissues using only TMB blanket therapy is performed rarely because in most cases the therapeutic effect is attained slowly.

It is more advisable to use specific clinical therapies and rehabilitation methods in combination with TMB treatment. This helps to considerably improve the therapeutic effect of the specific treatment regimes and rehabilitation in terms of quality of treatment, time to recovery and restoration and to reduce material expenses.

7.1 **TMB as a Supplementary Treatment to Enhance the Efficiency of Specific Therapies**

The course of TMB treatment is aimed at:

- Curtailing the course of a disease and improving the vlinival outcome.
- Preventing or reducing complications of the principal disease and its transition from acute to chronic form.
- Improve the efficiency of treatment of the principal disease (by enhancing the special clinical therapy, reducing side effects, shortening recovery times.)
- Preventing or controlling concomitant diseases.
- Improving the emotional and mental state of patients.
- Reducing drug administration/ dosage.

The TMB course lasts 7-30 days comprising 1 or 2 procedures daily. Various application methods can b used (see section 8 “TMB-01 APPLICATION METHODS”). The duration of a single procedure is determined according to section 9.1. IF required, the course can be repeated 1-2 weeks. It is recommended to perform a preventive TMB course about 2 to 8 weeks after the last treatment.

7.2. **Increasing the Efficiency of Clinical Rehabilitation**

A rehabilitation plan depends on the specific disorder, stage and clinical course of the disease, severity of the condition, and concomitant diseases. The TMB procedures are included in the rehabilitation plan for the following purposes:

- Restoring the integrity and harmony of the physiological functions of different subsystems of the body and its relationship with the external environment.
- Removal of health-related complaints.
- Health enhancement.
- Improving the psycho-emotional state.
- Increasing workability and professional performance.
- Increasing the efficiency of rehabilitative methods.

The TMB course lasts 10 to 60 days comprising 1 or 2 procedures daily. Various application methods can be used (see section 8 “TMB-01 APPLICATION METHODS”). The duration of a single procedure is determined according to section 9.1. If required, the course may be repeated after 1-6 months.

7.3. **Improving the Quality of Life for Elderly People**

Elderly people often experience a considerably reduced quality of life in terms of general health level, physical vigor, workability, aches and pains, and psycho-emotional state.

The course of TMB treatment is aimed at:

- Health enhancement.
- Removal of health-related complaints.
- Restoration of workability.
- Enhancing general activity and endurance.
- Improving the psycho-emotional state.

The TMB course lasts 45 to 60 days. The first rehabilitative course is conducted using two TMB procedures daily. Application method: Wrapping the whole body. The following rehabilitative courses can be conducted with 1 TMB procedure per day. Duration of a procedure is determined according to section 9.1. The TMB courses should be periodically repeated every 3-6 months.

7.4. **Improving the Quality of Life for Hopeless Patients**

Hopeless patients are usually in a very severe condition. Their life is full of distress. Their family and friends also suffer from witnessing the situation. The use of TMB procedures is primarily an attempt to return the body’s integrity,

restore self-regulation and to improve the psycho-emotional state by eliciting more physiologically beneficial NARs.

The course of TMB treatment is aimed at:

- Improving the subjective state (which is attained in all cases to a certain degree).
- Improving mood.
- Reducing health-related complaints (which is attained in all cases to a certain degree).
- Returning physical activity as much as possible.
- Providing the ability to return to a normal life as much as possible.

The first therapeutic benefits usually become evident in 5-7 days, and 2-3 weeks into the rehabilitative TMB course patients can attempt to return to active life.

Two TMB procedures are performed every day. Application method: Wrapping the whole body. The first TMB procedure is performed before breakfast. The second TMB procedure is performed at noon. The duration of a single procedure is determined according to section 9.1.

7.5. **Preparation for Surgical Intervention**

Preparation for surgical intervention helps to improve the immediate results of treatment, to decrease the frequency and severity of postoperative complications, and to reduce the postoperative recovery period.

Pre-surgical TMB treatment is aimed at:

- Easier and faster recovery from postoperative stress.
- Decreasing the frequency and severity of delayed infectious/ suppurative complications.
- Relieving the side effects of anesthesia.
- Reducing the postoperative recovery period.

The pre-surgical TMB course should commence 1-2 weeks before the operation. Application method: Wrapping the whole body. Two TMB procedures are performed daily. The duration of a single procedure is determined according to section 9.1.

8. TMB-01 BLANKET APPLICATION METHODS

TMB treatment procedures are basically intended to move the body from unfavorable states to progressively more favorable functional states (FSs) by eliciting improved general NARs. The body usually requires **full wrapping** for this purpose. The patient is wrapped in the TMB-01 blanket such that only the patient's face remains uncovered. The NAR usually change according to one of the three pathways (see earlier section 2.4 "Paths for Functional State Modification").

Changes in the NAR type is governed by circadian rhythm and is formed in the morning hours. Therefore, if **Path 1** is desired for the functional state improvement then the TMB procedure should be done in the morning from 07.00 to 11.00 hrs.

If the FSs improvement is required by enhancing the reactivity level without changing the NAR (**Path 2)** then the first TMB procedure should be carried out after noon.

A non-specific adaptive response (NAR) develops in two phases:

Phase 1: Neural phase, which arises immediately and has a short duration.

Phase 2: Humoral phase, develops in 3-6 hours and lasts about 24-48 hours.

In some cases, when the starting NAR is chronic stress or when there are irreversible morphologic changes in organs and tissues, the **second humoral phase** of the adaptive response may not develop in a single TMB procedure. In such cases, transition into a more beneficial physiological NAR will fail. To progress from a persistent unfavorable state more efficiently, two TMB procedures a day are recommended.

The 2nd procedure may be a local application, a partial wrapping or full wrapping with the TMB blanket.

Partial wrapping: Wrapping TMB blanket around a part of the patient's body.

Local application: Applying the folded TMB blanket on the painful area of on the projection of a diseased organ.

Using partial wrapping or local application as a second procedure is more efficient in treating disorders with marked local manifestations.

Full wrapping as the second procedure should be performed 3-4 hours after the first procedure.

Partial wrapping or local application as the second procedure should be performed 2-4 hours after the first procedure.

NOTE:

To increase the effect of **partial wrapping** or **local application** procedures, advanced TMB-01 series models of TMB products an be used.

Advanced TMB-01-M products are made as bandages, overboots, shorts, etc. These models are more efficient for local applications because of their more focused effect aimed at the specific treatment area and due to the longer application times (procedure durations). One example is using TMB-01-M bandages for wrapping joints overnight.

TMB-01 Blanket Application Methods

9. DURATION OF A TMB PROCEDURE

The duration of a TMB procedure depends on which TMB blanket application method is utilized, age, sex, and condition of the patient.

9.1. One Full Wrapping

The patient is wrapped in the TMB-01 blanket such that only the patient's face remains uncovered. The procedure durations are given in Table 2.

Duration of Full-Wrapping Procedures

NOTES:

1.For children, the average duration of each procedure (chosen according to the age range) is kept during the entire course.

2. For men and women, in most cases the average procedure duration is gradually
reduced from the maximum value (of the time range) to the minimum value at the end of the course.

One exception to this is for patients with severe and moderately severe abnormalities of the cardio-vascular system. In such cases, the procedure duration is selected in the time range of 15-20 min and kept constant for the whole course.

Another exception is cases with concurrent acute inflammation. IN these cases, the treatment course consists of two phases: during phase1, the procedure duration is gradually increased to the maximum value of the time range. During phase 2, the procedure duration is gradually reduced to the minimum value of the time range. In phase 1, it is recommended to increase the procedure duration in steps, as follows:

a) For men: 16, 20, 25, 32, and 40 minutes.
b) For women: 16, 20, 25, and 32 minutes.

Depending on the extent and acuteness of the inflammation, up to 4 procedures are carried out at each duration level.

Items 1 and 2 mention average procedure durations. This means that in a prolonged TMB blanket course you should randomly change the procedure duration every day by 5-10% around the chosen average value.

Example: At a constant average duration value of 20 minutes, procedures are actually performed in a series with durations of 20, 19, 21, 20, 18, 19, 20, 22, 20, 19, etc. minutes…

In some cases, pains or exacerbation of the condition may be observed at the beginning of treatment. To treat and prevent these signs for future procedures, the duration should be temporarily reduced.

9.1. **Two Full Wrappings**

The first procedure duration is selected according to section 9.1. as for one full wrapping procedure daily. The second procedure usually has the same duration as the first procedure, but may be extended up to 1.5 times longer.

9.2. **1 Full Wrapping + 1 Partial Wrapping (or 1 Local Application)**

The first procedure duration is selected according to section 9.1 as for one full wrapping procedure daily. The duration of the partial wrapping or local application is 1.5 to 3 times longer. The longest session durations are used in the treatment of musculo-skeletal disorders.

9.3. **1 Partial Wrapping or 1 Local Application**

The duration is selected according to section 9.1 as for one full wrapping procedure daily.

9.4. **2 Partial Wrappings or 2 Local Applications**

The first procedure duration is selected according to section 9.1 as for one full wrapping procedure daily. The duration of the second application is 1.5 to 3 times longer.

10. TMB IN COMBINATION WITH OTHER METHODS

10.1. **Influence of the TMB on the Efficiency of Combined Methods**

TMB procedures combine perfectly with most methods of clinical treatment, rehabilitation and health-improvement.

Studios on the TMB in combination with other treatment modalities show that TMB blanket significantly increases the efficiency of the combined techniques. This happens primarily through reducing disagreements in biological rhythms and harmonizing the functions of the regulatory and immune subsystems.

10.2. **Combination with Transcutaneous Neurostimulation Methods**

Combination of TMB procedures with transcutaneous neurostimulation techniques (e.g. massage of reflex zones, application of neurostimulation devices such as SCENAR, DENAS, PROLOG, etc.) not only increases their therapeutic effect but also helps indentify which skin areas are most appropriate for neurostimulatory action.

The action of the TMB prior to SCENAR etc. reveals the appropriate reflex zones for action through changes which become apparent on the patient's skin (Podshibiakin's active points and Zakharyin-Ged's zones). Such reflex zones are distinguishable from the surrounding zones by reddening, paleness, rash, etc. Such zones are displayed most clearly in chronic diseases (especially in gastro-intestinal diseases), allergic and immnunodeficient diseases associated with abnormal regulation of body fluids, hypertension, gastric secretion, etc. The visually distinguishable skin areas are most effective target zones for transcutaneous stimulation for the patient at that given moment of time. As the disturbed functions improve, such active treatment zones become less obvious following TMB application.

The same is true for areas where a slight pain, inflammation, itching, tingling, or other sensations appear during a TMB procedure. Using the TMB as a preparatory procedure to reveal target treatment zones enables generalized neurostimulatory techniques to be abandoned in favor of a more appropriate and targeted treatment regime to ensure the most optimal and efficient overall treatment program.

This technique was successfully used by such experienced SCENAR practitioners as Leushina V.A., Scenar-LET company, Chelyabinsk; Kalipanova I.P., "RADOST" Clinical Prevention Center, Rybinsk; Shabunina I.I., Medical Rehabilitation Department of NPO "SPECIAL CHILD" company, Yekaterin-burg; etc. The efficiency of this technique can be judged from data given in section 11.6.

10.3. **Increasing the Effectiveness of TMB Procedures**

In developing more favorable functional states, self-detoxication processes are enhanced and endotoxin production slows. Therefore, in order to increase the effectiveness of psychiatric, preventive, rehabilitative, and

therapeutic treatments it is useful to combine TMB procedures with methods that activate natural intestinal, renal, dermal, mucosal elimination pathways.

Begin with intestinal control or an enema. Use of enterosorbents are indicated: Enteresgel, SUMS-1, Polyphepan, activated carbon, etc. Vegetable or fruit juices will be beneficial except in diabetes mellitus.

The next stage is using diuretics, choleretics, matural nutrients and pro-biotics. Good results are achieved with bio-additives such as Peccecom, Katrel, etc.

Significant benefits may be gained from measured rhythmical movements, walking or balneal procedures.

11. TMB BLANKET TREATMENT CASES AND EFFICIENCY

11.1 Department of Physiotherapy and Therapeutic Gymnastics, INSTITUTE OF NEUROLOGY, RAMS, Moscow

Chernikova L.A., Kashina Ye.M.

TMB was used in the multi-disciplinary treatment of patients with multiple sclerosis, residual manifestations of cerebral circulation disorders, hyperkinesis of various etiology, etc.

The reason for including the TMB-01 into a composite treatement is the presence psycho-emotional strain or pain.

In 83.3% of patients exhibiting psycho-emotional strain syndrome there was improvement on the emotional-volitional side that manifested as enhancement of mental activity, better mood, increased emotional tonus, interest in treatment, reduced mental strain and feeling more comfortable. **70% of patients exhibiting pain of various intensities reduced manifestations of pain** assessed by Melzac's Pain Scale.

11.2. INSTITUTE OF MENTAL HEALTH, RAMS, Moscow

Kraineva L.V.

The TMB was used in the multi-disciplinary treatment of patients with small-gradient forms of endogenous diseases and borderline mental disorders.

In patients who received TMB treatment as part of their therapy there was **significant reduction of symptoms:**

Asthenia-neurotic - in 91%;
Asthenia-vegetative - in 74%;
Somatomorphic - in 69%;
Affective - in 48%.

11.3. Multi-Field Hospital of All-Russian Center of Disaster Medicine "ZASCHITA", RF Health Ministry, Moscow

Shabanov V.E.

The TMB was used in the multi-disciplinary treatment of peripheral nervous system disorders (lumbosacral radiculitis, trigeminal neuralgias), locomotor apparatus diseases (thoracic and lumbosacral osteochondrosis).

The multi-disciplinary approach included conventional drug therapy (analgesics, anti-inflammatories, desensitizing, neurotrophic and pro-aggregate drugs, group B vitamins, antihypoxants, diuretics and neurostimulants; preparations improving neuro-muscular conduction) physiotherapy (clinical facilities were limited only to UV and diadynamic therapy) and the therapeutic multilayer blanket TMB-01.

Using TMB treatment **patients felt better faster, noted significantly enhanced general and motor activity, slept better, improved their appetite and felt greater relieft of discomfort. 80% of patients** whose treatment included TMB blanket **showed an earlier (by 3-4 days) and more marked decrease in pain,** which allowed a **reduction in administration and dosage of analgesics by a factor of 1.2-1.4 (in comparison with the control group).**

Finally, there was a significantly **shorter hospitalization by 2-3 days** in cases where TMB-01 treatment was used (in comparison with the control group).

11.4. RUSSIAN SCIENTIFIC CENTRE OF RESTORATIVE MEDICINE AND BALNEOTHERAPY OF THE RF HEALTH MINISTRY, MOSCOW

Khan M.A., Radetskaya L.I., Konova O.M., Dmitrienko Ye.G., Vakhova Ye.L

11.4.1 Use of the TMB-01 in the Prevention of Acute Respiratory Diseases in Children

After one course of activation treatment, **the efficiency of treatment in children with frequent acute respiratory diseases improved to 72.6 %** compared to **40.2% (p<0,05) in the control group.** The 6 months follow-up tests demonstrated the stability of the therapeutic effect. **During the 6 months after the course of treatment there were no ARD complications** among the children of the test group.

Research into the sickness rate among children found **1.4 times fewer exacerbations of chroic ENT diseases or acute respiratory cases.**

Thus, application of the therapeutic multilayer blanket **helps to enhance non-specific resistance in frequently ailing children by improving the thermal and autonomic nervous system control. This in turn helps to reduce the acute respiratory sickness rate and frequency of exacerbations of chronic ENT diseases and decreases the drug load on the patient.**

11.4.2. TMB-01 Treatment of Children with Bronchitis

After a single course of non-specific activation TMB treatment, **the efficacy of treatment was 82.6%** (of which 61.7% of patients showed a significant improvement with a moderate improvement in 38.3% of patients) while **the efficacy of treatment in the control group was only 56.1% (p<0,05).**

Thus, multilayer therapeutic blanket treatment of children suffering from bronchitis **helps to improve clinical course of disease, enhances the functional condition of the lungs and autonomic nervous system and increases non-specific immunity of the body.**

11.4.3. TMB-01 Treatment of Children with Bronchial Asthma

After one course of activation TMB treatment, **the efficacy of treatment for children showing a moderate or significant improvement was 83.3%. In children of the control group, the efficacy of treatment was only 62.5 % (p<0,05).**

The TMB treatment had a **beneficial effect on the clinical course of bronchial asthma in children: improved emotional and mental state of patients, enhancement of adaptive forces of the body** due to the transition to a more beneficial physiologic type of non-specific adaptive response and to higher levels of reactivity; **decreased lung rales and reduced bronchial obstruction,** which was confirmed by tests of respiratory function and peak flowmetry data. It was established that the therapeutic multilayer blanket has a **significant effect on the allergic inflammation process, characterized by a reduced eosi-**

nophilia in peripheral blood an improved balance of serum immunoglobulins.

11.4.4. TMB-01 Treatment of Children with Atopic Dermatitis

After one course of activation treatment with the TMB, **the efficacy of therapy for atopic dermatitis in children was 76.7% (who shed either a** moderate or significant improvement) compared to **below 60.7 % (p<0,05) in the control group.**

Thus, activation treatment with the TMB-01 has a **beneficial effect on changing the type of adaptive response, on the reactivity level of the body by increasing its non-specific immunity, and on the clinical course of atopic dermatitis in children. TMB treatment helps to reduce allergic skin inflammation and dermal pruritus and to normalize emotional and mental functions. The method allows the body to enhance the protective-adaptive responses and rapidly restore functional reserves.** Application of TMB-01 **promotes de-sensitization and reduced the immune imbalance of the body.**

11.4.5. TMB-01 Treatment of Children with Neuro-Circulatory Asthenia

After a course of wrapping with therapeutic multilayer blanket, **the efficacy of therapy was 80.0%,** basically through improvement. **In children of the control group,** there was a lower **efficacy of treatment of 58.0% (p<0,05).**

TMB treatment has a **beneficial effect on the clinical course of neuro-circulatory asthenia** in children. **The number of health-related complaints significantly decreases, the workability is elevated and sleep is normalized.** TMB treatment **improves the emotional and mental state of patients, enhances adaptive forced of the body** due to transition to a more functional type of non-specific adaptive response (strong activation) in 42.5% of patients and to a higher reactivity level in 50.0% assessed by the tension degree in the white blood count. **TMB treatment helps to normalize arterial pressure** in the states of lability and elevation of pressure, **reduced heart rate, has a beneficial effect on all types of autonomic dysfunction.** This is especially notable with prevailing sympathetic effects that demonstrates the pathology-focused action of activation TMB treatment in neuro-circulatory asthenia.

11.4.6. TMB-01 Treatment of Children with Headaches

Assessment of test results showed the high efficacy of TMB wrapping as an adjunctive therapy for treating headaches in children (85.0%), compared to **60.0% (p<0,05) in the control group.**

The conducted tests confirmed the efficacy and benefit of TMB wrap-

ping in the treatment of headaches in children. The clinical basis of the therapeutic effect consists **of reducing headache manifestations, decreasing tension of aaptive processes** in the body according to white blood count analysis, **normalizing the psycho-emotional status, decreasing anxiety, correcting autonomic function** through reducing excessive sympathetic-parasympathetic effects.

11.4.7 TMB-01 Treatment of Children with Biliary Dyskinesia

After a single course of activation treatment using the TMB-01, the **efficacy of therapy was 75.0 %,** based on clinical improvement, while **in the control group it was 40.0%** ($p<0,05$).

Activation treatment using the therapeutic multilayer blanket TMB-01 **caused a significant increase of the number of children with strong and mild activation states at a high reactivity level. This had a beneficial effect on the clinical course of biliary dyskinesia** both in the hypermotor and in the hypo-motor form. Clinically this manifested as a **significant reduction in the number of health-related complaints, decreased dyspeptic episodes, improved workability and appetite**, a positive impact on both clinical and laboratory indices and **good anti-inflammatory, desensitizing, and immuno-corrective effects, with favorable shifts of hematology and humoral immunity indices, normalized indices of gall bladder contractility and autonomic nervous activity.**

11.4.8. TMB-01 Treatment of Children with Neurogenic Bladder Dysfunction

After a course of ull wrappings in the TMB-01 blanket, the **efficacy of therapy was 75.0%** based on clinical improvement, while **in the control group it was 40.0% (**$p<0,05$).

Full wrapping in the TMB for treatment of neurogenic dysfunction of the urinary bladder had a **beneficial effect on changing the types of adaptive responses and reactivity levels, as well as on the clinical course of neurogenic bladder dysfunction and the accompanying inflammatory diseases of the urinary tract. The frequency of enuresis during the day and night considerably reduced with the average effective volume of the urinary bladder and voluntary urination frequency normalized.** Full wrapping in the TMB blanket leads to **normalization of urine flow indices**, which testifies to its favorable effect on the urodynamic status of lower urinary tracts.

11.4.9. TMB-01 Treatment of Children with Posture Disorders

After a single course of full wrapping in the TMB-01 blanket, the **efficacy of therapy was 62.0%** based on clinical improvement, while **in the control group it was 35.0%** ($p<0.05$**).**

Activation treatment using full wrapping in the TMB-01 **promotes favorable changes in the types of adaptive responses and reactivity to higher functional levels, appreciable improvement of the psycho-emotional state, reduction of painful sensations along the spine, diminishing hypertonicity and spasticity of the back muscles in children with posture disorders. Treatment also improves the state of the cardio-respiratory systems (higher peak expiratory flow, lability of arterial pressure and heart rate disappeared, better autonomic balance** mainly by reducing sympathetic hyperactivity).

11.4.10. TMB-01 Treatment of Children with Constitutional Exogenous Obesity

After one course of TMB treatment in children suffering from constitutional exogenous obesity , the **efficacy of treatment was 63.8%, while in the control group it was 38.0% ($p<0.05$).**

Activation treatment by full wrapping in the TMB-01 **promotes favorable changes in the types of adaptive responses and reactivity levels, gives appreciable improvement of the psycho-emotional state and has a beneficial effect on the clinical course of constitutional exogenous obesity. It helps to reduce appetite, diminish the number of complaints, normalize sleep, enhance physical performance and improve skin state**. There was an **evident trend to reduce body weight with a better state of the anterior abdominal wall and reduced weight/height index.**

Thus, a course of activation TMB treatment has a **beneficial effect on the general non-specific reactivity of children, on metabolic processes, indices of physical fitness, state of the ANS and cardio-vascular system and lipid exchange indices.**

11.5. **EDEM Sanatorium, Belokurikha Health Resort Complex, Belokurikha, Altai Region**

Teplyakov G.V.

Monotherapy with the TMB-01 **demonstrated 100% efficacy in treating patients with seismic hypersensitivity syndrome (SHS).** TMB therapy has

been recommended to be included in a compound program for earthquake victim rehabilitation and SHS syndrome prevention in tectonically unstable regions.

11.6. **Medical Rehabilitation Department of NPO "SPECIAL CHILD" Company Yekaterinburg**

Shabunina I.I.

TMB treatment was used for rehabilitation of children with:

- Locomotor system disorders: infantile cerebral paralysis, sequela of post-traumatic CNS infection, osteochondroses, sequela of cerebral vascular disorders with central and peripheral pareses;
- Diseases of the musculo-skeletal system (myositis, arthritis);
- Diseases of the cardio-vascular system (essential hypertension, astheno-vascular dystonia);
- Neurosis-like syndromes (behavior and sleep disorders);
- ENT diseases

Patients received two types of treatment:

- TMB treatment witout other therapeutic methods
- TMB treatment combined with other methods (SCENAR, massage, therapeutic exercises, DYPROCOR).

The treatment was selected based on the patient's age, state, type and severity of the disorder. Treatment was performed by wrapping the whole body or by local application to segmentary-reflex spinal zones (collar area, areas along the backbone, lumbar zone).

Subjective observations by Shabunina suggested that the best results were achieved with the following combined therapies:

- TMB, massage, therapeutic exercise
- TMB, SCENAR while using an individual treatment program in each case (see section 10.2).

After the course of treatment a **marked improvement was observed in 83% of cases, a slight improvement in 12% and 5% remained unchanged.**

The following clinical neurologic trends were observed during the treatment course:

- **Correction of muscular tonus (reducing hyper-tonicity)**
- **Normalization in hypotonia/dystonia cases**

- **Hyperkinesis reduced or disappeared, in terms of extent and intensity**
- **Increasing amount of both active and passive movements**
- In some cases **physical functions that had disappeared due to disease were re-acquired (sitting, walking, purposeful hands manipulations), promotion of self-management**

- **Reduced frequency and intensity of headaches**
- **Improved emotional-volitional state** (better mood, correction of behavior, normalized sleep)
- **Correction of functional abnormalities of the autonomic nervous system**
- **Relief from pain**

The effects achieved on both neural and somatic status confirms the target-oriented action of TMB treatment on the underlying pathogenic mechanisms of neurological diseases.

11.7. **Neurosis Hospital of PSYCHIATRY Association, Yekaterinburg**
Vyguzova Ye.Ye.

TMB therapy was used in the treatment and rehabilitation of patients with neuroses, neurotic reactions, organic cerebrovascular insufficiency, sequela of brain injuries, neuro-circulatory asthenia, climacteric neurosis, etc. Virtually all patients began with sleep disturbances and poor appetite, cerebro-asthenic complaints disturbances of the gastro-intestinal tract, genitor-urinary, respiratory and cardiovascular systems.

Psychosomatic disorders began, as a rule, after an acute stress, a prolonged situation of mental trauma, or a long-term somatic disease.

Initially, acute symptoms were relieved with drugs (antidepressant medication, tranquilizers, symptomatic therapy, neotrophic therapy, etc.) Next, special treatments were used (TMB, SCENAR, acupuncture, composite therapy).

It is beneficial to use the TMB in a general approach to borderline mental abnormalities, either combined with acupuncture and SCENAR or independently. When wrapped in the TMB-01 blanket, patients relaxed, became warm, perspired, felt comforted and often sleep. A general positive attitude towards treatment appeared, especially in women at the menopausal age or older.

TMB-01 treatment in combination with SCENAR was used for patients with organ abnormalities (problems with spine, joints, gastro-intestinal tract, respiratory and urogenital systems, skin diseases) and for patients with a fear of invasive treatment methods. TMB-01 blanket in combination with SCENAR **efficiently removes general neurotic syndromes, asthenia, autonomic**

disturbances, cures somatic and psychosomatic disorders, and recovers both the control systems and affected organs.

11.8. **Center for Medical, Mental and Social Rehabilitation of Disabled Children, Moscow**

Leonov A.V.

Research was carried out using the TMB-01 blanket for rehabilitating patients with autonomic-circulatory disorders manifesting as latent autonomic lability or clinically displayed autonomic dysfunctions.

A course of rehabilitative TMB treatment consisted of 9-25 procedures performed in the morning or evening hours every other day with a final exposure of 25-40 min. (The initial exposure in all patients was 10-15 min.). No other types of treatment were used except the TMB treatment.

TMB treatment resulted in a significant and stable improvement of the condition in 83% patients, no improvement or instable improvement was observed in 17% patients.

Treatment using the TMB-01 therapeutic blanket **leads to an objective reduction of autonomic abnormalities, activation of the body reserves and protective capacities and regulation of psycho-emotional disturbances.**

11.9. **"LUCH" Sports Club, Yekaterinburg**

Lipskaya N.G.

A combination of TMB-01 and SCENAR procedures were used daily, immediately after training of the leading track-and-field athletes. **The athletes receiving the treatment recovered faster, with higher exercise performance.** Better recovery **helped the athletes to go through the athletic season without injury whilst remaining at the peak of athletic performance.**

11.10. **"IMPULSE-CORRECT" Rehabilitation Center based in Tyumen Research Center of the Siberian Division of Russian Academy of Engineering Sciences, Tryumen**

Mizova O.V.

Locomotor system diseases: arthrosis, arthritis, polyarthritis, osteo-chondrosis, myositis). ENT and respiratory diseases: sinusitis, otitis, vaso-motor rhinitis, cochlear neuritis, quinsy, tonsillitis, ARD, bronchitis. Cardio-vascular diseases: coronary disease, thrombophlebitis, astheno-vascular dystonia.

Diseases of the gastro-intestinal tract: peptic ulcer, gastritis, colitis, pancreatitis, cholecystopancreatitis). Urinary system diseases: cystitis, adnexitis.

Analysis of the therapeutic results showed **distinct positive trends (both subjective and objective) in 97.5% of patients.** Patients with locomotor system diseases improved (or cured) kyphoscoliosis, increased spinal range of motion, disappeared painful sensations. Patients with gastrointestinal diseases had less discomfort, decreased painful sensations, less epigastric burning, normalized stool.

Thus, the combined SCENAR/TMB-01 treatment gives **positive results in treating a wide variety of disorders and abnormal conditions.**

11.11. **TMB-01 is also used effectively in the following institutions:**

- "OGONYOK" Rehabilitation Center of Pediatric Orhopedics and Traumatology, St. Petersburg, Dudin M.G., Kurchenko S.N.
- St. Petersburg City Psychiatric Hospital #3 named after Skvortsov-Stepanov, St. Petersburg Local Health Administration. Agishv V.G.
- Physical Therapy & Rehabilitation Center #11, Moscow, Leshinskaya A.E.
- All-Russian Physical Rehabilitation Center for Disabled Children, Moscow, Posvezhinskaya N.P.
- "MEDBIOEKSTREM" Center of Occupational Radiopathology, Ozyorsk (Chelyabinsk Local Health Administration), Voronin S.V.
- "POGRANICHNIK ROSSII" Recovery Center for Border Guards, Federal Security Service of Russia, Anapa
- Central Clinical Sanatorium, RF Ministry of Transport, Sochi
- Kislovodosk City Children' Hospital, and other institution.

12. INTENDED USE OF TMB-01 BLANKET

13. APPENDIX 1
FEATURES OF NON-SPECIFIC ADAPTIVE RESPONSES (NARs)

At any moment of time, the body can develop only one NAR of he five possible types of NARs:

- Training Response
- Mild Activation
- Strong Activation
- Stress
- Overactivation.

These NARs can develop at different levels of reactivity.

Features of Non-Specific Adaptive Responses (NARs)

13.1. Training Response

The thymolymphatic (immune) and endocrine subsystems are within the lower half of the normal zone (except for glucocorticoid secretion, which is in upper half of norm).

With increasing reactivity level, the activation of the thymolymphatic system, thyroid gland, genital glands and mineralcorticoid secretion is increased. With decreasing reactivity level, glucocorticoid secretion rises while secretion of thryroid and sex hormones decreases.

A moderate prevalence of glucocorticoids over mineralcorticoids without any damage or inhibition of the body (especially at a moderate reactivity levels) is accompanied by a mild anti-inflammatory effect.

A mild protective inhibition prevails in brain.

Activity of anabolic and catabolic processes is not high, but anabolic activity prevails. With decreasing reactivity level, anabolic processes decreas, while catabolic processes increase. Energy substrate accumulation exceeds energy expenditure, thus energy is stored, especially at high reactivity levels. Subsystems' activity synchronization is satisfactory and remains within the lower half of the normal zone similar to many other parameters.

If the responses is maintained continuously, the **fitness** stage develops. In the **fitness** stage, non-specific immunity increases due to a higher activity level of protective subsystems. As long as the training response is maintained, non-specific immunity increases with increasing reactivity level.

At high reactivity levels, the **psycho-emotional state** is characterized by calmness, some inertia (moderate activity), low anxiety, low aggressiveness, satisfactory sleep and appetite. Workability is low in terms of operation speed but it is good in terms of working time. At low reactivity levels, anxiety increases, work performance is decreased, sleep an appetite are disturbed.

<u>Biological meaning of response:</u> *Cutting off nonessential, weak repetitive stimuli by developing a protective inhibition in the brain*

13.2. Mild Activation Response

The thymolymphatic (immune) and endocrine subsystems are within the upper half of the normal zone (except for glucocorticoid secretion, which is within the lower half of normal values).

With increasing reactivity level, activation of thymoloymphatic system, Thyroid gland and genital glands is increased. With decreasing reactivity level, glucocorticoid secretion rises while secretion of thyroid and sex hormones decreases.

A mild activation response is accompanied by a moderate increase of proinflammatory potential and prevents the acute inflammatory process transforming into the chronic state.

Mild activation prevails in brain.

Metabolism is primarily anabolic. Energy exchange is characterized by high-speed metabolism of energy-supplying substrates, well-balanced by their expenditure and replenishment. With decreasing reactivity level, energy exchange becomes less economic, since anabolic processes, which are typical for mild activation response, are slightly decreased while catabolic processes increase.

Subsystems activity synchronization is good.

Non-specific immunity rapidly and considerably increases due to activation of protective subsystems, especially at high reactivity levels.

At high levels of reactivity, the **psycho-emotional state** is characterized by high activity, calmness, good mood and low aggressiveness. Workability is good both in terms of precise execution, operation speed and duration of working. At low reactivity levels, anxiety increases, workability decreases, sleep and appetite can be disturbed.

Biological meaning of the response: *Increasing activity of control systems of the body.*

13.3. **Strong Activation Response**

The thymolymphatic (immune) and endocrine systems and glucocorticoid secretion are with the upper third of the normal zone or slightly above normal. With increasing reactivity level, activation of the thymolymphatic system, thyroid gland genital glands increases. With decreasing reactivity level, glucocorticoid hormone secretion rises while secretion of thyroid and sex hormones decreases.

This response is associated with a higher proinflammatory potential than in the mild activation response and prevents the maintenance of chronic inflammatory processes.

Stronger activation prevails in brain.

Metabolism is characterized by very active anabolic and catabolic processes with a significant prevalence of anabolic processes and well-balanced expenditure and replenishment of energy-supplying substrates. With decreasing reactivity level, energy exchange becomes less economic, since anabolic processes, which are typical for strong activation response, decrease while catabolic processes slightly increase.

Subsystems activity synchronization level is high.

Non-specific immunity increases rapidly and more considerably than in the mild activation response.

Regular exposure supporting the strong activation response at a high level reactivity makes the response steady. In such a state, ***rejuvenation of the body*** occurs.

At high levels of reactivity, the **psycho-emotional state** is characterized by very high activity (thirst for action), optimism, excellent mood, sometimes even with slight euphoria (although without losing the ability to correctly appraise a situation), excellent sleep and appetite, workability is high especially in terms of precise execution and operation speed and some lower in terms of duration of working.

At low reactivity levels, there appear sleep disturbances, shortness of temper, aggressiveness (especially during transition to overactivation), workability decreases (first in terms of duration of working, then in term of accuracy, and finally in terms of operation speed).

Biological meaning of the response: *Increasing the activity of control and protective systems of the body.*

13.4. Overactivation Response

Overactivation can arise from a strong activation response at low and very low reactivity levels.

The functional activity of the endocrine glands and thymolymphatic system is excessively high.

The brain is over-excited.

Metabolism is tense, especially on the part of energy exchange. Expenditure of energy-supplying substrates grows and their replenishment gradually lags behind. Subsystems activity synchronization is rigid, which can result in sudden breakdowns.

The psycho-emotional state is characterized by high activity, shortness of temper, aggressiveness, disturbed sleep but without loss of appetite. Workability is high however there may be breakdowns activity.

Overactivation provides the non-specific basis for development of such serious diseases as collagenoses, some forms of tuberculosis, chronic polyarthritis and other forms of rheumatism, hepatitis and children's lymphatism.

Biological meaning of the response: *An attempt to retain the activation response without falling into stress.*

13.5. Stress Response

With the exception of ACTH-glucocorticoid secretion, which is elevated, the activity of the thymolymphatic (immune) and endocrine functions is disturbed – especially in Selye stress (stress of low and very low levels of reactivity)

A prevalence of glucocorticoids provides significant anti-inflammatory effect although against a background of immune suppression.

High excitation in the brain is replaced by the development of overinhibition.

Metabolism is characterized by a prevalence of catabolic processes. Energy exchange shows a sharply increased expenditure of high-energy substances against a background of reduced replacement. This leads to depletion or blocking the stock of energy-supplying substrates and to increasing the proportion of glycolytic processes.

The observed functional desynchronization of subsystems increases with decreasing reactivity level.

Non-specific immunity in stress is decreased.

The psycho-emotional state is characterized by depression, low spirits, sometimes aggressiveness, high anxiety, abnormal sleep and appetite. Workability in terms of operation speed can be high at the beginning, but then it falls. Workability in terms of accuracy and duration of working is decreased.

The degree of disorders depends on the reactivity level. Maximum disorder corresponds to sever stress of lower reactivity levels (H. Selye). Minimum disorder corresponds to mild stress at high reactivity levels.

Stress, especially of low and very low reactivity levels, provides the non-specific basis for the development of most diseases.

Biological meaning of the response: *Prevention of too high a reaction of the body that could result in death.*

14. APPENDIX 2

NARTYPE IDENTIFICATION (Basic Method)

The lymphocyte percentage in the white blood count is used to identify the state of non-specific adaptive response as shown in the table below.

Identification of NAR by lymphocyte percentage in White Blood Count.

Age(years)	Type if non specific adaptive response				
	Stress	Training Response	Mild Activation	STRONG Activation	Over Activation
	LYMPHOCYTES, %				
3-5	<29,5	29,5-37,5	38-45	45,5-57	>57
6-9	<25	25-32	32,5-40	40,5-51	>51
10-13	<23	23-30	30,5-38	38,5-48	>48
14-16	<20,5	20,5-28,5	29-36	36,5-46	>46
Adults	<20	20-27,5	28-34	34,5-44	>44

15. APPENDIX 3

REACTIVITY LEVEL IDENTIFICATION (Basic Method)

The body reactivity level, at which a non-specific adaptive response develops, is reliably identified by the tension degree in the white blood count, as specified in the table below.

Tension Degree in the White Blood Count

Blood cells	Tension Degree				
	0	1	2	3	4
Monocytes	5-7	7.5-8.5 4-4.5	9.0-11.0 3.0-3.5	11.5-15.0 2.0-2.5	>15.0 <2.0
Eosinocytes	1-4.5	5.0-6.0 0.5	6.5-8.5 0.5	9.0-15.0	>3
Basophils	0-0.5	1	1.5	2.0-3.0	>15.0
Stab neutrophils	3-5.5	6.0-7.0 2-2.5	7.5-9.0 1.0-1.5	9.5-15.0 0.5	>10x109 <2.9x109
Total leucocytes	4-6X 109	6.1-6.5 x109 3.7-4.0 x 109	6.6-7.9 x109 3.2-3.6 x 109	8.0-10 x109 2.9-3.1 x 109	
Other				1-2 plasma cells	More than 2 plasma cells or neocytes
Toxic neutrophils	No	No	In isolated cells	In half of cells	Almost in all cells

How to Identify the Reactivity level according to the Tension Degree

High Reactivity Level:

a. All indices are within norm (Column 0).
b. 1-2 indices in the lower range of Column 1.

Moderate Reactivity Levels:

a. More than 2 indices in Column 1.
b. Up to 2 indices in Column 2.
c. Conditions (a) and (b) simultaneously.

Low Reactivity Levels:

a. Up to 2 indices in the upper range of Column 2.
b. 3-4 indices in the lower range of Column 2.
c. Up to 2 indices in the upper range of Column 3.
d. More than 3 indices in the lower range of Column 3.
e. Any 1 index in Column 4 (except for stab neutrophils).
f. Various combinations of the above conditions simultaneously.
g. 1-2 plasma cells in peripheral blood.

Very Low Reactivity Levels:

1. More than 3 indices in the upper range of Column 2.

2. More than 2 indices in the upper range of Column 3.
3. More than 4 indices in the lower range of Column 3.
4. More than 1 index in Column 4 (except for stab neutrophils).
5. Various combinations of the above conditions simultaneously.
6. Detection of normally absent neocytes (from juvenile cells to myelocytes) in peripheral blood, or more than 2 plasma cells.

16. APPENDIX 4

NAR APPRAISAL BY PSYCHO-EMOTIONAL STATE

The description of specific features of various types of adaptive responses shows that the psycho-emotional state of a person is mainly determined by the type of non-specific adaptive response and the reactivity level, at which this response develops. Therefore, Garkavi L.H. and Kuzmenko T.S. conducted an estimation and analysis of changes in the following mental states:

activity, optimism, sleep, appetite, oppression, tiredness, irritability, anxiety, and workability in terms of the operation speed and duration of working.

A 7-grade Psycho-Emotional States Assessment Scale was designed for appraising changes of the mental states. Observations over a number of years have shown that any particular set of subjective estimates of the mental states corresponds to a certain type of adaptive response at various reactivity levels. Based on this data, the expert computer program “ANTISTRESS” was developed to help identify the type of NAR and reactivity level according to the psycho-emotional state.

When applying the TMB-01 blanket in practice, however, the patient’s course of treatment is monitored according to changes in his/her general mental state. Once the patient’s adaptive response transfers to high reactivity level, the type of adaptive response can be identified by rating the OPPRESSION or ANXIETY states. The estimates of oppression and anxiety have the same dependence on the type of adaptive response and the reactivity level (see figure below). Therefore the adaptive response is identified by the oppression state and double-checked according to the anxiety state.

Figure.
Correspondence of the oppression and anxiety scores to NAR type and reactivity level.

OPPRESSION

1. - full of life, high spirits
2. – good mood;
3. – mood is more good than bad;
4. – uncertain mood;
5. – some oppression, no great mood;
6. – oppression, sadness, heavy-hearted;
7. – heavy oppression, nasty mood, very gloomy and heavy thoughts.

ANXIETY:

1. – only vital problems can bother.
2. – am calm. Besides vital problems, only considerable troubles can bother.
3. – am calm. Insignificant troubles can bother.
4. – rather calm, but no assured that it will last the whole day;
5. – concerned of trifles, anxious about the health of family, my future, etc.
6. – the least threat of changing life habits causes anxiety;
7. – filled with concern and anxiety.

17. APPENDIX

INDICATIONS FOR USE OF NAR RESPONSES

17.1 Training Response are indicated

17.1.1. The training response at a medium reactivity levels is elicited to achieve a mild an an