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RESTORATION OF PSYCHO-PHYSICAL WORKING CAPACITY IN CRISES AND EMERGENCY SITUATIONS

Adult stress management project

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Introduction

Modern civilization is developing at a very fast pace. Along with the significant results achieved, some negative consequences for the external (natural and social) and internal (physical and mental) environment also appear. Still natural disasters - earthquakes, hurricanes, tornadoes, floods, fires, etc. they cause enormous damage, take the lives of hundreds of thousands of people, cause great suffering. There are also changes in the social environment. Acute political and economic crises arise, leading to military conflicts, terrorism, poverty. The guide aims to offer methods of recovery and resilience for older adults, which refers to a person's ability to adapt well to disasters, tragedies, threats, emergencies or major sources of stress. The overall goal of Stress Management for Adults is to create and promote an innovative educational toolkit, especially for adults with a low level of skills, knowledge and competences, corresponding to their needs to acquire strategies to cope with crises, emergencies and stress and to increase the general awareness of post-Covid-19 physical and mental health problems and stress provoked by the various emergencies and crises (such as the war in Ukraine). Negative changes in the external (natural and social) environment affect the internal (physical and mental) environment of a person. ***The disasters*** that have occurred cause crises and emergency situations, which ***are considered as a special kind of extreme and super-extreme situations.*** Actions in these situations are associated with spending a large amount of ***vital energy*** . In recent years, adults have been under tremendous stress. More than a third of over 30s in the EU are suffering from mental exhaustion and physical deprivation caused by the Covid 19 pandemic and the stress caused by the war in Ukraine, according to Eurobarometer research. Public health actions such as social distancing were necessary to reduce the spread of COVID-19, but they made people feel isolated and lonely and increased stress and anxiety.

Psychophysical working capacity significantly decreases. In situations, it manifests itself as situational psychophysical readiness. The restoration of psychophysical working capacity is related to the increase of situational psychophysical readiness. It is necessary for a person to acquire knowledge and form skills for the rapid

recovery of his psychophysical working capacity, which is the basis of specialized preparation for actions in various situations and includes behavior, attitudes and feelings that must be understood and overcome.

The guide is organized into **three chapters** , where the main questions about the restoration of psychophysical working capacity are considered in a logical connection.

The first chapter examines crises and emergencies as a special type of extreme and ultra-extreme situations. The global factors of the situations - danger and difficulty and their integral functions - risk and effort are derived. ***The second chapter*** includes the analysis of the content and structure of psychophysical working capacity and its realization in the situation as psychophysical readiness. ***In the third chapter*** presents four methods for restoring psychophysical working capacity. Movement and tempering are considered as important factors of psychophysical performance.

Chapter One

CRISES AND EMERGENCIES _

1. Crisis and crisis situations

A common phenomenon that directly affects the quality of a person's life is **the crisis.** Different understandings of this complex phenomenon - crisis are known. According to the Chinese, the concept *" crisis "* everything consists of from two syllables (危機) spelled with two separate the sign :危 *" vei "* - *danger ,* and機 *" ji "* - *opportunity* . The syllable *" ji "* means that despite danger there is also opportunity for overcoming it. In the Bulgarian language, there are five meanings for the term *"crisis":* 1. Turning point in the development of something, a severe transitional state; 2. Difficulty, difficult situation, deteriorated condition of something; 3. Severe absence and absence of something;
4. Absence and abrupt change, usually worsening in the course of some disease; 5. Tense situation, strong disorder.
The turning point in the development of something is seen as a sharp and fundamental change, in which a new, most often negative state is formed, it is taken as a crisis. In the dire situation, in which the difficulty of the situation increases significantly, the requirements for the activity increase. The status quickly changes from positive to negative. The lack of the necessary information about a sudden event requiring active actions, the lack of the necessary means of insurance, the limited possibilities of people to react, are reasons for the emergence of crises. In the course of a certain disease, there is a sharp deterioration in health. Dangerous injuries in accidents, conflicts are also accepted as crises. High nervous-psychic tension, mental disorder, experiences of strong negative emotions - fear, anger, despair, sorrow, suffering, panic, horror are a special type of crisis.

A large part of crisis researchers build their theoretical statements on the theory on evolution , the theory on achievements and motivation , theory on the adaptation , the theory on the extraordinary and the extreme situations .

"crisis" is very well defined in the Law for crisis management. In it, the crisis encompasses several significant signs: 1. Change on established condition a life in

which the conditions for existence and the implementation of the activity in the changed environment are severely violated. 2. The crisis covers territories, objects, sectors and spheres of human activity or the environment. 3. Crises are most often caused by human activity or natural phenomena.

The main signs of the crisis are related to the severe violation of living conditions and the significant limitation of people's activities. Crisis covers different territories and almost all spheres of human activity. It also covers the dangerous conditions of the social and natural environment. It is pointed out that the main causes that trigger the various crises are people. The harmful consequences of air, soil and water pollution are known. Even more harmful are the deliberately created acute social crises on an economic, political and religious basis. In recent years, these crises have increasingly escalated and turned into armed conflicts and wars. The consequences of social crises are billions of victims, huge material damages and ecological catastrophes. For example, it is known that for the last 5,500 years of human history, about 77,000 ***military conflicts have been registered*** , in which more than 3.5 billion people died. During this period there were only 292 years of peace **.**

Another part of the crises is caused by ***natural elements*** such as earthquakes, hurricanes, droughts, fires, pandemics, etc. On October 11, 1138, several strong earthquakes in what is now northern Syria and southeastern Turkey, known as ***the Aleppo earthquake*** , killed 230,000 people. During the period 1928-1930, 3 million people died of hunger due to ***drought*** in Northern China. Tens of millions of people have fallen victim to natural disasters.

Looking at the crises of various social and natural disasters, it is seen that all of them are connected with the death of a huge number of people, destruction of many values, pollution of nature, diseases.

The crisis in various social and natural disasters, as well as human disasters, are seen as ***crisis situations.*** Due to the high degree of extremity, they ***are defined such as extreme and ultra-extreme situations.***

2. Emergency cases

A special type of situations are ***emergency situations.*** There are many definitions of emergency situations. To one degree or another, they reveal their essence. Most often, they are considered depending on the content of situations that have an adverse impact on people, the environment and property. Emergency situations are created during social and natural disasters such as wars, pandemics,

earthquakes, etc. They also arise in man as great suffering, serious illness, grief, violence, etc.

In order to more fully reveal the content of emergency situations, it is necessary to determine ***the nature of the situations*** . The concept *" situation "* produced from the french language includes the basic one Latin word " *situs* " meaning position , placement , finder se , inhabiting , living . In the bulgarian language situations can be desribed like position , disposition, condition , set of circumstances and conditions.

There are many interpretations on the concept *"situation"*. Based on a thorough analysis and a summary of different understandings of the nature of the situation, it is defined as a "complex of environmental conditions." The environment is divided into internal and external, material and immaterial. The external environment includes the natural and social environment. Internal environments include the human psyche and a large part of the social environment, which are actually intangible. Material environment is the human body, the natural and part of the social environment. They are all made up of multiple elements that are in different interactions and create different conditions. This set of environmental conditions is defined as a situation. Different types of situations are known. An essential sign for evaluating situations is ***extremity*** . *Extreme* is seen as extreme, urgent, spectacular, out of ordinary. Depending on the degree of extremity, situations are divided into standard, extreme and ultra-extreme. In standard situations, the extremity is low. A person performs his daily tasks with low voltage. When the degree of extremity increases and becomes high, these situations are known as ***extreme.*** Man's actions are active. In ***the ultra-extreme ones*** situations the extremity is very high. Man is required to exert maximum effort in the face of great danger.

In the Bulgarian language, *"extraordinary"* is characterized by three main related qualities: 1. Which happens outside the defined order and program; 2. Who is in excess or beyond a certain time and quantity; 3. Extraordinary, peculiar, special, exceptional.

A main feature of emergency situations is that it is not related to the planned or expected occurrence and development of certain events. In everyday life, people usually perform a specific activity, and solve certain tasks. They strive to comply with the various requirements. When new situations arise that greatly disrupt the order, people are required to take active action. Another feature of emergency situations is the unpredictability of their occurrence, duration and strength of their impact on people and the environment.

Emergency situations are also characterized by their very rare occurrence, cause great tension, are not typical, have a strong negative impact, which in most cases is destructive and very dangerous for people's lives, health and living environment.

Emergency situations are also considered an emergency. It is introduced in a given country under exceptional circumstances, applying special measures to maintain order. Various normative documents have been developed for emergency situations.

When summarizing the considered concepts about the essence of ***crisis and emergency situations,*** it can be seen that they are characterized by a high and very high degree of extremity, which gives grounds ***for defining them as extreme and super-extreme situations.*** As in all situations, including crisis and emergency situations, danger and difficulty are global factors in their structure. Risk and effort as integral functions of danger and difficulty in these situations are determined by the effectiveness of human preparation for action in extreme situations. The person is most vulnerable to the negative effects of the situations, which necessitates purposeful preparation to form an adequate psychophysical readiness for effective actions in these dangerous situations.

3. Global factors of crisis and emergency situations

In the integration of all factors of the external and internal environment of crisis and emergency situations, two are connected to each other ***global the factor – danger and difficulty .***

The danger as a global factor of the situation is seen as, "the possibility or probability of something bad happening, some trouble, misfortune". It causes high tension and the experience of strong negative emotions - fear, anxiety, grief, despair, anger, sadness, etc.

Based on the generalization of the various definitions, the hazard can be considered as a negative event that has a harmful, destructive impact. On the basis of emotional tension, five degrees of danger are accepted - very small (I) , small (II) , medium (III) , large (IV) and very large (V). Crisis and emergency situations are of medium, high and very high degree of danger.

In overcoming danger that requires active action, one takes a risk. Therefore ***risk*** is the main factor of the activity, which is determined by the degree of danger of the situations.

The difficulty is the second global factor of the extreme ones situations. It is related to overcoming various limitations of actions. Depending on the strength of mental and physical tension, five degrees of difficulty are accepted - a lot small (I) , small (II) , medium (III) , large (high) (IV) and very big (a lot high) (V).
Overcoming the difficulties of situations is accomplished through the effort which is the essential element of action. Hence ***the effort*** is a major factor of the activity, which is determined by the degree of difficulty of the situation.
Depending on the degrees of danger and difficulty, the degrees of extremity of the situations are also determined. Crisis and emergency situations are manifested in the various extreme and ultra-extreme situations of the external and internal environment. The external environment includes natural and social extreme and ultra-extreme situations.

Some of the most destructive ***natural elements*** are earthquakes **,** volcanoes, hurricanes, tornadoes, tsunamis, floods, droughts, fires, etc. One of the strongest earthquakes on earth is considered Assam (North-Eastern India) on 12.06.1879 with an intensity of the 11th degree on the Richter scale. It was very destructive and the waves on the earth's surface had an amplitude of 30 cm. Another very strong earthquake was recorded on 26.12.2004 in the Indian Ocean with an epicenter near the northwest coast of the island of Sumatara (Indonesia) with a magnitude of 9.3 . The earthquake caused destructive tsunami waves with a height of 24-30 m, which moved at a high speed of 920 km/h and struck the Aceh Peninsula in North Sumatra. 280,000 people die.
Social extreme and ultra-extreme situations include wars, uprisings, theorizing, nuclear disasters, pandemics, etc. The coronavirus pandemic, which has covered almost every country on the planet, has claimed the lives of millions of people. It caused a major economic crisis. Many people live under great stress and fear. Even today, wars are fought on the planet and thousands of people die. The war in Ukraine is taking many lives, causing great damage. People are leaving Ukraine and seeking refuge in other countries. The most dangerous of social super-extreme situations are ***nuclear disasters*** . People remember the nuclear disaster when the fourth reactor of the nuclear power plant in Chernobyl (Ukraine) exploded on 26/04/1986. The amount of radiation released is equivalent to 200 nuclear bombs with the power of the nuclear bomb that hit Hiroshima. A real danger arises in the war in Ukraine from the use of nuclear weapons, which could lead to the destruction of civilization
Internal extreme and ultra-extreme situations are related to a person's state of psychophysical readiness. A major role in determining the degree of extremity of

the situation falls to thinking in the structure of mental readiness. In a disorder of thinking, the core structure is disturbed. Strong negative emotions prevail, the will is severely inhibited and actions are inadequate. When the structure of physical readiness is violated, the effectiveness of the activity is limited. Adequacy of psychophysical readiness is determined by the efficiency of functioning of human organs and systems in conditions of situations with a high degree of extremity.

In order to overcome crisis and emergency situations, it is necessary for a person to improve his psychophysical working capacity through the formation of situational psychophysical readiness for effective actions.

Chapter TWO

PSYCHO-PHYSICAL WORKABILITY

The effectiveness of people's actions in the conditions of extreme and ultra-extreme situations of crises and emergencies is determined by the state of their psychophysical working capacity. The specific requirements for the activities of these situations are related to the performance of certain actions with great difficulty and a high degree of danger. Psychophysical working capacity is realized in specific actions corresponding to the requirements of the situation by means of situational psychophysical readiness.

Psychophysical working capacity is made up of ***mental*** and ***physical working capacity*** , which are in unity.

1. Mental capacity

Mental capacity is defined as a person's ability to perform a certain mental work (activity) for a certain time. In situations, mental activity is carried out through situational mental readiness, which is realized through actions.

The situational mental readiness for action in specific situations is seen as a mental state that corresponds to the demands of the situation on the activity.

Mental readiness is made up of three substructures – cognitive, emotional and volitional, which are interconnected.

The cognitive substructure directs and regulates human actions and behavior in the various conditions of extreme situations. It is made up of the mental processes of perception, memory, attention, idea, imagination, thinking and anticipation.

Perception is related to the reflection in the human consciousness of objects and phenomena in their immediate impact on the sense organs. *Memory* is the mental process of remembering, storing and reproducing perceived information. *Attention* is a process of directing and focusing mental activity on a specific object or phenomenon. Main properties of *attention* are focus, intensity, persistence, volume, distribution. *Representation* is a process of reflection of past perceived objects, and *imagination* is the process of forming new objects and phenomena. *Thinking* is the main mental process that reflects the essence, regular connections

and relations of objects and phenomena. *Anticipation* is the process of predicting future events. All cognitive processes can be trained and developed.

The emotional substructure of situational mental readiness manifests itself as an experience that is a form of expression of emotions and feelings. Emotions last for a shorter time and strongly influence cognitive processes. Emotions are positive and negative.

Positive emotions synchronize the functioning of the body's organs and systems and accelerate adaptation. The vital energies of the person increase. Common positive emotions are joy, courage, good mood, satisfaction, etc. As emotional experiences of mental activity are astonishment, astonishment, doubt, etc. Emotional experiences related to the will are confidence, activity, etc.

Negative emotions limit the functioning of the body's organs and systems, making adaptation to changing situations significantly more difficult. Actions are ineffective, negatively affect health. Strong negative experiences are harmful, and very strong negative experiences are destructive. The most common negative experiences are fear, anxiety, hatred, worry, anger, despair, sorrow, insult, etc.

Feelings are persistent experiences of emotions and are most often formed as qualities and character traits. In extreme situations, they manifest as emotional experiences. Feelings are formed on the basis of prolonged experience of certain emotions, and formed emotions as feelings are projected into the emotional substructure as an emotional experience.

Emotions and feelings are experienced with different strengths. Very strong experiences negatively affect both the cognitive and also the volitional subs4tructure of situational mental readiness.

The volitional substructure makes the connection between mental and physical activity and determines the effectiveness of actions in extreme situations. ***Volitional effort*** is a major factor in the volitional substructure. It appears as mental force and is realized in muscular effort as physical force. By means of physical strength, certain movements and actions are carried out in various extreme situations.

Sustainable mental readiness includes in its structure the mental properties of the personality orientation, temperament, character and abilities, as well as various qualities and traits. It is formed and implemented in practice by means of situational psychology.

Cognitive, emotional and volitional substructures are interrelated and dependent in the structure of mental readiness. With an increase in the strength of the interrelationships between the individual substructures, the structure of mental

readiness is refined and its degree increases. Mental readiness is formed, which is realized in effective activity and extreme and ultra-extreme situations are overcome. One survives and improves. Valuable qualities and skills are built to fight the dangers and difficulties in the life of modern man.

2. Physical ability to work

Physical fitness is considered as ability for the completion of different physical (practical) movements and actions for a certain time. It is realized in practice only through situational physical readiness.

Situational physical readiness is considered as a complete physical condition that is realized in situations by means of physical movements and the actual. Its structure includes the basic and special physical qualities of strength, speed, endurance, agility, flexibility, explosive power, speed-power endurance, etc. All physical qualities are interconnected and provide a certain practical (physical) activity.

In the process of overcoming various dangers and difficulties in extreme situations, situational physical preparedness is gradually built up as **sustainable physical preparedness**. In addition to physical qualities, in the structure of sustainable physical fitness motor habits, skills and the functional state and systems of the body are included. In the structure of the sustainable and the situational physical readiness, the main place is occupied by the physical qualities, which in unity realize the physical (practical) activity.

One of the main physical qualities is ***strength.*** It is defined as a person's ability to overcome or counteract external resistance by means of muscular force (tension).

Speed is another basic physical quality, which is seen as a person's ability to perform movements with great speed and frequency for a minimum period of time under given conditions. Four forms of speed are known: 1) speed of individual movements ; 2) speed of the motor reaction ; 3) frequency of movements and 4) speed of moving certain distances.

Endurance is a basic physical quality. It is determined as a person's ability to continuously perform a certain work (activity) with a certain intensity for an extended period of time. As physical endurance increases, work capacity increases. The main criterion for evaluating endurance is ***the state of fatigue*** . In order to provide sufficient energy to the body during exercise, a quick recovery of the spent energy is necessary.

Agility is another basic physical quality, which represents the ability of a person to quickly readjust his motor activity in accordance with changing

conditions. Basic criteria for measuring agility are speed, accuracy and economy in mastering and executing complex coordinated physical movements.

Flexibility is seen ***as*** a person's ability to perform large-amplitude movements. Two types of flexibility are known - active and passive.

Special physical qualities are built from the basic physical qualities and improve the structure of physical readiness and physical work ability.

Basic and special physical qualities are interconnected in the structure of physical readiness. On the basis of complex studies, it has been established that as the strength of the interrelationships between physical qualities increases, the structure of physical readiness improves. Physical performance improves.

3. Psychophysical working capacity

Psychophysical work capacity is defined as a person's ability to perform mental and physical activities in various situations. In crisis and emergency situations, it is realized in practice as psychophysical readiness. ***Psychophysical readiness*** expresses the degree of work ability. Just as mental and physical readiness is situational and sustained, psychophysical preparedness is situational and sustained. It should be emphasized that only situational psychophysical readiness determines the effectiveness of mental and physical movements and actions in the conditions of different situations.

Situational psychophysical readiness is considered as an immediate psychophysical state during the actions in the specific situation. The effectiveness of actions is determined by the unity of mental and physical readiness in the structure of situational psychophysical readiness as a manifestation of psychophysical working capacity immediately in a given situation.

Sustainable psychophysical readiness is realized in the activity in certain situations by means of situational psychophysical readiness. All mental and physical qualities, personality traits, motor abilities, developed skills and habits as significant elements of sustainable psychophysical readiness are projected onto situational psychophysical readiness.

The structure of psychophysical readiness is made up of mental and physical readiness, which are interdependent. The strength of the interdependence between the individual elements (processes and qualities) of mental and physical readiness determines the state of psychophysical readiness. When the strength of the interrelationships between them increases, the quality of actions in crisis and emergency situations improves. When the strength of the interrelationships between the elements of the mental and physical elements is reduced, the actions in the conditions of crisis and emergency situations deteriorate.

Chapter THREE

RESTORATION OF PSYCHO-PHYSICAL WORKING CAPACITY

Maintaining a high psychophysical working capacity is a condition for solving the tasks that arise in crisis and emergency situations. The formation of adequate psychophysical readiness is a purposeful process in which various methods of psychophysical effects are applied. The selection and creation of methods for psychophysical effects are related to the possibility that **their application will be easy and their effectiveness will be great** . The methods are intended for impact in all types of extreme situations.

1. Psychophysical relaxation[1]

Actions in various extreme situations are associated with the expenditure of large amounts of vital energy. It significantly reduces the ability to work, lowers the psychophysical readiness for action, as a result of which the possibilities to achieve specific goals are largely limited. There are possibilities for quick recovery of vital energies, as a result of which the psycho-physical working capacity is significantly increased. Adequate psychophysical readiness for effective actions in extreme situations is formed.

For the development of psychophysical relaxation was served by the " Autogenic" method training " . Based on this method , other methods such as mental self-regulation , hypnosuggestion, mental self-regulating training , self-suggestion .

The goal of psychophysical relaxation is to very quickly restore and spent vital energies and to form adequate psychophysical readiness for effective actions in various extreme situations.

The main tasks of the method are:

1 To quickly bring the body into a state of relaxation and significantly reduce mental and physical tension

2. To bring the organism from a state of relaxation to a state of restorative sleep.

[1]Relaxation (lat. relaxatio) - relaxation

3. To bring the organism from a state of restorative sleep to a state of wakefulness and to mobilize for the upcoming actions.

When solving the ***first task,*** by quickly bringing the body into a state of relaxation, the mental and physical tension is significantly reduced. Before performing this task, it is necessary that a person has taken a comfortable position in a lying (most often on the back) or sitting position, and when mastering the method - it can also be in an upright position. Clothing should be comfortable without pressing the body. To avoid various noises, conversations of other people. It is recommended that the air is clean, the temperature at the place of relaxation should be 22-23 degrees. After mastering the method, side irritants do not have a particular effect on relaxation.

The relaxer takes a comfortable body position, closes his eyes, breathes calmly. Several times he slowly repeats in his mind: "Calm, calm." At first the attention is directed to the inhalation and exhalation, and then to the verbal formulas. After a few minutes, the relaxer relaxes the muscles of the body, feels the weight of the body, instills a pleasant warmth on the body and a pleasant coolness on the forehead, thereby "turning off" the main irritants that cause tension. After that, the relaxing person applies one of the strongest influencing factors – ***the word*** . As the wise thought says: "... in him (the word) was life, and the life was the light of men." The relaxer ***slowly and intently*** says the following verbal formulas in his mind:

1. The muscles in my legs and arms go loose, loose, loose. They are loose, loose;
2. My legs and arms relax, relax, relax. They are relaxed, relaxed;
3.They are heavy, heavy, very heavy. They are pleasantly warm;
4. The muscles in my face relax, relax. They are loose, loose. They are soft, they are very soft, soft ;
5. My forehead is pleasantly cool, cool, it is pleasantly cool;

After performing the five verbal formulas, the person without stopping performs the next three formulas. It is necessary to emphasize that breathing is one of the most significant processes, providing the body with oxygen - the basis for the creation of vital energies.

6. My breathing is calm, rhythmic and calm;
7. My heart works calmly, calmly;
8. I am charged with vital energy, energy.

When performing the verbal formulas, a person gradually moves into ***the most important stage of relaxation - restorative sleep*** . In this state ***, the second main***

task is solved . Vital energies are restored very quickly, psychophysical working capacity is restored.

In the process of active activity, a large amount of vital energy is spent, gradually lowers performance, disrupts the structure on psychophysical readiness. Fatigue increases, as a result of which the performance of the activity is slowed down. It turned out that after intensively load the recovery processes last 2-3 days . A few minutes after stopping the load, the recovery reaches 60-80% of the standard working capacity. After that, the recovery continues and goes beyond the standard operating state. This one phase is known like paradoxical phase, " ***phase of over-recovery "*** (is xaltational phase), **rapid sleep** . In this phase, a person is maximally relaxed , in a half-asleep state. Electromagnetic waves on the brain are within limits from 7 to 14 hertz. These waves are famous like alpha waves . In the awake state, electromagnetic waves (beta waves) are above 14 hertz, in theta level they are from 4 to 7 hertz, and in delta level - from 0 to 4 hertz **. Rapid recovery takes place in the alpha level - in the phase of REM sleep.**

The duration of relaxation can be from several to 30 or more minutes. Relaxation can pass into ordinary sleep.

When solving the ***third task*** - the bringing out of a state of relaxation (restorative sleep) into a waking state is carried out by carefully waking up - independently or with the help of a close person. After waking up, one should take a few deep breaths and exhales, smile, then slowly stand up and do some motor exercises.

The effect of relaxation occurs about 15 minutes after waking up. After the initial assimilation of the relaxation techniques, additional influences such as quiet and pleasant music, pleasant natural noises, etc. can be included during their implementation.

Psychophysical relaxation is one of the most effective methods for restoring psychophysical working capacity after actions in extreme situations where large amounts of energy are spent,

When mastering the techniques of psychophysical relaxation, it can also be carried out under other conditions. The benefit of relaxation is great when it takes place in a forest, mountain, near waterfalls, by the sea, lake and river. Fresh air, pleasant natural sounds increase the positive impact of relaxation. The vital energies are quickly restored, the psychophysical working capacity is significantly improved. Relaxation should be carried out by the practitioner during longer journeys as a passenger in different vehicles, as well as during breaks at work, etc.

When relaxation is mastered, the practitioner can recite the verbal formulas of impact. The time to complete the relaxation when solving the first task is shortened

(to bring the organism to a state of relaxation very quickly and to significantly reduce mental and physical tension). An abbreviated version can be applied by mentally repeating the following verbal formulas:

1. Every muscle in my body goes loose, loose, loose.
2.They are loose, loose, loose.
3. They weigh, weigh. They are very heavy. I don't feel them.
4. My breathing is calm and rhythmic, calm.
5. My body is pleasantly warm, my forehead is pleasantly cool.
6. I charge myself with vital energies.

When psychophysical relaxation is fully mastered, the verbal formulas of the motto should be even shorter:

1. All the muscles of the body relax. They are loose.
2. The body relaxes, it is limp and heavy.
3. Breathing is calm. I'm recovering.

Many cases are known in which individuals have demonstrated incredible abilities to ***quickly restore vital energies*** and set a number of "unofficial records". In rugged terrain at high altitude in Tibet, the so-called "running yogis" ran more than 200 km in one night. When running, they fell into a special state (most likely in the REM sleep phase - alpha level). The Indians of the Taraumara tribe (the swift deer) from Mexico ran 600 km in 12 hours without feeling tired. It is assumed that they also fell into REM sleep. New Zealand trainer Arthur Liddiard got up at 4 in the morning and ran 32-33 km, then went to work with high efficiency. In the evening he ran 24-25 km again. So, Arthur Liddiard ran 56-58 km during the day and never felt overtired. His very high psychophysical work capacity in the process of the heavy load is due to the formed ability to restore his vital energies very quickly, directly during the run. In 490 BC the best runner of the ancient Greek army, Philippides, ran the distance from Marathon to Sparta (42 km and 195 m) to convey the glad tidings of the victory over the Persians. He had previously run more than 200 km in two days and during that time he had participated in the Battle of Marathon. After delivering the good news, he falls and dies of exhaustion. As can be seen, Philippides could not immediately restore his vital energies in the process of the heavy load.

In order to restore their working capacity, similar methods of psychophysical relaxation have also been applied by some of the famous personalities. Napoleon was relaxing on horseback. Suvorov liked to "sleep" before launching an attack, during artillery fire from the enemy, during which the shells fell very close to his tent. Leonardo da Vinci did not sleep, but had relaxation for 15 minutes every four

hours. It is known that advanced yogas can enter a similar state of relaxation, where their body does not need air, water and food. They can be in this state for a long time, weeks, months.

In the process of evolution, the living conditions of some species of animals have changed. A large part of them perish, and a part adapt. During unfavorable periods, in order to survive, they fall into similar states of relaxation - for example, the winter sleep of bears. Some microorganisms enter into a "deep sleep" at very low temperatures. In this state, they can "survive" for thousands of years, and upon falling into favorable conditions, they "wake up". Such microorganisms were found in Siberia, in the South Pole.

The effectiveness of psychophysical relaxation has been proven on the basis of many experimental studies. It was found that after a very heavy workload, after 30 minutes of relaxation accompanied by pleasant music, the mental performance of the subjects increased more than twice compared to their performance in a calm state. Their physical performance is significantly improved their learning success rate increases. Psychophysical work capacity is quickly restored and adequate psychophysical readiness is formed. Psychophysical relaxation is also a reliable method for post-traumatic stress therapy after experiencing great danger and encountering significant difficulties in the conditions of extreme situations. As a result of the rapid recovery of physical and mental performance, psychophysical relaxation can be applied in all human activities associated with heavy loads.

The study of psychophysical relaxation needs to be carried out before extreme situations occur. If possible, it can be applied before the occurrence, during and after the predicted or unexpected extreme situation.

The complex positive impact of relaxation on the psychophysical development of a person has been proven. The method can also be applied in the therapy of various mental and physical disorders **.**

The occurrence of various extreme situations are largely predicted. A significant part of them cannot yet be predicted. The sudden, unexpected occurrence of situations with a high and very high degree of danger and difficulty usually cause very large damages to the environment and especially to the life and health of people. The main cause of mass death and enormous material damage is the lack of adequate situational psychophysical readiness of people for effective actions. In these situations, most often they do not react or react inadequately.

One of the most reliable mental impact methods related to psychophysical relaxation is thought control.

2 . Thought control

Thinking is the highest mental process that reflects the essence, regular connections and relations of the objects and phenomena of reality. The acquired knowledge is a basis on which thinking proceeds as a process in the concrete situation, now. People often think of thinking as the mind. It should be noted that *thinking is a process* , and *the mind is quality* . Mind as a sustainable quality is realized only in the practice, the situation, now, through thinking as a process. The development of the mind takes place only through thinking. As is well known, there are quite a few smart people in life who sometimes have inadequate thinking, and individual stupid people express smart thoughts. Therefore, thinking is the main and most important process in a person's life that governs his activity. There is a well-known saying "Mind rules, mind enslaves, mind feeds ducks". ***Thinking is destiny and most importantly, it can be controlled.***

Thinking is formed on the basis of cognitive mental processes sensation, perception, memory, attention, image and imagination. It is very strongly related to emotions and feelings and determines the effectiveness in making decisions about certain actions in different types of situations. Thinking can be ***positive or negative*** .

Positive and negative thinking are determined by the effectiveness of the activity, by the benefit of the achieved goals for the person, people and nature. One of the mistakes of defining thinking is that often goals are aimed at achieving benefits only for an individual, a group of people, but harmful to other people and nature. In fact, this thinking cannot be taken as positive. Unfortunately, it turns out that people think much more negatively. Many of them are said to carry "deadly baggage" including destructive thoughts, negative emotions, and outdated beliefs and ideas. In separate world forums, it is claimed that our civilization is in a very difficult state and is developing in the wrong direction. It is also said that this direction is not of stability, but of "social explosions, poverty, social imbalance, terror, wars and destruction... We are close to the precipice." A major cause of this state is negative thinking **.** The way to solve these problems is indicated, and it is "another kind of thinking", i.e. ***positive thinking*** .

The content of thinking is always related to a person's emotions and feelings, which are positive or negative, and they determine the type of thinking - be it positive or negative.

Thinking determines the future. ***Positive thinking determines a happy future.*** A person overcomes various extreme situations, achieves his goals and

improves himself. Positive thinking people "move" civilization forward. They are happy. Conversely, people with a negative mindset are unhappy. ***Negative thinking*** is characteristic of people who often experience **fear, hatred, anger, envy, greed, sorrow, pain, arrogance, lust for power, etc.** It has even been argued that the 'normal' state of mind of most people is 'dysfunctional', 'insanity'. An American Indian chief shared with the world-renowned psychologist Carl Jung that most white people have a tense expression, a staring gaze, and a cruel demeanor. “They're always looking for something. What are they looking for? White people always want something. They are always worried and restless. We don't know what they want. We think they're crazy."

Thinking and the mind create the future. Therefore, it is necessary for a person to ***control his thoughts by transforming negative thoughts into positive ones*** .

Mastering *this method* requires one **to observe oneself impartially** , without criticism. Scientists have proven that "if you are able to observe yourself impartially, you will automatically self-correct." For man, the possibilities to manage his life are revealed in the process of successively overcoming situations with varying degrees of difficulty and danger of various extreme situations.

First of all, a person should make an objective assessment of his thoughts and emotions and if they are negative, transform them into positive ones and lower the tension.

The thought control method is performed in ***three consecutive steps.*** In ***the first step,*** the content of thoughts related to negative emotions is determined (diagnosis). In ***the second step,*** the content of the new positive thoughts related to positive emotions (strategy) is defined and in the ***third step,*** the content of the thoughts from the second step is assimilated (practice).

First step. One asks the question, "What am I thinking about now?" and answers to himself: "Now I'm thinking about ..." One must answer objectively about the content of the thoughts at that moment. He must admit to himself exactly, frankly, what he thinks about, which issues concern him the most. It is known that many thoughts occur in a short time - in one day, about 60,000 thoughts occur in a person's head, and 95% of them reflect the past. Very often the thoughts are related to negative emotional experiences - worry, fear, anxiety, anger, hatred, contempt, insult, guilt, etc. These negative emotions disrupt the structure of situational psychophysical readiness to overcome extreme situations. A person makes many mistakes, the situation escalates. Conditions are created for the emergence of conflicts and his actions become aggressive. **An essential moment of self-**

assessment is the disclosure of negative thoughts and emotions . The reason for their appearance and the possibility of their removal are determined.

The second step is performed when a person in the first step finds that the content of his thoughts are negative. In this step, a strategy is developed to control one's thinking. When performing the second step, a person asks himself the question: "What should I think about now?". Then he answers to himself: "Now I have to think about...". The content of thoughts should be optimistic, related to positive experiences of confidence, security, love, courage, self-control. The selection of the content of the thoughts is expedient to be carried out before the application of the method. When the thoughts are positive, the second step may not take place.

In the third step, one willfully redirects one's attention to the selected thoughts from the second step. He repeats in his mind: "I'm starting to think about ...", i.e. the content of the new thoughts selected in the second step. After a few repetitions, he says to himself, "I'm already thinking about...".

Very often, thoughts are focused on objects, objects and phenomena (sometimes meaningless, unnecessary) that have a negative meaning. The redirection of thought content to a new positive content is ***a key point in thought control*** and is determined by the level of development of attentional focus. The level of mental development of a person is judged by the ability to quickly or slowly redirect attention.

In the process of practicing *the method of thought control,* it is necessary for a longer time to focus attention on the content of the new thinking. Reflection on the new content of thought must be connected with analyzing and systematizing positive phenomena, comparing and highlighting its advantages and benefits. At the end of the implementation of the method, it is recommended to build an algorithm for the implementation of the mental and practical activity as a system that is subject to management.

In the process of carrying out the method, attention can be directed to another object or phenomenon. It is necessary to focus again on the new content selected in the second step.

With systematic practice of *the thought control method,* attention, perception, memory, ideas and imagination are improved, the will is trained, positive emotions dominate, and work capacity is increased. Personality is improved and life problems are solved much easier.

The situation unfolds at a public transport bus stop. No vehicle passes for a long time. A lot of people gather, most of them nervous, resentful because the bus

is late. The weather is cold, it's raining. GR is also resentful, angry that he is late for an important meeting. The bus arrives and everyone runs to get on. G.R. also ran and when getting on the bus, he bumped into a young woman of an apparent age of about 40 years. The woman reacted harshly by loudly insulting GR. She called him a brat, a simpleton, a jerk. She continues to insult him on the bus as well. The woman shows aggression, with a large part of people reprimanding her and a small part supporting her. G.R. gets even angrier, but quietly says to himself: "Great simplicity, hysteria." An elderly man turns to the woman: "Stop shouting, calm down!". Another woman ordered in a nervous tone, "Stop it, shut up, hush-oh!". After the second stop, the bus falls silent.

This situation is a conflict, an extreme situation, in which anger manifests itself as aggression and there is a danger of turning into violence, the tension is high. With the intervention of the elderly man and the other woman tension decreases. In G.R.'s soul, the tension has not decreased much, he is tormented by insult, bitterness, disappointment, anger. Almost all day this negative experience tormented him.

How would G.R. apply the method of thought control after this conflict situation? His attention should be focused on positive thoughts and emotions of joy.

At the first step, GR asks himself the question: "What am I thinking about now?" He answers frankly: "Now I think about the insulting words of the woman, which in a very loud and hysterical voice she said to me in front of people. I am very offended, I am upset. ".

After G.R. assessed that his thoughts and emotions were negative, he determined the reasons for their appearance. The causes of negative thoughts and emotions G.R. considers that they are, on the one hand, the unintentional bumping of the woman by him, for which he does not apologize, and on the other hand, the high nervousness of the woman. Most likely, the woman has mental problems. GR criticizes him for not apologizing, but feels that even if he had, the woman would have reacted in the same aggressive manner.

In the second step, G.R. asks himself the question: "What should I think about now?". Negative thoughts related to the moment of conflict with the woman should be directed to positive thoughts and emotions of joy, confidence, calmness, good mood. GR recalls that his daughter did very well in the Maths Tournament. His wife's salary was raised a month ago. His boss and colleagues respect him. Happy holidays are coming.

In the third step, GR focuses his attention on the thoughts of the second step, repeating in his mind: “I start thinking about my daughter's excellent

performance in the Math Tournament, about my wife's salary increase, about the boss and my colleagues respect me. Happy holidays await us." He repeats positive thoughts several times, resulting in calm, confidence, joy. He says to himself: "I'm already thinking about...". If the negative thoughts and emotions associated with the conflict reappear in GR's mind, he must repeat the third step.

The method has been applied by people of different professions, gender and age in situations of varying degrees of extremity. Excellent results were achieved in professional activity, various complex life problems were solved. Practicing this method positively affects creative thinking, attention, memory, ideas, emotions and will. Psychophysical performance improves

3 . Ideomotor modeling training

This method is built on the foundation of the relationship between the psyche and the movements. On the basis of many experimental studies, the interrelationship between mental processes and physical movements has been proven. The concept of *ideomotor* is made up of two words – *idea* and *motility* . In the Bulgarian language, the word *idea* has six meanings, of which two of them most fully explain its content: 1. Thought, a general concept of a given object or phenomenon and 6. Representation.

The concept of *motor* is seen as an engine, something that moves, motion. Therefore, *ideomotor* expresses a thought and an idea of movement. In other words, *ideomotor modeling training* means creating in the mind of a person an idea model for performing certain movements and actions in different situations through the performance of certain exercises **.**

The purpose *of ideomotor modeling training* is to form an adequate psychophysical readiness for actions in future extreme situations that most likely can happen.

The method includes techniques for mental playing and representation of actions in accordance with the requirements of ***situations that are most likely to occur in the near future.*** For achieving the goal sequentially ***three main*** ones are decided ***tasks:*** 1. Mental play and representation of situations that will most likely happen in the near future ; 2. Mental playback and presentation of the individual movements and actions related to the requirements of the individual elements of the situation; 3. Mental playback and presentation in unity of individual movements and actions in accordance with the specific requirements of the elements of the situation. Finally,

the activity in the development of the situation, which most likely can happen in the near future, is mentally played out and presented in its entirety.

The first task involves choosing and analyzing in detail a specific situation that is likely to occur in the near future – during the day, in the following days or week. At first, a situation with a simpler structure is chosen, where danger and difficulty are of lower degrees. The situation is divided into separate elements related to the passage of time in seconds, minutes. The individual elements of the situation are studied and presented sequentially. Greater attention is paid to those elements that are of greater danger and difficulty. The mental playing and representation of the individual elements of the situations is carried out several times. After the individual elements of the situation are played, the whole situation is played and presented sequentially element by element.

If the chosen situation is complex and the person does not have the necessary knowledge about it, it is necessary to look for information from various literary sources, to consult with specialists, relatives and acquaintances.

It is of great importance for the construction of an adequate mental model of the situational psychophysical readiness for action in the selected situation that the trainee pays attention to his experiences. They should be positive - confidence, determination, self-control, activity, etc. The tension must be reduced.

After studying the elements of the situation and successively connecting them in its overall mental play and presentation, the second task begins to be solved.

The second task is related to mentally playing and presenting the individual movements and actions in accordance with the requirements of the specific elements of the situation related to the given time. For each element of the situation, the necessary movements and actions are performed mentally. Then, the individual movements and actions are sequentially mentally replayed and presented from beginning to end of the situation. In their implementation, special attention should be paid to positive experiences.

The third task is aimed at fully synchronizing movements and actions to the requirements of the individual elements of the situation. At the same time, their separate elements are played and presented sequentially with the corresponding movements and actions. After synchronizing the individual elements of the situation with the movements and actions, the activity as a whole is mentally replayed as it develops. The mental replay and representation in the execution of the sequence of movements and actions in accordance with the requirements of the individual elements of the situation in the process of its development is repeated

until the formation of adequate psychophysical readiness for action in extreme situations.

Finally, after the implementation of the method, the training person finally fixes in his consciousness the model for situational readiness through the verbal formula: "In the event of an analogous extreme situation, I will react according to the lost thought situations and actions".

This method is carried out for each individual situation. Initially, the method is trained on individual situations with low difficulty, then the number of situations increases and the level of difficulty increases. IN the consciousness of a person everything makes t program (readiness) for action at sudden situations with different degrees of extremity . The program (readiness) includes immediately at the appearance on mentally played out situations . With the systematic implementation of this method, a psychophysical readiness is formed to overcome situations of varying degrees of extremity, the idea, imagination, attention, and memory develop. It is especially useful to practice the method of developing creative thinking and anticipation.

G. M. works in a private company in the city of X. His wife is sick and needs to undergo medical examinations in the city of Sofia. He wants for his boss four days of unpaid leave. The Boss's attitude towards GM is negative, which is most likely due to his wounded pride. In a dispute in front of the team between the Boss and GM, related to their professional competences, it is understood that the Boss is very limited and totally loses the argument. The Boss's pride is affected and he takes pleasure in insulting, hurting GM in front of the other employees. He's looking for a reason to fire him. The boss ordered GM to report to him at 4:00 p.m. G. M. had 2 hours available until his appearance with him. G. M. was familiar with the ideomotor modeling training method by successively solving the three tasks:

First task. GM assesses the situation as extreme. It divides the situation into separate elements (parts) depending on the passage of time. The dangers and difficulties of moving in the building to the Chief's office - one minute. Danger and difficulty in knocking, entering and standing before the Boss - one minute. The most important part of the whole situation is the conversation with the Boss - 8 minutes. Danger and difficulty in leaving the Chief's office. G. M. consistently mentally plays and imagines the situations, paying main attention to the conversation with the Boss. I imagine his insults, the refusal of leave. He understands that the Boss's goal is to humiliate him, make him feel sorry, afraid or angry and provoke him to react aggressively, which can be grounds for dismissal. The situation when leaving the office is related to the nature of the conversation. G.

M. completely mentally plays and imagines the development of the situation from entering the Chief's office to leaving..

Second task. G. M. mentally replays the individual actions in the development of the different parts of the situation. In moving into the building to the door, knocking, entering and standing in front of the Boss, GM tries to be calm, to keep his composure. The most important part of the second task is the mental replay and representation of the conversation with the Boss, listening carefully to the insults, humiliations and refusal of leave. Here, G. M. maintains complete self-control and agrees with the Boss **.** He shows no fear, grief or anger. After the conversation and the Chief's decision, GM calmly left the office. All actions in the situation are sequentially played.

The third task . G. M. simultaneously mentally replays and imagines the individual actions in accordance with the requirement of the different parts of the situation. At first, the individual actions and parts of the situation are played, then all the actions are played sequentially as the situation develops. Again, the main focus is on the situation part of the conversation with the Boss. The negative effects of the Boss have not changed the state of GM, it is positive. Avoids getting into pointless arguments, keeps his composure. G. M. has formed a high psychophysical readiness and his actions are effective.

In this situation, most often the reaction of Bosses is angry at first, then calm and positive. In the particular situation the boss reacted in this way. He authorized the unpaid leave and his attitude towards GM has changed.

It is established that _ at application on ideomotor impact at men the muscular strength increases by 34%, the speed on movement by 34% and accuracy by 17 % . Ideomotor is also included in famous schools and for preparation of all actors . The reincarnation on the actor in the imaginary hero is ideomotor process . It has been established that there is a strong connection between the experience on the stage incarnation and craftsmanship of the attitude of the imaginary situation through ideomotor impact . By means of the ideomotor effect, the direct influence of thinking about physical activity . As a result of applying certain thinking techniques, the success rate improves learning and ideas are enriched for motor skills . The positive impact is revealed by the purposeful thinking on motor skills with different difficulty . Athletes have achieved excellence in various types of sports as a result of applied ideomotor impact before competition. The accuracy of the execution of movements and actions in the conditions of a high degree of danger and difficulty is significantly improved. Ideomotor modeling training is best applied before the occurrence of extreme situations.

4. Regulation of breathing

Breathing is an important biological process without which man could not exist. It is known that a person can live 40-50 days without food, about 5 days without water, 7 days without sleep, but only 5 minutes without air. It is no coincidence that the ancient Romans pointed to confidence in breathing as a symbol of life with the maxim: "As long as I breathe, I hope." As is known, a person is born with inhalation and dies with exhalation. Through breathing and blood circulation, the body's needs for oxygen are met, which participates in the breakdown of chemical elements, and thus provides the necessary energy for the body to carry out a certain activity. Therefore, oxygen is the main source of energy. The main element in the composition of air is oxygen, which is a vital factor for the body's energy supply when performing various activities. Oxygen combines with hemoglobin when it comes into direct contact with the blood and is carried to all cells of the body through the circulatory system. A number of scientists believe that life on our planet originated when in the prehistoric atmosphere oxygen was 0.1% of its current concentration - 20.946%. As a result of the enhanced photosynthesis of ancient algae, and later of land plants, the amount of oxygen in the atmosphere increased significantly. Based on research by American scientists, about 7,000 years ago, the oxygen in the air on our planet was 25%, and the atmospheric pressure was 2 atmospheres. A scientific experiment was conducted in which an environment analogous to the Earth's atmosphere 7000 years ago was created in a hyperbaric chamber. The scientists found that in the chamber the hemoglobin blood cell is saturated with the maximum number of oxygen molecules, as a result of which the ability to work is restored very quickly. A cut heals in less than 24 hours in a hyperbaric chamber, and in today's atmospheric conditions (20.946% oxygen and one atmosphere of pressure) in about 14 days. It is assumed that modern man has not yet adapted to the reduced oxygen from 25% to 20.946% in the air and the reduced atmospheric pressure from two atmospheres to one atmosphere.

In another study of men in a state of deep relaxation, the chemical composition of inhaled and exhaled air was analyzed. Scientists found that the optimal content of inhaled oxygen is 25%, and the pressure in the lungs is 2.16 - 2.18 atmospheres.

A very large part of people in modern civilization breathe superficially, quickly and non-rhythmically, in which their body is not charged enough with vital energy, its working capacity is reduced, the work of cognitive activity is slowed down, and negative mental states arise. Experts claim that the main reason for the significant

increase in respiratory diseases is due to improper breathing. It is known that the judicious management of breathing prolongs life, increases the vital forces, while incomplete and careless breathing shortens life, lowers vitality and is the cause of various diseases.

Breathing is an innate unconditioned reflex, it can be consciously regulated and thus have a beneficial effect on the functioning of the organs and systems of the body and the psyche. Breathing is regulated by the active role of the centers of the brain. One can consciously increase the frequency and depth of breathing. Its effectiveness increases significantly if it is conducted in an environment where the air is clean.

Restoring psychophysical work capacity and forming adequate psychophysical readiness can be accomplished by regulating breathing, applying breathing techniques of varying complexity.

A. Breathing actions for general strengthening

Breathing exercises for a general strengthening effect are associated with an improvement in psychophysical working capacity. They have a simple structure and do not require special preparation. Several breathing exercises are presented, which enable a quick recovery of vital energies. It is recommended that the exercises take place in quiet places and in fresh air.

1. Rhythmic breathing in two phases . This breathing is performed in two phases — inhalation and exhalation. The duration of inhalation and exhalation is the same. The exercise begins with a deep and smooth exhalation, followed by a deep and smooth inhalation. Inhalation and exhalation are continuous with a slight attenuation between the two phases. Initially, exhalation and inhalation are performed for 6 seconds, after which the duration is gradually increased to 7, 8, 9, ... seconds. It is more convenient to count the time in seconds by counting the numbers from 21 upwards. Attention is focused on each inhalation and exhalation.

2. Rhythmic breathing in three phases. The respiratory process in rhythmic breathing contains three main phases - inhalation, retention and exhalation. In the first phase – full inhalation (absorption) through both nostrils slowly, evenly. Attention is focused on the entry of air into the nostrils. One imagines that one is being charged with vital energy. In the second phase, breathing stops, the gaze and attention are directed to the abdomen (between the sternum and the navel). During the retention, one imagines that the vital energy is concentrated (accumulated) in the area between the sternum and the navel, where the "storehouse" is. In the third

phase, exhale slowly, continuously and fully. Attention continues to be focused on the abdominal area (between the sternum and navel). The idea of exhalation expresses the distribution of vital energy over the whole body. The three phases are of equal duration of 5 seconds each and gradually the time can be increased.

3. Breathing with prolonged exhalation . This exercise is applied in a state of anger, insult. It is initially performed in two phases — inhalation and exhalation. The exhalation phase is longer than the inhalation phase. Most often, the ratio of inhalation to exhalation is 1:2. Inhalation is deep and more intense, and exhalation is smooth. In the beginning, the ratio of inhalation to exhalation can be 3:6 seconds, and subsequently - 4:7; 4:8; 5:7; 5:8; 5:10, etc. Inhaling one imagines being filled with calmness, and as exhaling one imagines releasing tension.

4. Breathing with prolonged inhalation. This way of breathing is used in a state of fatigue, fear, uncertainty, worry, despair. Doing this exercise increases activity. The inhalation phase is longer than the exhalation phase. The ratio is the same as in exercise #3, only here the ratio of inhalation to exhalation is most often 2:1. In the beginning, it can be started in the ratio of 6:3 seconds and gradually the time is extended in the ratios of 7:4; 8:4; 7:5; 8:5; 10:5, etc. When breathing in, the image is directed to charging with vital energy, courage, determination, confidence, and when breathing out, it is directed to the expulsion of fatigue, fear, uncertainty, etc.

5. Even breathing in four phases. The exercise is performed in four phases, which are of equal duration - inhalation, pause (hold), exhalation, pause (hold). At the beginning, the duration of individual phases can be 4 seconds. Attention is focused on each phase of the breath. In the first two phases (inhalation and retention) one imagines that he is charging with vital energy and calmness, and in the other two (exhalation and retention) he expels tension. The duration of individual phases can be increased to 5, 6 and 7 seconds.

The effectiveness of breathing exercises depends on the conviction of the benefit of the practitioner of this method, the correct and systematic execution of the indicated breathing exercises. They can also be improved.

B. Specialized breathing exercises

Specialized breathing exercises are designed for impact in case of great fatigue, when the structure of psychophysical readiness is dominated by negative emotions of anger, sadness, fear, grief, uncertainty, etc. These negative emotions are the cause of many diseases. As a result of the impact of specialized exercises, vital

energies are quickly restored and psychophysical work capacity is improved. The exercises have a more complex structure, to which additional effects of specifically selected words and physical movements are included. Negative experiences are transformed into positive ones.

Exercising at the top of the fire

One of the most common negative experiences is anger. Anger is seen as a feeling of strong resentment and indignation, anger that is the cause of liver disease, the cardiovascular system, the psyche. Being angry, as a more acute form of anger, largely expresses hatred, which can turn into aggression. Thinking is significantly limited, as a result of which wrong decisions are made. Often the actions are violent. In order to prevent anger from growing into anger and aggression, a person needs to develop the ability to control it. He should avoid getting into sharp conflicts. To form the skill of controlling anger and transforming it into calmness, the following exercise can be applied. When a person realizes that he has become angry about something, he can take a walk alone in a nearby park, forest, next to a river.

In the first edition

First part. One moves slowly. He exhales deeply in the first 4-6 steps, holds his breath and takes another 1-2 steps.

Second part. Continues the movement by inhaling and taking 2-4 steps, holding the breath for the next 1-2 steps.

The exercise is performed 3-5 times.

After performing the exercise several times, a person continues his walk for about 4-6 minutes, breathing calmly, naturally.

In the second edition.

First part. A person performs the first part of the first exercise (on exhalation) saying to himself mentally (if possible out loud): "I push out tension, tension."

Second part . He continues the performance of the second part of the first exercise (while inhaling) saying to himself mentally (if possible out loud) : "I charge myself with calmness, calmness." Then he says to himself: "I am now calmer, calmer." The exercise (first and second part) is performed 4-6 times.

The number of executions can be smaller or larger depending on the conviction of the positive impact of the exercise, the desire to perform, good concentration of attention and accurate execution **.**

Exercising is at its peak

Sadness is a painful state of mind, which, with a longer and deeper experience, can develop into a mental disorder, a disease of the respiratory system. In this sad condition, a person's thinking is confused and he may come to the conclusion that life is meaningless and it is better not to live anymore. In order not to allow the sad state to become the cause of a mental disorder, which is most often depression, it is necessary for a person to realize it and transform it into calmness.

A breathing exercise with verbal and motor impact is offered. It is recommended that a person conduct the exercises alone in a favorable environment, a park, a forest, a mountain, by a river, lake, sea, waterfall. A person moves at a moderate pace for about 5-7 minutes, breathing calmly. His attention is focused on breathing.

First edition

First part . The man is moving. He exhales deeply until he takes 3-5 steps. Then he holds his breath and takes another 1-2 steps.

Second part . He continues the movement and in the next 5-7 steps he inhales deeply. Then he holds his breath and takes 1-2 steps. Attention is focused on exhaling and inhaling.

These two parts are performed 3-5 times, after which the person moves slowly for about 8-10 minutes, breathing calmly, normally. Attention is directed to trees, water, as one seeks to see the beauty and harmony of nature. After that, a person takes a break of 8-10 minutes. He recalls funny incidents, smiles, laughs. Sings a happy song.

In the second edition

First part. After the break, he starts moving slowly, breathing normally. Attention is focused on breathing. Exhaling, he takes 3-5 steps and says to himself (if possible out loud) : "I am pushing out the sadness, the sadness", holding the breath for 1-2 steps.

Second part . The person continues the movement by inhaling and taking 5-7 steps, holding the breath for 1-2 steps and saying to himself: "I charge myself with calmness and peace, calmness and peace" and smiles.

The two parts of the second exercise are repeated 4-5 times. The person then continues to walk at a brisk pace for 10-12 minutes. Again he rests for 8-10 minutes. He remembers happy events. Sings a happy song.

After performing the exercises, a person should take a warm and cool shower, then drink soothing tea, direct his thoughts to situations that create calmness, confidence and good mood.

Specialized breathing exercises can be performed both in a sitting and lying position of the body. The number of steps is assumed to correspond to the time measured in seconds. One step equals one second. The content of verbal impacts is selected depending on the type of emotion.

Many types of breathing exercises are known. Each person can create useful exercises for themselves depending on their training and needs. The effectiveness of breathing exercises is determined by the positive change in the state - lowering of tension, formation of positive mental states for actions in situations with different degrees of extremity.

A number of experimental studies have been conducted to establish the impact of air oxygen limitation on psychophysical performance. It has been proven that under emotional stress the frequency of breathing increases and its depth decreases. In extreme situations, the frequency of breathing increased more than 3 times compared to the frequency in standard situations. Oxygen consumption increases and oxygen deficiency decreases, as a result of which mental processes are disturbed. Psychophysical work capacity decreases. Nerve cells are most sensitive to lack of oxygen (hypoxia). They absorb 20 times more oxygen than muscle cells. During one of the expeditions in the Himalayas, during the ascent of Mount Lhotse (8511m) at a height of 7950m, the concentration of attention of the climbers decreased 27 times, the resistance - 15 times, the mental capacity - 13 times compared to the indicators of the base camp (5400m).

People living in the high mountains have adapted to the unfavorable conditions of oxygen deficiency as a consequence of the reduced partial pressure. Delayed physiological processes of aging and active longevity are characteristic of mountain dwellers. In the Hunza Valley, which is 2,500 m above sea level, the average life expectancy is 120 years. Undoubtedly, the high indicators of life activity of these long-lived people are due to the healthy mountain climate, clean air, lack of nervous and mental tension, daily physical work, proper diet. There are reports that the hermit Tapasviji lived to be 186 years old in the Himalayas. In addition to the favorable conditions of the mountain, he daily and continuously practiced special breathing and psychophysical exercises, relaxation, meditation .

The described impact methods can be applied separately and in combination depending on the nature of crisis and emergency situations. With regular training of the exercises, positive changes in psychophysical readiness occur, psychophysical work capacity is restored. Exercises can be supplemented depending on needs. The methods and exercises have been experimented many times and their effectiveness has been proven in practice.

5. Movement and tempering

Movement is the basis of life. Since ancient times, people have known that a person cannot live without movement. Movement is the basic element of action and activity. Psychophysical performance is actually the ability to perform certain movements and actions in different situations. Limitation of movement is one of the main causes of reduced working capacity and various diseases. It was established that when limiting ***motor activity*** (physical activity) diseases of the cardiovascular system, the respiratory system, and higher nervous activity significantly increase. All organs and systems of the human body and psyche to one degree or another are subject to the strong negative effects of limited motor activity. Motor activity is the main factor for improving a person's health and increasing his psychophysical working capacity. It is well known that "...in its effect, movement alone can replace any remedy, but all remedies cannot replace the effect of movement." Therefore, the improvement of psychophysical readiness is directly related to motor activity, which is carried out through effort in the process of overcoming difficulties in situations of varying degrees of extremity. Along with the presented methods of effects, by means of which work capacity is improved, motor activity is also of great importance. Every person should realize the importance of physical activity to improve health and work capacity. There are opportunities to practice different forms of motor activity such as walking at different paces, running, swimming, fitness, practicing different sports, hiking, etc. It is beneficial for health that active movements that are functionally related to breathing take place in a favorable environment where the air is clean, saturated with negative ions. These are the forests, mountains, areas near waterfalls, rivers, seas, lakes.

One of the main factors for restoring psychophysical working capacity is ***hardening.***

The purpose of hardening is to improve the body's thermoregulatory mechanisms by developing adaptive reactions that increase resistance and maintain the body's thermal equilibrium under wider limits of change in the meteorological and temperature conditions of the environment. Tempering is a process in which the natural factors of impact are mainly used - the sun, water and air.

A hardened organism can tolerate adverse environmental factors and improves its psychophysical working capacity. Hardening is carried out by means of dosed exposure of the organism under the influence of certain natural factors.

Tempering by ***the sun's rays*** is done gradually. The first procedures should not exceed 10-30 minutes. The duration of subsequent procedures is gradually increased by 10-20 minutes depending on tolerance. On hot summer days, procedures should not last more than 2-3 hours.

Water treatments are the primary means of water tempering, which include rubbing, spraying, dousing, douching, dipping, bathing, and its variety, "wrinkling." Wiping is done with a wet cloth (in winter with snow) successively –

hands, feet, face, stomach, chest and back. Dousing with lukewarm, and later with cold water, initially lasts 10-15 seconds, gradually increasing the duration. Immersion and bathing should start in the summer at a temperature of 22-23 degrees with a duration of 5-6 minutes. If muscle tremors occur, the procedure should be stopped. "Worzing" is carried out by a specialist. Regular washing of the feet in the evening with cold water, walking with bare feet on the grass, ground and snow has a great hardening effect. The duration is initially 30-50 seconds when walking on snow and gradually increases to 12 minutes.

Tempering with ***air baths*** begins with gradually removing clothes and exposing larger and larger parts of the body to the immediate impact of the surrounding air. It is good to perform air baths in a forest, mountain, near the sea or by a fast-flowing river.

To achieve a greater effect of hardening procedures, it is necessary to observe the following basic ***hardening principles:***

1. Gradualness – gradually increasing the strength of the irritant and the duration of its impact.
2. Systematicity – regular application of the impact factors during hardening, which lead to corrective changes in the body.
3. Use of irritants of sufficient strength. The small difference between the temperature of the skin and the temperature of the stimulus does not lead to profound and lasting adaptive changes.

It is not recommended to carry out hardening procedures after heavy physical exertion. The effect of tempering is significantly greater if the natural factors of tempering - sun, water and air - are applied in a complex manner.

CONCLUSION

Every person in his life has faced dangerous and difficult situations to one degree or another. In the process of overcoming them, vital forces are mobilized, mental and physical qualities are developed. There are not a few cases in which a person reacts very hard in these situations, is unable to mobilize his forces, as a result of which various mental and physical deliriums occur. Therefore, one needs to be prepared to overcome various dangerous and difficult situations, i.e. to have a formed high psychophysical working capacity, which can be realized in practice as a psychophysical readiness for action in extreme and ultra-extreme situations. These situations are seen as a complex of environmental conditions requiring active actions.

A special type of extreme and ultra-extreme situations are crises and emergencies. The global factors of these situations are danger and difficulty, which manifest as risk and effort. Psychophysical working capacity is realized in practice as a situational psychophysical readiness, which is made up of mental and physical readiness. Mental readiness is formed by a cognitive, emotional and volitional

substructure, and physical readiness – by physical qualities, motor skills, habits and anatomical-physiological features of the body. The strength of the interrelationships between them determines the adequacy of psychophysical readiness.

The restoration of psychophysical work capacity is carried out through the application of reliable methods of psychophysical effects. It is more expedient to apply psychophysical relaxation after the development of extreme situations, and ideomotor modeling training - before its appearance. Thought control is a method of influence that can be applied before the occurrence, in the process and after its development. Breath regulation will have a better effect when applied before the occurrence and after the development of situations. Motor activity and hardening are factors that largely determine the recovery of psychophysical working capacity.

Depending on the type and extremity of the situation, the impact methods can be applied separately and in different combinations. Their effectiveness is determined by their correct and regular implementation. When mastering the mentioned methods, the psychophysical working capacity is restored, which is realized in crisis and emergency situations as an adequate situational psychophysical readiness for effective actions.