Practical Guide
Mental Trainer to Empower your Super Ability

Erasmus+

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Our thoughts, repeated on and on, without being aware of it, end up shaping us and leading our destiny and we call it "fate", without knowing that we are solely responsible for the way our lives look like. Our thoughts "walk" on the highways (neural circuits) created by us, by repeating them. All we have to do in case we don't like what our life looks like is to become aware of our thoughts and change them. By changing the thoughts, we change our destiny.

SECTION I

Introduction to mental training. How the mind affects psysical performance

The concept of performance

In the current sense, performance designates the result of an activity, in the sense of accomplishing a task or the success of an action.

Sports performance is the result obtained in a specific activity, usually in a competition, designated by a number or a rating on the scale of values (place in the ranking). It represents the special, remarkable result, obtained by an athlete in a test, trial or competition.

Performance is determined by the total capacity of the athlete (physical, mental), being the aspect of excellence (optimum) of the human being viewed in its entirety.

Regarding the determinants of performance, several authors have classified them as follows:

I. The work capacity of the athlete is determined by:
   a. health
   b. body constitution
   c. training preparation
   d. Another classification divides the performance factors into:
      1. Exogenous factors: - technical-material conditions;
         - competition conditions.
      2. Endogenous / personal factors: - motor qualities (physical condition);
         - psychic attitudes (beliefs, psychic behavior);
         - technique-coordination;
         - constitution;
         - tactics.

Psychic factors of performance (the 4 "A's" of performance)

A1. Skills: generally, they represent the predispositions of the individual for performing sports activities with high results. They are systems of physical

and mental processes organized in an original way and which facilitate, through their way of organization, the achievement of performances in one field or another. The skills are extremely numerous - all the qualities that give the athlete the ease of obtaining superior results are considered skills. The aptitude system determines the performance, but not all its components have the same weight or the same degree of educability. For example, speed can be less affected, while resistance can be more easily improved.

The overall scheme of performance skills in sports is as follows:

1. Somatic: height, weight, somatic type, type of muscle fiber.
2. Functional: type of superior nervous activity, vital capacity, oxygen consumption, endocrine type.
3. Biochemical: type of metabolism, ability to recover.
4. General motor: learning ability, resistance to disturbing factors, energy mobilization ability, mental recovery ability.
5. Psycho-motor: general coordination, segmental coordination, static and dynamic balance, ambidexterity, muscle tone, spatio-temporal perceptions, spatial integration, reaction speed, repetition and anticipation, synchronization.
6. Motor: speed, endurance, force, mobility.
7. Psycho-intellectuals: vigilance, attention, mental concentration, thinking, imagination, memory, anticipation, decision.
8. Psycho-affective: emotional balance, resistance to stress.
9. Volitional psycho-regulators: voluntary effort, perseverance, combativeness, resistance to pain.

A2. Attitudes: are structural components of the human personality, resulting mainly from education and social influences. They represent, in essence, the characteristic of the human psychic system to perceive and judge reality in its own way and to react accordingly to it. Attitude is synonymous with preference,

opinion, orientation towards things or people, way of relating to others. The role of attitudes is, therefore, to directly influence behavior.

The core of human attitudes is therefore given by the conception of the world, beliefs, orientation in life and activity. Together with moral feelings, they form the fundamental objectives of education. Education means its positive meaning, the formation of attitudes and behaviors; it must also have a prophylactic function, of protection against harmful influences, as well as corrective, in the sense of modifying those negative features already installed.

List of specific attitudes in sports:

a) in training: availability for effort, desire for progress, cooperation for progress, performance orientation, helping others, objective self-evaluation, activism, discipline.
b) In competition: desire for victory, performance orientation, self-confidence, combativeness / aggression, fear of failure, anticipation of situations, mobilization for effort, cooperation with partners, critical and self-critical spirit, desire for self-affirmation, willingness to take risks, acceptance of failure, willingness to meet demands, patience, fair play.
c) Towards the coach: trust, cooperation, communication
d) Towards referees: acceptance, trust.
e) Attitudes of rejection towards: excesses, non-observance of the work and rest regime, uncivilized, incorrect behaviors, aggression in sports activity.

A3. Training: is the main means of preparing the athlete for competition and performance. Far from being a simple biological process of increasing motor skills (strength, dexterity, endurance) or a psycho-pedagogical process of learning and consolidating technical-tactical behaviors, training is actually a very complex reality of conditions, stimuli, strategies, techniques and methods to:

a) the maximum development of the integral performance capacity of the athlete;

b) training the athlete for performance in the competition;
c) the harmonious development of the athlete's personality.

In psychology, the concept of total training appeared and developed, through it being understood beyond the simple development of motor qualities or the capacity for effort, the development of the athlete's entire personality.

Mental training of athletes has become an essential factor in the structure and strategy of training, for the following reasons:

a) everything that the athlete does or is made to do goes through his mind (intellect, affectivity, will, attitudes);
b) only a higher level of motivation, voluntary effort and psychobehavioral skills can keep the athlete in a long, hard and sometimes boring or stressful training process;
c) the efficient behaviors in the competition are conditioned by the pre-competitive attitudes and by the capacity of self-regulation of the athlete's own behavior, by what in technique is called the reliability of the system.

Training is therefore presented as an activity that stimulates and mediates the transition from shyly expressed skills and attitudes, to firm abilities and beliefs, to stable and effective psycho-behavioral behaviors.

As a suggestion addressed to coaches, it is recommended that, in the process of training athletes, pay equal attention to biological, psychological and sociological data of athletes, in parallel with the scientific management of training, integrating all this into a unitary, proper and appropriate particularities of the group.

A4. Ambience: Man is born and lives in a certain environment that forces him to adapt or change in his favor. The environment in which man lives is very varied, with different effects on him.

The social environment is the factor with the greatest influence on the life of the individual and especially on the development of his personality. We

understand by social environment the family, the school, the sports environment that influences the individual's psychosociological behaviors of status, role, preferential relationships. The sports environment can be considered as a special world, with its own value system. This environment also satisfies some of the fundamental needs of the human being: security, belonging, communication, self-esteem and respect from others.

The sports climate consists of all the relationships within the sports team or club, as the case may be.

Interpersonal relationships are, on the one hand, the result of how the members of the group appreciate and prefer each other or not, and on the other hand, they constitute as a factor of influence through the group the social attitudes of individuals.

Mental capacity

It represents a system of qualities of a person, qualities that are closely related to the skills, knowledge and experience of the individual, aspects that lead to effective actions and performance. Mental capacity is demonstrated or demonstrable by facts (potential, latent mental capacity).

It is therefore a demonstrated or potential ability that is expressed by:

a) latent-unproven capacity;
b) dynamic capacity - observable behavior, demonstrated capacity;
c) inactivated capacity - capacity that can be observable but that no longer appears, being passive;
d) potential, latent capacity, which can be activated under the influence of an adequate training program.

Summarizing, we can say that mental capacity means the efficiency of psychobehavioral activity.

In relation to the pedagogical activity carried out by the coach with the athlete, it should be mentioned that this (mental capacity) has an evolutionary character. It develops as the athlete is influenced by education, is required by the specifics of the activity, maturing intellectually and characteristically by making a constant effort for self-improvement.

The components of psychic capacity are:

- self-confidence, in one's own performance capacity;
- psycho-physical resistance to demands;
- decision power;
- desire for self-affirmation;
- stability of confidence in victory;
- psychic resistance;
- capacity for psychophysical mobilization;
- willingness to take certain risks;
- hardness towards oneself, availability for effort.

Another classification identifies as components of psychic capacity the following elements:

- lucidity;
- personality stability;
- enduring difficulties;
- independence;
- self-discipline;
- mental maturity;
- perspective view;
- adaptability;
- confidence;
- clear goals.

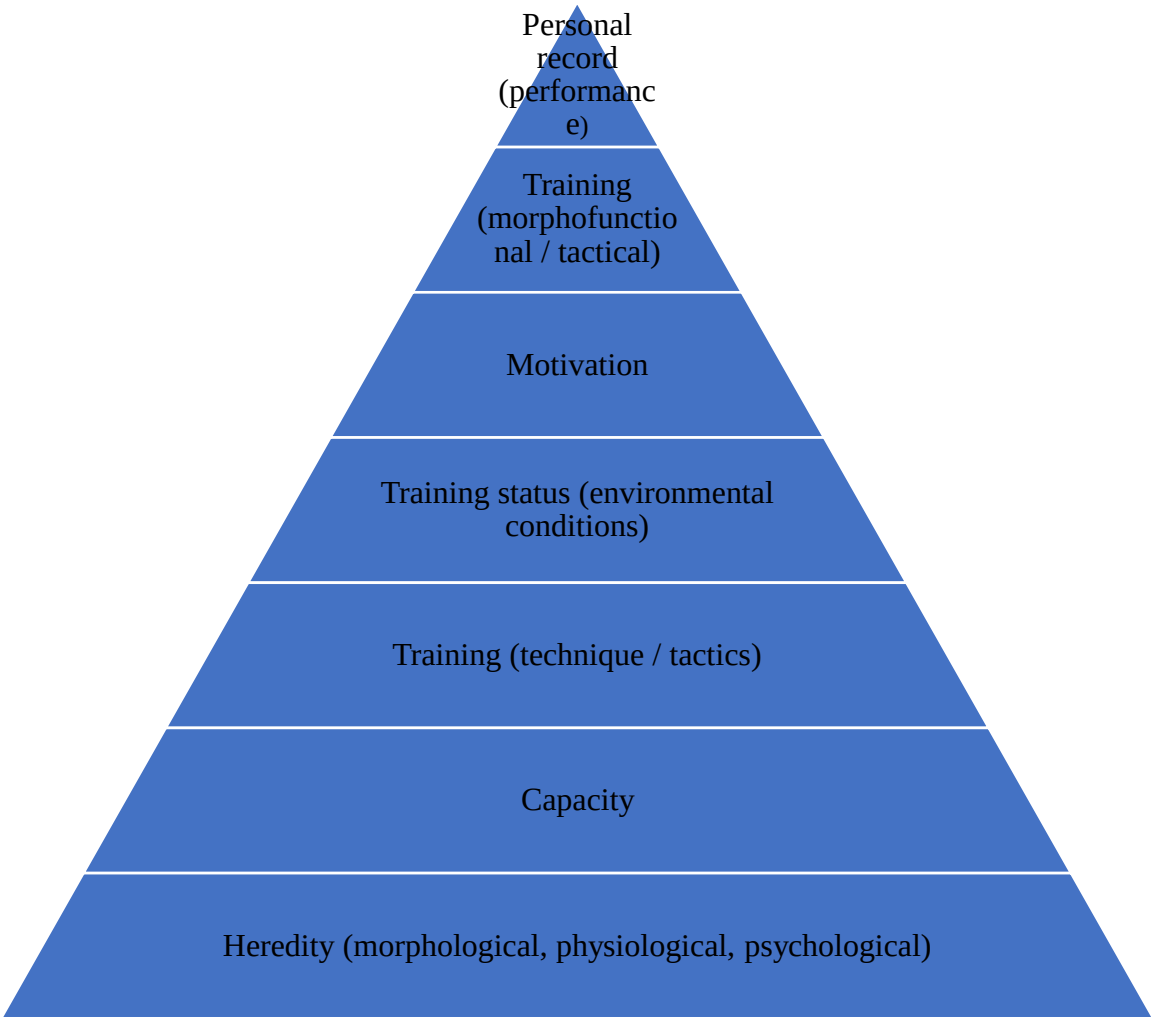
Third classification:

- emotional stability;

- anxiety control;
- stress control;
- openness to others and listening to others;
- competitiveness, employment and ambition.

A conclusion that emerges from the presentation of these notions of sports psychology can be formulated as follows: mental training should be given the same importance as physical, technical or tactical training.

Requirements for achieving the sports result



Psychic demands in sports

By psychic stress is meant the extent to which the entire psychobehavioral system is mobilized to resolve a situation, which presents itself as a task or obligation. The degree of mental stress is determined by the complexity and duration of the pregnancy; in sports, maximum performance usually requires maximum effort, rationally driven.

Factors of mental stress:

- ✓ the requested subject (athlete);

- ✓ the requesting situation (competition, contest);
- ✓ the content of the request;
- ✓ ways to react and adapt to requests.

Psychic training, as an integral and indispensable part of the entire sports training, involves the formation of psycho-behavioral dimensions of the athlete (psychic self-regulation skills) such as: attention, positive thinking, anxiety control, self-image, self-suggestion, concentration, self-confidence, relaxation, goal orientation, ability to face difficult situations, combativeness, etc.

The effects of mental stress are expressed in both positive and negative form. The positive effects are related to the process of development and adaptation, while the negative effects are related to mental consumption, fatigue or overwork.

Athlete's reactions to requests (psychic stress)

Any activity is a kind of request; training or competition are demanding activities: physical, as effort, coordination, complexity; psychic- as motivation for achievement, attention, reactions to failure, dissatisfaction, etc.

The usual demands are easily borne by athletes, their progressive growth achieving adaptation. When these demands are too great or last too long, the balance is disturbed, resulting in a momentary maladaptation or a deeper stress reaction.

A certain task is demanding in different degrees depending on the psychophysical capacity of the athlete; at the same time, the demand develops (under certain conditions), but also deteriorates, consumes the psychophysical capacity.

Psychological studies have shown that the cognitive assessment of the requesting situation (what the athlete thinks about the situation) influences the behavior of the athlete. The way he understands and interprets the situations he

faces will decide his kind of reactions, positive or negative; he will thus be dependent on his own way of interpreting the situations.

Sports psychology help professional and amateur athletes to deal with their problems, improve their performance and achieve their goals. Sports psychology is important for successful performance in most sports, it can help all athletes to enhance performance, cope with the pressures of competition, recover from injuries.

Performance in sports is no longer dependent on physiological well-being of the athlete. It is clear now that there are numerous psychological factors which affect and improve the physical performance.

The most important ***psychological factors involved in mental training and which affect the physical performance and sports*** are as below:

- **Personality**

Personality means the quality or condition of being a person. "Personality is the entire mental organization of a human being at any stage of his development. It embraces every phase of human character: intellect, temperament, skill, morality, and every attitude that has been built up in the course of one's life". The concept of personality is dynamic because human self is dynamic - always interacting, adapting, adjusting, integrating. This is important when it comes to understanding the personality development. The human personality is a complicated structure, woven of motives, emotions, habits and thoughts, into a pattern that balances the pulls and pushes of the outside world. Several comprehensive literature reviews have been completed in an attempt to clarify the relationship between personality and sports performance. However it is good to remember that the relationship between sports performance and personality is far from being clear. Athletes differ from nonathletic on many personality traits.

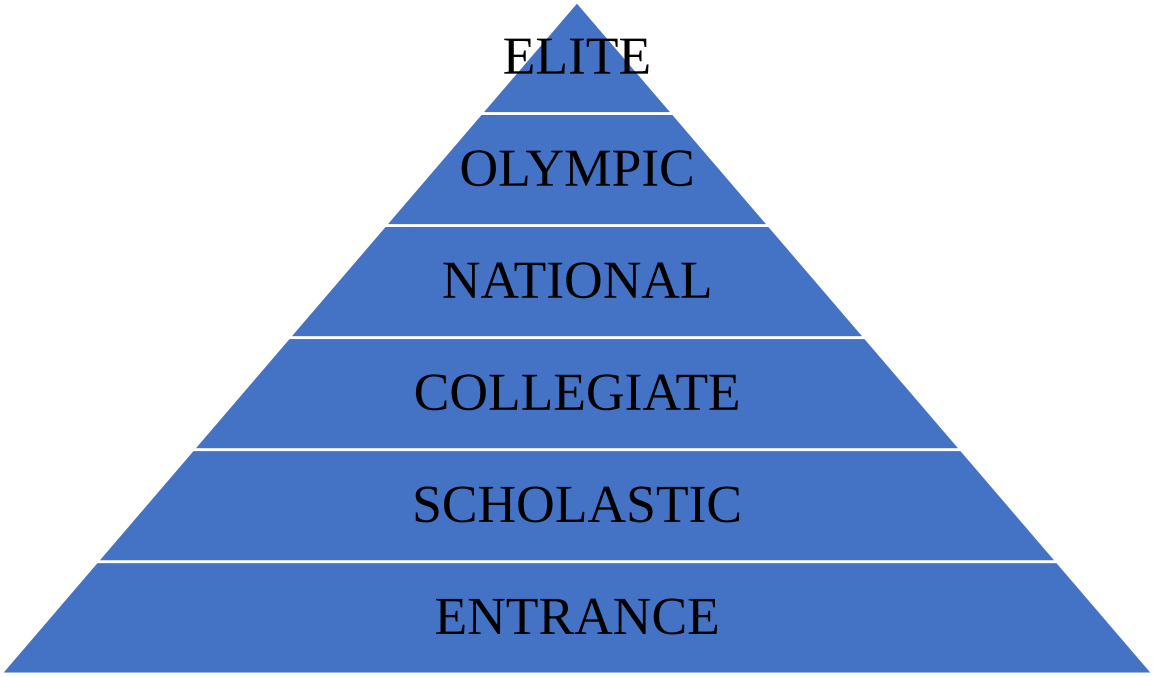
One research showed that athletes who participate in team and individual sports are more independent, more objective, and less anxious than non-athletes. From other research it is also clear that athletes is often more intelligent than

average. Additionally, the studies describes the athlete as being more self-confidence, competitive, and socially outgoing than the non- athlete.

Generally, athletes differ from nonathletes in many personality traits. For example, it can be demonstrated that athletes are generally more independent, objective, and extraverted than nonathlete, but less anxious. The athletic pyramid shows that athletes become more alike in their personality and psychological traits. At the base or entrance level of sport, athletes are very heterogeneous, or have different personalities. When trying to differentiate between athletes of varying skill levels in the middle and lower parts of the pyramid, we meet with failure, but if we select the higher level of the pyramid the athletes become more homogeneous in their personality traits. Perhaps the clearest distinction occurs between athletes involved in team sports and those involved in individual sports. For example, team sport athletes are more extraverted, dependent, and anxious than individual sport athletes. In many cases, athletes playing different positions on the same team can be differentiated as a function of personality characteristics. This can be seen in sports in which athletes are required to do very different kinds of things. Point guards in basketball, setters in volleyball, and goalies in soccer or ice hockey can be expected to exhibit personality characteristics different from those of some other position players. The literature on the female athlete and personality, and the expected differences between male and female athletes, it was concluded that the normative female differs in personality profile from the successful female athlete. Specifically the female athlete is found to exhibit personality traits much like those of both the normative male and the male athlete, for example, assertive, achievement oriented, dominate, self-sufficient, independent, aggressive, intelligent, and reserved. In comparison with available norms, female body builders were observed to be more extraverted, more vigorous, less anxious, less neurotic, less depressed, less angry, and less confused. We can conclude that personality differences are inevitable, as two individuals cannot possess similar personality traits.

Personality traits are basic to sports excellence. It is necessary to identify and cultivate those personality traits which are most conductive to the performance in sports.

The personality performance athletic pyramid:



- **Learning**

You cannot explain behavior without reference to learning. Learning is the process that covers all interactions or the experiences that happens to an individual his whole life, and which changes him for good. A person cannot evolve without learning. Learning is a process which brings together cognitive, emotional, and environmental influences and experiences for acquiring, enhancing, or making changes in one's knowledge, skills, values, and world views. There are some laws of learning, which seem generally applicable to the learning process. These principles have been discovered, tested, and used in practical situations. They provide additional insight into what makes people learn most effectively.

Edward Thorndike developed, in the beginning, the first three "Laws of learning:" *readiness, exercise,* and *effect*. After that, psychologists set down five more additional principles: primacy, recency, intensity, freedom and requirement. The first three laws and their relation to physical activity are:

1. Law of Readiness

Readiness or preparedness makes one learn more quickly and effectively than otherwise. If a person is not ready to act, it will be annoying for him to act on compulsion. When someone is ready to learn, he will learn more willingly and effectively than otherwise. If a person is not ready to act, it will be annoying for him to act on compulsion. These are the reasons why the state of readiness is one of the most important laws of learning. An individual should be physically, mentally, and emotionally mature and read to learn if actual learning is to take place. Interest is the motivation force for all learning.

2. Law of exercise

This law emphasize that practice leads to perfection. By repeating over and over again, the reaction becomes automatic. This law is somewhat similar to the law of use and disuse. It involves principles of exercise, and of repetition or practice or drill.

We learn and retain by use, and forget by disuse. Individuals learns by doing. Practice of aerobics gymnastics, shooting, typing etc. are the obvious examples of this law. Highlighting the application of this law in physical education and sports, Charles A. Bucher has stated “the law of exercise, in respect to the development of skills in physical education, means that practice makes for better coordination, more rhythmical movement, less expenditure of energy, more skill, and better performance”.

3. Law of effect

According to Thorndike, satisfaction enhances learning to a great extent. This law is also known as law of satisfaction. By effect, is meant the effective result of any activity. Activities which are accompanied by a feeling of pleasure or satisfaction are more readily and easily learned than activities which are unpleasant. The speed of learning depends on satisfaction and interest. The sports coach should make every attempt to provide activities that produce a feeling of gratification and satisfaction.

All the above laws, when applied to learning skills in physical education, state that the practicants of sports must either be ready or must be motivated to be ready, and the act must be repeated time and again before one can become proficient. This process proceeds much more rapidly if the practicants of sports experience satisfaction, and this feeling of satisfaction can be experienced only when some success has been achieved.

- **Intelligence**

Intelligence is aggregate mental capacity or energy of an individual to act purposefully, to think rationally, and to deal effectively with one's environment. The ability to understand complex ideas, to adapt effectively to the environment, to learn from experience and to engage in various forms of reasoning is different from one individual to another. There are a lot of definitions of intelligence, one of them comes from Mainstream Science on Intelligence: "Intelligence is a very general mental capability that, among other things, involves the ability to reason, plan, solve problems, think abstractly, comprehend complex ideas, learn quickly and learn from experience".

The relationship between physical activity and intelligence has often been a matter of serious debate among sports psychologists. Intelligence in athletics also exercised in the strategy in various games. Given a series of athletic tasks,

administered under the same conditions and with all other factors influencing athletic achievement to two individuals, identical in physique but differing in intellect, it is reasonable to believe that the more intellectual will prove superior. The assumption now is that intelligence plays apart in athletic achievement. Intelligence of an individual plays an important role in effecting physical performance. The more complex and the more interpretative the movement, the greater the amount of intelligence necessary to comprehend. Sports activities involve complex skilled actions. Since all skilled behavior is intelligent behavior, the relationship between sports performance and intelligence is obvious.

- **Attention and concentration**

Attention is the concentration of consciousness upon one object rather than upon another. It helps in bringing mental alertness and preparedness. In this way, the individual becomes alert and alive, trying to exercise mental and physical power as effectively as possible.

High performance in physical activity and sports depends very much on attention, because all psychosomatic process such as sense perception, cognitive, motor memory, intelligence, are closely associated with it. The competitive athletes have to acquire the ability to combat distracters during practice and competition and develop one pointed concentration, a state in which all body and mental energies are brought to a flashpoint. The athletic trainers and physical educators need to be aware of individual differences in the development of mechanisms of selective attention important in the storage and retrieval information relevant to various tasks. Assessment of attentional capacities may be very useful for this purpose. A direction dimension refers to the extent to which attention is directed externally to environment stimuli or internally to cognitions and emotions. Giving high quality attention to the skill during sports competition is important for effective performance. Various cognitive strategies and intensive over learning of skills may enhance the capacity to focus attention on the task at

hand, resulting in better performance. There are number of factors which distract and reduce attention and concentration, which will lead to poor performance.

- **Emotions**

Emotions are our feelings. Literally, we feel them in our bodies as muscular tension. Emotions are biologically based adaptations that assist us in responding to particular external stimuli. Almost every situation involves feeling, and as the situation becomes intense, it is expressed as emotion.

No aspect of our mental life is more important to the quality and meaning of our existence than emotions, because emotions express our true feelings. According to Young definition, emotions are actually disturbed states or processes which originate in psychological situations and which are revealed by marked bodily changes in the glands and smooth muscles.

Emotions lies at the top of the *Prime Sport Pyramid*. This is ordered in a purposeful and logical manner. Its order is based on the sequence in which the factors impact sports performance. They provide energy for us to confront challenges. Emotions play a central role in sports performance.

Without being emotionally aroused an athlete's "psyching up" procedure is not complete. All winning performance are invariably a result of emotional upsurge in the athlete. Emotions has both facilitative and debilitative effect on athletic performance.

In general, while positive emotions like joy, happiness etc., have facilitative effect on performance negative emotions such as anger, fear, anxiety, over-arousal etc., put hurdles in the way of performance. Studies indicate that optimal emotions can initiate and maintain the required amount of effort for a task. Meaning that when, for example an athlete's anxiety level is optimal before and during competition, his or her chances of performing best are also optimal. Optimal emotions keep the athlete energized as a result of which his or her level

of motivation level remains high. Emotions can have important consequences in the sporting world.

Prime Sport Pyramid

Emotions have either positive or negative effects that can be seen when examining the role of emotions on motivational functioning, cognitive functioning, health, interpersonal functioning and performance. There are individual differences in the consequences of certain emotions as well as how to predict performance.

In summary, emotions and sport significantly impact upon one another. Certain sporting situations can lead to the development of emotions and these emotions can have significant impacts on sporting aspects. Understanding these factors will aid in the prediction of emotions and the inter- and intra-personal consequences of these emotions.

- **Individual differences**

In this world, there are not two individuals exactly the same or even similar. People are very different – they are different in height, weight, color, appearance, speed of reaction, character, personality, behavior etc. These kind of differences make one easier to acquire various skills and other, not. Differential psychology studies this subject of individual differences. In the study of individual differences we try to understand the way in which people are psychologically similar and particularly what psychological characteristics vary between people.

Usually, the differences among individuals refer to age, sex, ethnicity, body build, psysiological functions, psychological make up. In education setting, understanding of individual differences helps in designing curriculum, planning course material and training programme both for students and teachers. The situation in physical education and sport is no different from that in education.

In exercise and sport, the individual differences is important principle of training which underscores the fact that optimal benefits are achieved by devising training programmes to suit the specific needs of individual athletes.

The principle applies to exercise. Ideally, there should be an individualized exercise programme for each exercise. This would ensure that the exercises meet the requirements of the individual, and would minimize the risk of overtraining and overuse injuries. Finally we can say that each athlete is unique to oneself. Apart from physiological differences such as height, weight etc., there are bound to psychological differences as well. Some athletes may be outgoing and extrovert and other may be shy, introvert and withdrawn, and they may also differ in their levels of perception. Some athletes are born strong psychologically while others have weak dispositions. Athletes with weak disposition fail to accomplish their task. Thus individual differences in sports performance are an inevitable phenomenon, and the teacher or coach has to modify his approach according to the nature of each individual athlete.

- **Stress and anxiety**

In psychology, stress is a feeling of strain and pressure. Small amounts of stress may be desired, beneficial, and even healthy ("motivational" stress). Positive stress helps improve athletic performance. It also plays a factor in motivation, adaptation, and reaction to the environment. Excessive amounts of stress, however, may lead to bodily harm. Stress can increase the risk of strokes, heart attacks, ulcers, dwarfism, and mental illnesses such as depression. Stress can be external and related to the environment, but may also be created by internal perceptions that cause an individual to experience anxiety or other negative emotions surrounding a situation, such as pressure, discomfort, etc., which they then deem stressful. Not all stress is bad for the performance. Stress can affect the performance in two different ways.

There are many factors which can cause stress for an athlete and there are two ways these are demonstrated, the stress model and the stress response process. The stress model demonstrates what factors affect stress in sport. Stress can affect performance, the way an athlete responds to the stress can affect it, and the management of the stress can negatively or positively affect the athlete's stress level. So, the whole idea is stress can help you when it makes you more alert, more motivated to practice, and gain a competitive edge. In the right amount, stress helps you prepare, focus, and perform at your optimal level.

On the other hand, too much stress, or bad stress, can cause performance anxiety, which is very bad for health and does not allow to play relaxed, confident, and focused in competition. Every competitive athlete experiences some stress; good and bad. Somenone's stress may be positive and helpful or instill anxiety and apprehension. Pregame jitters can cause some athletes to not sleep well the night before competition. Some athletes can't eat the morning before a big game. The pre-competition jitters may make someone feel like he/she has to throw up.

Stress is often accompanied by physical symptoms. One of the most common physical symptom of stress is increased muscle tension, which can obviously interfere with motor functions. There are some ways that can help an athlete cope with stress. First, he should eat and sleep well, especially before a game or match. He should also learn and practice relaxation techniques, such as deep breathing, muscle relation, visualization and positive self-talk.

Additionally, an athlete should engage in some type of physical activity other than the sport he is currently involved in. Finally, an athlete should not expect to be perfect without mistakes. Every athlete makes mistakes from time to time.

Stress model

(Graham-Jones and Hardy)

Stress response

Stress and performance Stress management/ self regulation

Anxiety is an emotional state that everyone experiences from time to time, represented by a feeling of dread, apprehension, or fear (usually without a clear reason).

Anxiety is a very important component, being a fundamental element in performance sports, especially in terms of the fact that it can cause cognitive blockages and can cause direct somatic reactions that implicitly directly influence the way the athlete performs, the way decision-making, relationships with

teammates, and tolerance of stress and frustration during training and competition.

Psychology classifies anxiety into two major categories:

- Anxiety as a *personality trait*;
- Anxiety as a *state*, induced by the subjective interpretation of the athlete in response to the action of external factors (competition, etc.).

Anxiety *as a trait* contributes significantly to interindividual differences in vulnerability to stress. When elevated, anxiety as a trait is a vulnerability factor to hyper-reactivity to stress and the development of several types of psychopathology (anxiety disorders, depression, etc.).

Anxiety *as a condition* is a temporary condition (characterized by anxiety, unpleasant somatic sensations, worry, etc.) that occurs in response to a specific event, object or situation perceived as threatening.

On the other hand, anxiety as a trait describes a personality trait, not just a temporary state. People with anxiety as a trait experience anxiety at a more intense level, over longer periods of time and in a wide range of situations, not just in specific contexts.

It is known that there are significant individual differences in terms of anxiety, which are based on elements such as: personality characteristics, how to relate to the sports environment, meeting the need for security by the team, environmental characteristics conducive to anxiety (criticism, devaluation, unfair competition, over-responsibility, over-loading, over-compensation etc.).

Measuring, identifying the level of anxiety with the help of specific psychological tools is an important step in the process of optimizing individual performance. Considering the multidimensional nature of anxiety in sports, identifying the type of anxiety characteristic of each athlete is another important step.

The word emotion is generally used to describe biomechanical changes and feeling state that underlie a person’s internal sense of anxiety. Affect is used to

describe the person's emotional state from an observer's perspective. Anxiety is an abstract concept, so difficult to describe concretely because it has so many different potential causes and degrees of intensity.

One can talk about anxiety on three levels:

- on *cognitive* level, meaning particular thought process;
- on *somatic* level - by physical response;
- on *behavioral* level, by patterns of behavior.

Sport anxiety is simply mind-body state that is marked by uneasiness, fear or worry. It is usually a conditioned response to a stimulus. The precise impact of anxiety on sporting performance depends on how an athlete interprets his or her world. Unfortunately, far too many athletes accept high levels of anxiety as an inevitable part of the total sporting experience and fail to reach their potential. Its dynamic in different sports and different competition situation is of great interest to the athlete and their trainers.

There are a wide variety of stressors upon participants in sports; it can be physically exhausting, it pitches you against superior opponents, and hostile fans might verbally abuse you. These elements may need to be overcome. When the demands of training or competition exceed one's perceived ability, anxiety is the inevitable outcome. Sports differ from one another in skill structure, play dynamics, competition procedure and the need for physical and psychological training. Therefore, not all sports generate the same kind and the same amount of anxiety in sports persons.

Traditional coaches and trainers may try to help the athlete understand why negative or anxiety-producing thoughts and feelings develop and then try to change or modify that process with limited amounts of success. One can say that anxiety is one of many emotions that may arise in response to a competitive situation. An emotion is associated with a physiological change, a subjective experience, and an action tendency. As one can see, anxiety includes state and trait dimensions both of which can show themselves as cognitive and somatic

symptoms. An athlete with high anxiety trait (Atrait) is likely to be more anxious in stressful situations.

To help the athlete control competitive anxiety somatic techniques (relaxation) and cognitive techniques (mental imagery) can be used.

Anxiety control in sports

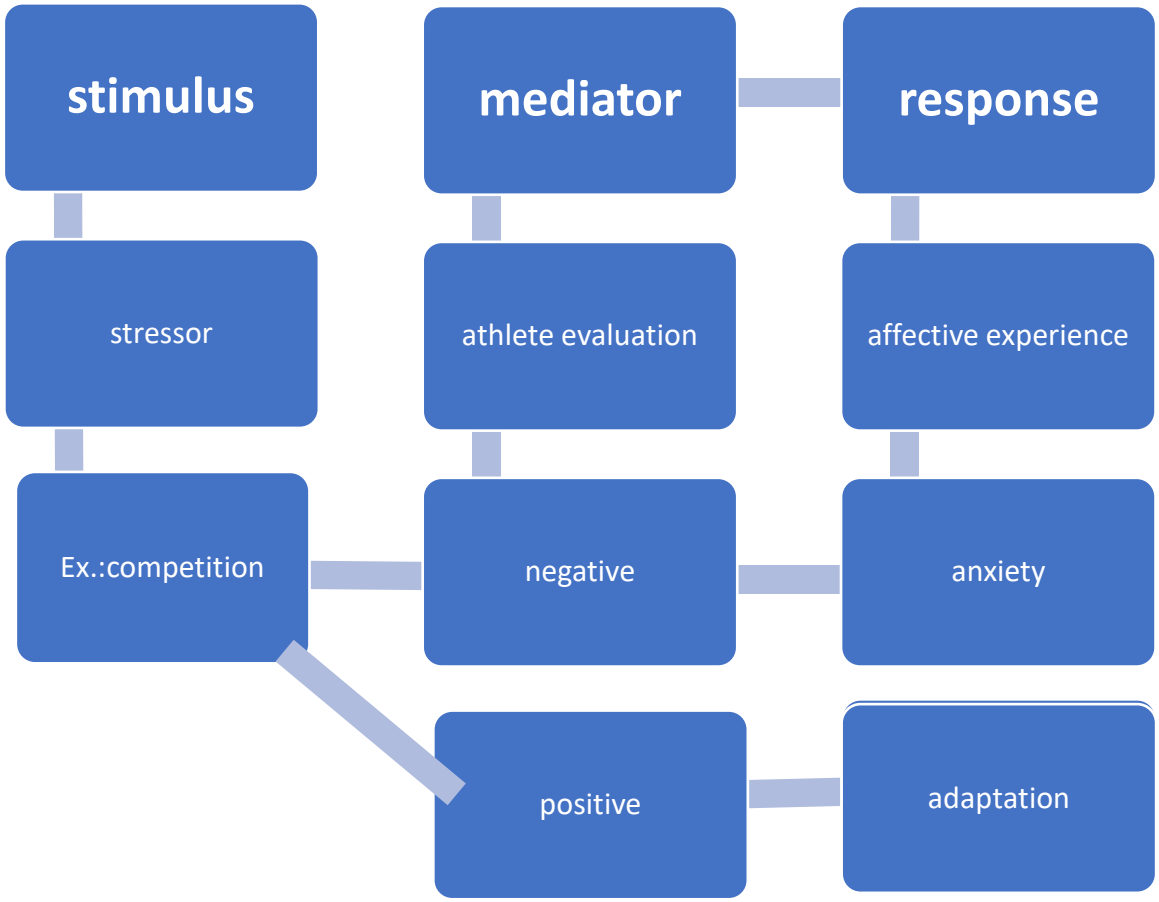
Anxiety is, therefore, a maladaptive psychophysiological response to a threat perceived as possible, but vague. This type of threat causes a decrease in performance because we cannot protect ourselves in the face of an uncertain and unpredictable event. Very often, anxiety-specific behaviors are represented by avoiding certain demanding situations and "escaping" from these situations, which explains why during sports competitions, in the minds of anxious athletes often appear thoughts and intentions to avoid confrontational situations or why in in some cases there are even "involuntary" injuries.

Many athletes perform satisfactorily during training, but during competitions they face certain "inexplicable blockages". When feelings of nervousness, tension or excessive fear affect performance in sports, the application of psychotherapeutic methods can help athletes gain control of anxiety and reduce the excessive tension caused by sports competition.

In the case of athletes, the perceived stress increases on the day of the competition because, on one hand, they compete in front of an audience and, on the other hand, they have very high expectations regarding their own success. This type of stress is often based on how athletes interpret the competitive situation. It rarely happens that external situations (by themselves) generate stress directly; one can rather talk about the way in which athletes describe the situation in which they were involved (the competitive situation), a description that provokes feelings of emotional tension, fear and tension.

It is first recommended that the athlete determine whether those thoughts related to doubt, failure or lack of confidence are determined by the perceived lack of technical and / or tactical skills specific to the sport in which he operates. If so, internal self-descriptions (self-suggested, mentally constructed ideas, "self-talk") will generally lead to feelings of fear, nervousness, and tension. Therefore, in a sport performance is difficult to achieve when one's own inner voice says otherwise.

The interactional approach to stress



Anxiety in sports has other characteristics compared to the non-sports context, and the manner of intervention in relation to it is a delicate process for several reasons:

- First of all, in high performance sports, we are talking about an *optimum of competitive anxiety*, which ensures what in sports language is known as "competition".
- Second, anxiety depends primarily on the individual's personal history. In this context, a multitude of studies have shown that senior athletes often have a higher level of anxiety than juniors.

Mental imagery

Imagery may be defined as *using one's senses to create or recreate an experience or visual image in the mind that at times may seem to be as real as seeing the image with our physical eyes*. An image can be created in the mind in the absence of any external stimuli, also an image may involve one or more physical sense, and an image is created from information stored in the sensory store, working memory, or long-term memory. The mental practice literature is very instructive relative to the general application of imagery to sport. Among other things, the mental practice literature provides evidence that imagery is an effective cognitive process for enhancing learning and performance of motor skills.

Mental practice is most important in learning of almost all sport skills. The literature suggests that in addition to physically practicing a sport skill, the athlete should spend a small amount of time rehearsing execution of the skill in his mind. Mental practice can occur prior to actual physical practice, or it can occur at a time when physical practice is not possible (while traveling, in the locker room, while resting). Research with mental practice has also revealed several principles that enhance the effectiveness of mental practice. Mental ability and imagery help

the athletes to empower their emotional state, and the way they approach the physical efforts. Such mental activity enables the athlete to improve the execution and precision of the given skill or task by thinking and imagining about it. Mental imagery of critical competitive situations is essential to boost the fighting spirit to help an athlete to organize himself in a better way. Mental rehearsal of competitive situations certainly help in improving athlete's emotional state as well as his physical performance. It also helps in the smooth flow of energy as and when required.

Conscious Mind vs Subconscious Mind

- **The conscious mind**

Our conscious mind is only a very small part of our entire mind. We think with the conscious mind and whatever thoughts we have, they will all pass into the subconscious mind, which will thus create the external reality. The conscious mind is like a strong focused light, it shines very brightly, but only in one limited place. It is a very good tool for concentration, focusing on intelligence and understanding.

The conscious mind has certain essential functions.

First, it identifies the information received, through the five senses: sight, hearing, smell, taste, tactile / kinesthetic.

The conscious mind continually observes and catalogs what is happening around us.

The second function of the conscious mind is comparison. It compares any new information with that already stored previously, in order to adapt it to the environment.

The third function of the conscious mind is analysis, and analysis always precedes the decision.

The conscious mind functions like a binary computer, fulfilling two functions: it accepts or rejects data in making choices and decisions.

❖ **The subconscious mind**

The subconscious mind is the seat of emotions, it is the creative mind. It is very important to know that when the subconscious mind accepts an idea or a thought, it will begin to execute it.

The subconscious mind simply has the ability to create, to materialize any thought that reflects a deep belief / belief of ours, whether it is positive or negative. If we have negative thoughts, it will cause failure, frustration, anger, and unhappiness, but if our ordinary thinking is harmonious, peaceful, and constructive, we will experience success, prosperity, and perfect health. Our subconscious has a different awareness in all directions. He has an extraordinary sensitivity, nothing escapes without being noticed. While we are focused on a particular task, the subconscious mind is already quietly absorbing so much information around us.

The subconscious mind is so sensitive that it can perceive things that the conscious mind would find impossible to observe. It has unlimited powers of perception. It has a technologically advanced sensory system beyond normal human capabilities.

The subconscious mind has an infinite intelligence which, when in harmony, maintains all the vital organs and functions of the body. He is at work twenty-four hours a day and never sleeps. She speaks through symbols, impulses, premonitions, exhortations, ideas and inspirations.

The way the subconscious mind works can be summed up in the following words:

WHETHER YOU THINK YOU WILL SUCCEED OR FAIL, YOU ARE RIGHT!

This means that the subconscious mind has the ability to bring into our reality our deepest convictions, of existence of which the conscious mind has no idea.

The greatest advantage and the thing that must be understood by each of us is that with each thought of ours, we can re-create our reality. We can plant new thoughts that form new beliefs that in turn will form new neural networks that will recreate our reality.

Without going into details, as they are the subject of other chapters, we specify that some of the tools that are helpful in the direction mentioned above are meditation, hypnosis and brainwave training.

In the practice of performance sports, as in other fields of activity, one of the most effective techniques for increasing performance is visual imaging.

Its purpose is to access the subconscious mind to change negative mental programs. In order for this to happen, in order to be able to communicate with the subconscious mind, the first condition is the induction of a state of deep relaxation, ie the entry into the alpha or theta state.

Visualization is the simplest tool that can help us eliminate dysfunctional beliefs, negative mental programs, and introduce those beliefs that serve our interests. The moment we change our beliefs, we immediately change the thoughts, emotions and chemistry of the brain, implicitly its plasticity and malleability, new neural pathways are formed more easily, cells communicate more easily, old programs change more easily.

Visualization also incorporates all the benefits of meditation. Following a study at the University of California, San Francisco, Dean Ornish, a doctor of medical science, found that people who practiced meditation had much more durable protective coatings on their chromosomes called telomeres. Telomeres shorten over the years and when they become too short, the cells die.

When we practice visualization, we access the alpha and theta meditative states of the brain. During these states the brain regains its plasticity from youth and we can create much faster beliefs and beneficial habits.

Visualization can relieve stress by influencing a certain structure in the brain called the amygdala. In 2013, researchers discovered that meditation and visualization can alter the amygdala's response to stress.

Almost all mind and body healing techniques have visualization in common.

As we learn to communicate with the mind through visualization techniques, we can bring about changes in health, self-confidence, and performance in any field of activity.

Visualization is like a muscle that needs to be trained and developed until it becomes very strong. Visualization is practically the tool of materialization that we can work with every day until we get results that reflect our ideal life.

Brain waves

Brain waves are electrical impulses that our brain produces as a result of the activity of neurons. It has been scientifically proven that every brain frequency influences our state and, implicitly, our life.

The human brain is still a mystery, including to many scientists. We know very little about how the brain works, but everything we know so far is necessary to be aware of and put into practice.

Why? Because every frequency on which the brain vibrates, at a certain moment, creates something in our life.

The electromagnetic field that is created around the brain, as a result of this activity, works like a radar: it emits and receives!

Neural pathways transmit information, amplifying or reducing this electromagnetic field. We receive on the same frequency that we broadcast! And that's because that's how it works. It is important to understand this, to be present

in our lives and to be aware of what we create! If we don't like the way our lives look, we change the frequency; if we like it, we amplify it!

So the human brain works on the basis of an amount of electricity.

This electric current resulting from neural activity vibrates at different speeds, known as brain frequencies. Brain frequencies are measured in cycles per second (Hertz).

Why is it important to know these brain frequencies? Simple - to understand where we are and where we are going, to be aware of what we create at all times.

Creative ideas, "magic" solutions appear in the theta state, not in the beta state. All people who have trouble sleeping manifest this prolonged beta state, being unable to calm their thoughts and reduce their brain frequency from beta to theta.

Brain frequencies are related to emotions, thoughts, feelings and states of consciousness.

So, let's understand how this magical organ called the brain works and what we have to do to get what we want!

- ***Beta waves*** - have a frequency of 13-40 Hertz (cycles per second)

Everything that happens now, when we read, think, are focused, takes place in the beta state.

It is specific to the conscious mind and:

- Awake, when the attention is directed to external actions;
- Making quick connections;
- Activities that require focused attention;
- Increased vigilance;
- Concentrations;
- Preparing exams, presentations and all activities that require mental alertness, while increasing attention and concentration.

In beta: you are awake, you analyze and corroborate the information, you make plans / projects, you organize yourself. Beta is necessary for daily activities, but "functioning" predominantly on the beta frequency leads to stress, anxiety, depression, panic attacks.

- ***Alpha waves*** - have a frequency between 8-14 Hertz (cycles per second).

Represents the bridge between the conscious mind and the subconscious mind, between the beta state and the theta state. The alpha frequency is manifested when you keep your eyes closed, you feel relaxed, you are detached from the outside, you are calm.

In the alpha state, the memory and learning processes reach maximum levels. All those who have problems with memory fail to access the alpha state.

In this state, visualizing the objectives is easy, as well as programming with the help of positive messages (positive statements, meditations) for what you want to achieve.

In the alpha state, consciousness awakens to a much more comprehensive reality than in the beta state. You have access to that inner voice that becomes much clearer as you get closer to the theta state.

At the alpha level, healings are made on the physical body, phobias and fears are eliminated, stress levels are reduced, pain is eliminated. It is a state of release, relief and peace.

All you have to do to access the alpha waves is close your eyes and imagine, for example, the most beautiful sunset at sea, that you have ever seen.

- ***Theta waves*** - have a lower frequency, between 4-7 Hertz (cycles per second).

Welcome to the realm of the subconscious mind!

Here you have access to all your resources, to all the memories and sensations you have experienced. Most of the programs you run in this life were

written on this frequency and because they were written here, *they can also be rewritten here*!

Theta is the state of self-suggestion, a state of deep relaxation, which is reached in deep meditations during deep sleep. In the Theta state, mental reprogramming is experienced.

Theta state is the mental state where, consciously, using choices, you can create your reality exactly as you want, the speed of manifestation in the processes of manifestation is very high (often instant, so pay attention to what thoughts you have in a theta state).

- ***Delta waves*** - have a frequency between 0.5-4 Hertz (cycles per second).

They are the waves with the lowest frequency and are manifested during deep and very deep sleep. Here we mention the importance of sleep in healing processes. During deep sleep there is the possibility of accessing the information necessary to heal the body naturally.

The body has this ability to heal itself. The conscious mind cannot understand this because it does not have access to this information. So, think again when you do not give enough time to sleep and do not create optimal conditions for a deep sleep.

- ***Gamma waves*** - have frequencies between 40 and 5,000 Hertz (cycles per second).

Instant healings occur on this frequency, because it seems that in this process of instant healing the brain can naturally go from a frequency of 4 Hz to 5000 Hz. They are specific to higher brain activity and are frequently accessed by those who practice deep-spiritual techniques, accompanied by a complete detachment from conscious mind control. In the gamma frequency, states of altered consciousness are reached where calm, peace and tranquility predominate, beyond scientific concepts.

As a conclusion, it is good to understand that *we are the creators of our own reality*! We, through every choice we make, with every awareness we have or not, with every question we ask ourselves or not.

All this is extremely useful information for those who want to work with themselves in order to improve performance or even work with athletes with disabilities, in the sense of improving or even curing their various physical or mental problems.

What does visualization involve?

Visualization is the mental action by which a person can achieve the desired goals. When you imagine the things you want, they tend to become your experiences. You can learn and apply the process of visualization (of mental imagination) and the results will push you to fulfill your desire.

You need intentions, emotions, mental images and last but not least action. The tools you have access to and use them correctly will help you make massive changes within yourself and get where you want to be.

What are these tools? The thoughts, emotions, mental images and action we refer to in its material content will help you reprogram your mind and body to the frequency of the new life you desire.

Negative mental programs, limiting beliefs, rigidity, wrong choices only bring limitation, stagnation and suffering.

Your vision

It is important to know what your vision is to reach it, but even more important is to know where you are now. Your vision is to detail where you want to go, what the destination is, what the destination looks like and how you perceive the destination. It is the point called "arrival".

The art of imagining something means *seeing in your mind what you want to materialize*. In the field of personal development, people use visualization to change their external reality.

Your vision must reach all areas of your life to enjoy significant change.

The most important thing is to clarify your vision to know where you are going. It is not necessary to know all the way, to see it from the beginning. Setting goals, work plan and tools that you will use will show you step by step the direction. Your mind must remain focused on the destination.

In order to be able to get from where you are to where you want to be, your intentions need to be clear. Inconsistent and confusing intentions receive confusing results. In order to form clear mental images, you need clear intentions and to set your goals exactly.

Inner wisdom will guide you, if you allow it, with access to all the possibilities of the quantum field. But in order to create a clear vision of what you want to live, you must take the first step of the rest of the steps to materialize the life of your dreams.

Conscious visualization is an effort, a focused mental action that people take to manifest a certain goal in their reality, whether it is an ability or something else.

In the 70s and 80s, the Russians used visualization as a key tool in training Olympic athletes. The living proof of the effectiveness of this method were the over 200 medals obtained by the athletes. Also during this period, the first studies and experiments involving visualization techniques were performed.

In these studies, the Russian researchers chose 4 groups of athletes who were to participate in certain training programs.

The first group followed the program which included only physical training.

The second group followed the training which included 75% physical training and 25% mental training, the third group 50% physical training and 50%

mental training, and the fourth group 25% physical training and 75% mental training.

Surprisingly for those times, the best results were obtained by the group that followed a program that included 25% physical training and 75% mental training.

All subsequent experiments have had similar results, showing that mental images act as a "prelude" to muscle impulses.

Nowadays, sports visualization is widely used.

Visualization has also been used for athletes with disabilities, with studies showing that mental training is based on visualization based on working in the theta or delta over a longer period of time (the range varies depending on several variables that related to both sports and other external factors) leads to a significant improvement in the performance of athletes.

The visualization is widespread and is successfully applied in a large number of areas, of which we mention:

- pain management;
- changing limiting beliefs;
- shortening the learning time;
- optimization of sports performances;
- behavioral changes;
- elimination of various types of dependencies;
- curing anxiety and even performance anxiety;
- healing chronic fatigue, emotional shocks;
- improving the speed and accuracy of execution;
- reducing stress, eliminating insomnia;
- development of learning skills;
- development of healthy habits;
- elimination of negative beliefs, emotions, patterns and thoughts.

It is also important to point out that, on the one hand, it is important to identify the restrictive attitude that creates bottlenecks. On the other hand, it should be noted that visualization works only if the following conditions are met, cumulatively:

- ✓ clear desire / intention - strong and real desire to achieve that goal;
- ✓ the belief that the objective will be achieved following the visualization approach;
- ✓ emotion is the fuel that sends desire and the mental image of desire in the quantum field;
- ✓ accepting that you are ready to achieve that goal;
- ✓ daily practice necessary to impress the subconscious mind with the new image. Any interruption in the program will take us where we left off.
- ✓ Final setting - refers to the fact that the emphasis of visualization techniques should be on the final result, not on how things will unfold.
- ✓ Inspired action - even if the visualization process is based on creativity, peace and relaxation, it is mandatory to take a physical action congruent with what we want to achieve through training.
- ✓ Detachment - when practicing visualization it is important to detach from the result. If we invest energy in the result we practically lose the power of creation. Attaching the result takes you out of the state of creation and flow.

Visualization is an active process, not a passive one.

Conclusions on mental training. Maximizing performance in sports

Mental training is a component of the training process, along with technical, physical, tactical, nutrition training. This type of training leads to the improvement of psychomotor functional indices because it also produces appropriate changes in the neuromuscular system.

The difference between an athlete and a performance athlete is given by the MENTAL of the athlete. Top athletes have the ability to continue after mistakes, to maintain confidence and calm in front of the opponent and to focus on what is needed to perform each activity successfully. In order for athletes to make the most of their skills, it is essential for them to understand the value of improving their mental game.

Mental training is used more frequently in the stages of consolidation and improvement. It is good for the athlete to learn to focus, to represent his image well and to exercise 10-20 minutes a day, a few hours after the practical training. It has educational effects among athletes by increasing the level of awareness in training, concentration, discipline of thinking.

Mental training is a practice that comes to strengthen and complement the benefits of sports training. It must neither replace nor supplement nor be carried out in a rudimentary manner. Mental training (as well as sports training) is subject to precise rules and conditions as well as a well-structured plan. It facilitates the installation of a successful methodical scheme, equally offering the opportunity to change what does not suit or what may limit the athlete. It is a pragmatic "how to make it work?" Approach, rather than "why doesn't it work?" In this area, anything is possible and it is good to remember that the important thing is not to know how to fall, but how to get up.

When do we say that a pitcher is mentally strong? When he is able to use in competition regardless of the circumstances, 100% of the physical and

technical abilities of the moment, or even more precisely, when he manages to win with the last throw. At the same time, the purpose of mental training is to allow the athlete not only to realize his potential, but even to raise the level of performance. For this, there are a number of means.

First, a clear distinction must be made between, on the one hand, psychological support, which takes into account possible emotional imbalances related to personal problems that have an indirect but certain impact on performance, and, on the other hand, one's own mental training. said, specific to the throwing athlete, which aims at the primary development of motivation, self-confidence, concentration, combativeness and the ability to manage stress, therefore, the impact on performance (directly and obviously). The first approach appears as a quest to solve psychological problems. It is the responsibility of psychologists, psychotherapists, psychoanalysts and psychiatrists, being rather oriented on the analysis of the athlete's past in which the origin of his psychological imbalances is. It's about understanding the "*why*" of the problem.

The second approach aims to develop the mental qualities necessary to practice high performance athletics. It belongs to coaches and mental training specialists, is mainly focused on the future and allows the purchase of concrete means to manage the pre-competition day, the actual competition and the post-competition. This is about the "*how*" of performance. The benefits of mental training - stress management - the fear of losing, the pressures exerted (coach, family, colleagues, media, expected results, etc.) knowing that it is not possible to eliminate stress 100%.

In fact, stress is useful; its quantity and especially its quality are important.

If the coach uses natural and spontaneous field exercises (to improve concentration, for example) or home competitions (to teach the athlete to control stress and develop combativeness), there are a number of techniques. More targeted mental training, which takes place most of the time, outside the stadium.

In order for these techniques to be used effectively and to be beneficial to the athlete, it requires specific training from the coach. In a first phase, lessons must be developed to learn these techniques (sessions that will be included in the training structure), in order to later reach a self-training in which the thrower will use in an autonomous way everything will be learned. The balance of the most frequently used techniques and their ranking (physical or mental), leads to the following list: controlled breathing techniques; Jacobson analytical relaxation method; Schutz autogenic training; yoga; sophrology (basic sophrology, dynamic relaxation, progressive sofro-acceptance, etc.); mental visualization; neuro-linguistic programming.

Beyond these mental training techniques, the coach's attitude, motivation and communication have an undeniable impact on the mind of the athlete he trains. It sometimes happens that the thrower is inhibited in developing the mental qualities of internal obstacles of which he is unaware. Mental training must allow these inner brakes to be highlighted, so that they can be overcome and the initial process of developing mental qualities can be re-engaged. This requires a precise and deep communication between the athlete and the coach, the latter must therefore be a fine connoisseur of positive communication methods. Regardless of the type of intervention, it is essential that the athlete is always placed in the center, taking into account the size as a pitcher and the human. His needs must be listened to, in order to be able to propose to him what is really useful and not to intervene randomly, without discernment. The quality of the privileged coach-athlete relationship allows a psychological work, but this is only complementary to the one through which the mental trainer could make the athlete make better use of his own resources.

The mental trainer is not a guru; he only possesses a solid background in psychology, has the experience of a high level athlete and serious knowledge about one or more methods of mental training (relaxation, sophrology, hypnosis). The training will only allow the athlete to function to the maximum of his

possibilities, so to optimize his own potential. The pitcher is not dependent on the trainer, on the contrary his objective will be to (re) give the athlete autonomy, to make him work alone.

Conclusions:

Mental training is useful for any performance athlete. It does not replace physical, technical or tactical training, but supports it. Mental training is oriented towards the formation of mental routines for training and competition, concentration of attention, emotion management, positive thinking, preparation before the competition for obtaining the optimal physical and mental state of struggle.

There is no sport without physical education at the gross root level. The physical educator and the athletic coach face the same problems of human behavior and grapple with them almost in a similar fashion. Psychology in physical education perspective focuses on general process and procedures of learning, motivation, play, growth and development, in sport perspective, its concerns become more intense and specific in consideration of the type of sport. Psychological training, coping strategies, interventions, mental skills etc., have greater relevance in competitive sport than activity and recreational sport. Generally speaking, psychology in physical education addresses such important areas as personality, learning, intelligence, attention and concentration, motivation, emotions, individual differences, aggression, stress and anxiety, group dynamics and mental imagery with the objective to understand the real springs of activity behavior, guide behavior into realizing one's potential through activity programs and to optimize benefits of physical activity in terms of growth and development. So, it is very important to all coaches, physical education teachers and any sports trainer to be aware about all the above general psychological concepts

1. Psychology and neuroscience in sports

A brief history of sport psychology

The first mentions related to sports psychology are found in one of the forerunners, namely Descartes with his "Treatise on Fencing", the true history of sport starting with Wundt (1879) and his research in psychophysiology.

Pierre de Coubertin, the initiator of the modern Olympic Games, was also the initiator of the Congress of Sport Psychology and Sport Physiology in Lousanne (Switzerland) in 1913.

The beginnings of sports psychology are characterized by the fact that the sports phenomenon has been studied in order to identify the mental factors involved in sports but also to highlight the influence that these factors have on performance.

The actual history of sports psychology begins after 1930 when the first institutes of physical education were established and when psychology became the object of systematic study. After the end of the Second World War, the sport developed a lot, the emphasis being more on the mental preparation for the competition than on the general and special mental training in the sports branch.

Definition and role of sport psychology

The psychology of sport can be defined in several meanings:

- ✓ The science that studies the psychological-behavioral phenomena (characteristics of athletes' personality) presented by people who participate in performance-type sports activities.
- ✓ The discipline that studies the effects of sport on human behavior.
- ✓ Branch of applied psychology in the field of sports, having as main object of study the adaptation of the athlete in terms of mental processes to the

exigencies of table sports, as well as physical exercises and performance sports.

The study of these phenomena has the following advantages:

- ✓ The belief is formed that the practice of bodily activities, competitive and non-competitive, improves the physical condition and implicitly the quality of life.
- ✓ Adequate knowledge of the mechanisms of triggering, manifestation and development of processes, phenomena and mental traits is achieved in those who participate in sports activity (athletes, coaches, referees, managers, etc.).
- ✓ The practitioner of sports activities acquires during the practice of a performance sport knowledge and skills useful for developing a positive self-image, which will later help the athlete in the sense that he can apply the mechanisms of self-regulation of psycho-behavioral states learned in life. day by day.
- ✓ Teachers / coaches / instructors develop their skills to achieve with students a good instructive-educational process, appropriate to the tasks, in the various activities that they design and lead.

The psychology of sport therefore deals with psychic phenomena and, equally, with the behavior of athletes oriented mainly towards performance, towards overcoming themselves, their opponent or nature.

The essence of sports psychology consists, therefore, in the study of the person who practices physical exercise at the limit of his physical and mental possibilities, for which he consciously and voluntarily submits to an intense training in order to achieve performance in competition.

Sports psychology is a situational psychology - although there are strict rules according to which both training and especially sports competitions take place, the unique personality, originality (own style) of each athlete makes none

of the sporting events look like another, the results obtained by an athlete ranging from one competition to another.

Research has shown that athletes appreciate the following qualities in a coach: athletes in the early stages of training appreciate the coach's ability to learn the technique of execution, while athletes in the skill stage appreciate the coach's ability to motivate them for competition.

The sides and content of the athlete's psychological training:

1) *Intellectual / cognitive training*

The education of the intellectual abilities of the athletes is done within the practical activities, through specific means of the sport.

Directions to follow in the intellectual training of the athlete are:

- educating the spirit of observation;
- educating specialized perceptions;
- attention education (stability, concentration, distributivity);
- educating the qualities of thinking (speed, independence, critical spirit);
- educating imagination and creativity.

2) *Affective training*

This type of training aims at the athlete's ability to self-regulate his negative emotions before the competitions, in order to achieve a higher emotional balance.

During competitions, the athlete must know how to control his emotions, negative thoughts, nervousness, anxiety, in order to save his mental energy and direct it to the ultimate goal - winning the competition.

Some extremely useful techniques in the ability to master / manage negative emotional states and self-regulation of emotion are presented in this manual (breathing techniques, relaxation techniques, etc.).

3) *Volitional training*

This training consists in educating the different qualities of the will, especially those required by the sport branch practiced.

In this sense, the capacity to make optimal and sustained efforts, initiative, perseverance, discipline must be educated.

Willpower is educated by modeling training.

The mental training determines the increase of the psychic capacity that allows the athlete to carry out efficient actions and, implicitly, to obtain superior results in competitions (performance in sports). All these approaches lead in the end to the formation of the athlete's personality, of his capacity for self-management and self-regulation. In conclusion, we can say that mental training is responsible for the formation and development of those mental qualities involved in sports performance.

Psychic structures

Psychic structures	Positive (balance)	Negative (imbalance)
Intellectual	Lucidity Tactical calculation Creativity Independence Attention Vigilance	Lack of vigilance Confusion Decisional oscillation Thinking template Stereotypes Automatism
Affective/ emotional	Enthusiasm Positive hypertension Trust	Anxiety Fear of success / failure Apathy
Volitional	Liability Combativeness Perseverance Courage	Hesitation Indecision Submissiveness Abandon
Motivational	Realistic, positive aspiration Optimal state of motivation	Overmotivation Submotivation Very high or very low expectation level

A first conclusion that emerges is that the human psychic system is permanently subject to regulation, it is led, influenced, enhanced by the

instructive-educational process. He is educated from a motor, volitional, affective point of view, intellectual format, motivational stimulus, etc.

Regarding the concept of "neuroscience", this is a term that appeared in the early 1970s. The concept defines the set of brain sciences, at the confluence of neurobiology, psychophysiology, psychobiology, neuropsychology, etc.). Neuroscience has traditionally been a branch of biology and deals with the structure, function, neuronal development, genetics, biochemistry, physiology and pathology of the nervous system.

The interdisciplinary approach to the field of neuroscience appeared with the interest shown by other disciplines, of which we mention cognitive psychology, computer science, statistics, physics and medicine.

Currently, neuroscience now includes any systematic, scientific, experimental, and theoretical investigation of the central and / or peripheral nervous system of any biological organism, going as far as graphical representations of the brain for various activities. However, even today science cannot explain how neural networks produce intellectual behavior, emotions, perception and more.

In essence, the goal of neuroscience is to explain human behavior in terms of brain activity. In other words, how does the brain organize its millions of neurons to generate certain behavior and how are these neurons influenced by the environment?

Other questions in this area are related to how neurons and connections are altered by experience, while at the system level the questions are related to how neural circuits are formed and used anatomically and physiologically to generate physiological functions such as sensations, coordination of motor activities, circadian rhythm, emotional reactions, memory and learning, etc.

At the cognitive level, neuroscience is trying to answer questions about how cognitive and physiological functions are produced by neural circuits. Neuroscience includes all areas of study of the nervous system. Psychology, as a

scientific study of mental processes, can be considered as a subfield of neuroscience. In Principles of Neural Science, Nobel laureate Eric Kandel considers cognitive psychology to be one of the basic disciplines for understanding the brain in neuroscience.

Recent studies have introduced the concept of "affective neuroscience" to suggest the idea that the study of emotions should be a subdomain of neuroscience, different from cognitive or behavioral neuroscience. Modern research conducted at the emotional level has introduced the concept of "social affective neuroscience".

On the other hand, psychology, elementary speaking, indicates an input and an output. The connection between input and output, which happens in the brain to turn input into output, is hidden. Metaphorically, we can say that the brain is like a black box. Brain imaging took the lid off the box and revealed things of astonishing complexity. It is a known fact that each of us is unique but at the same time similar to the others. The same is true when it comes to the brain. Basically, the brain has a certain "design" but, from the moment of conception, our brain begins to have its own "oddities". Maintaining the health of the brain is vital because it is a governing organ and, if not healthy, causes movement problems, perceptual, sleep, digestive, memory loss, confusion, mood swings.

As for the amount of information that the brain can store, this is still unknown. One theory suggests that this knowledge could be stored in various forms, similar to storing information in a cached computer or on a hard disk. Training your brain to ignore irrelevant things or things that stand in the way of clear, clear thoughts means learning to take into account only relevant information.

In this sense, one of the most effective training methods is *neurofeedback*. This is a form of therapy that involves the idea of a person focusing on a film, for example, the person being monitored at the same time with the help of electrical sensors (EEG - electroencephalogram) related to the video source. The essence

of the process is that if the sensors indicate a loss of concentration, the video stops. In this way, the person is alerted and directed to turn their attention to that video again. The sensors respond by accelerating or clarifying the image. After a while, that person automatically learns to focus.

The best studied field of neuroscience at the moment is the visual system, due to the lightness with which laboratory experiments can be performed. Higher "functions" such as judgment, morality, memory, creativity, etc. they are more difficult to map because they involve very dynamic and extremely extensive processes.

On the other hand, there are a number of myths about the brain, of which perhaps the best known is that people use only 10% of the brain. In reality, man uses 100% of the brain, but not at the same time. Research has shown that the only time the human brain is 100% activated is during grand mal seizures (severe epilepsy).

As for the myth that the left hemisphere gives rise to logic and the right to creativity, the reality is that both hemispheres can do the same thing and usually work together. There are differences between them in terms of logic and creativity, but they are far from as significant as the myths say.

Regarding another universal myth - that of the differences between the brain of a man and that of a woman, there are differences but science has so far failed to specify exactly how much is due to biology and culture in which we were formed.

Mental practice - "magical thinking" and the formation of neural networks

Mental practice in this approach involves the use of the frontal lobe and its use to benefit from relevant changes in thinking. Through practice, our intention

is focused, channeled on a precise goal. We no longer perform a simple exercise routine but we perform as if we were doing them effectively, concretely.

Mental practice involves, for a start, knowing what result you want to achieve and then practicing mentally, cognitively, the steps you have to go to achieve that result. The physical body is not involved at all in this exercise. Everything happens in our minds. In the conditions of such an exercise, insofar as we remain focused, the brain does not differentiate between concrete action and its evocation in the mind. It is very important to have a clear picture, in detail, of what we want to achieve. In the case of performance sports, it is important to have a detailed and very clear picture of how to perform the movements that need to be perfected. When attention is focused to the maximum, substantial changes occur in our brain activity and in our perception. The frontal lobe is the seat of our imagination and our ability to create, with every thought, a new reality.

What we achieve is, in essence, to combine what we know, what we know, with the experiences that are already present in our neural circuits, to bring them together in a new combination and thus create new possibilities. With the help of the frontal lobe we compose new mental scenarios, thus elaborating a new portrait of our new self - an improved variant, according to current needs. When we combine new neural networks that are activated in different sequences, combinations and patterns, we create a new level of consciousness.

Subsequently, through repeated activation and the creation of new neural circuits, we make stronger connections that are activated at will and that will create a new mind, a new brain. The new mind creates a new brain.

As our brain architecture transforms into perfected, evolved nerve circuits, and old patterns are easily removed, we transmit new signals to the cells in the body. As all our cells are in direct contact with nerve tissue, as we form new circuits and break down old patterns of thought and action, old synaptic connections to the anterior self, the body changes and becomes different at the cellular level.

Neural plasticity

Since the second half of the twentieth century, with the expansion of molecular biology, electrophysiology and computational neuroscience, the area of knowledge of the nervous system has increased significantly.

"The task of neuroscience is to explain behavior in terms of brain activity. How can the brain organize its millions of neurons to produce behavior and how are these cells influenced by the environment ...? ”

Cognitive processes involved in sports performance

It is well known that adaptation is part of life. Living organisms react to the environment through a process of balancing and rebalancing between it and their own being. The personality and behavior of the athlete will develop, will adapt in a process of regulation and self-regulation to the demands of the activity carried out in sports and to their own goals and aspirations. Ultimately, sports performance is the result of factors that largely depend on the cognitive processes that make up, define, influence and change the athlete's behavior.

The athlete operates in an environment where information is essential for his performance. He is constantly surrounded by a variety of stimuli. It is very important that he distinguishes between stimuli to which the response must be controlled and almost instantaneously, and others that must be ignored because they are not relevant to his development process. The athlete sees, hears, feels and then translates all these things subjectively, in order to later integrate them into his behavior. For this, he needs a series of tools to enable him to act in accordance with existing information. Some of these tools are the very psychic mechanisms of information processing - sensations, perceptions, representations, thinking, memory and imagination.

Sensation is a psychic mechanism for capturing, recording and processing information early. The first form in which it reacts is simple irritability, the

general biological property that allows living things to receive external influences and respond selectively to them through an internal change.

Perception is the most important cognitive process in the category of primary information processes without which thinking, memory and imagination would be quite difficult to conceive. The specialized literature has outlined three meanings of this concept, perception as activity, perception as deformation of the object and that of personality expression, each of them highlighting important aspects of perception both in their nature and in the role they play in formation and development. human behavior.

The psychic processes of primary information processing, processes briefly presented to outline a clearer picture of their importance in performance sports, thinking, memory and imagination have a major contribution in training and improving the athlete.

Mirror neural system

Various studies have shown the existence of "motion acceptors" as P.K. Annohin called them in 1949 in his book "Key Problems in the Study of Nervous System Activity", and later the notion of "mirror neurons", both terms having the same functions. The existence of mirror neurons was initially discovered between 1980-1990, through various studies performed on monkeys.

In humans, research has shown that when a person performs an action, and also when the person sees another individual performing an action, the lower frontal cortex and upper parietal lobe are active. This led to the observation that these regions of the brain contain mirror neurons.

It was also observed that the activation area of mirror neurons begins to increase when imitating a movement performed by another person.

Mirror neurons are essential brain cells for social interactions. We use our body to convey intentions and feelings through gestures, facial expressions, body

posture. All these are ways of communicating with other people. Mirror neurons are just brain cells that specialize in encoding our actions and the actions of others.

The notion of "behavior" in performance sports

Man does not live only in the world of physical objects, he reacts not only to natural stimuli, but also to social stimuli, to other people, to group behavioral norms, to socio-cultural values. Man is par excellence a social, rational being that is why living and interacting with other people he has the opportunity to evolve, to develop his feeling, thinking, will and behavior, depending on the situational context and environment in which he lives.

The behavior of the performance athlete also varies depending on the way he receives information, the way he receives and then uses it, but largely the personality of the coach and the goals he sets in his training plan.

Stimuli also play a very important role in behavioral-sporting manifestation. Whether they act on the visual, auditory or proprioceptive sensation or on the cognitive processes of secondary information processing, all these significantly influence the athlete's behavior.

Technique and tactics, especially in team sports, are elements that ultimately define not only the individual behavior of the athlete but can characterize the entire team. The way in which they create a game strategy and at the same time manage to impose it on the field can give valuable indications about the functionality of the team.

At the opposite pole, however, are the unsportsmanlike behaviors, the deviant ones, which, although we do not want or admit that we have them and which we do not assume, also contribute to the behavior of the performance athlete.

The sport is imprinted both on the character of the athlete and on his behavior. It is a well-known fact that athletes who have practiced a team sport integrate more easily into the social environment, are more flexible and open to collaboration and manage to work very well in a wider group of people. You have certainly noticed that there are people who have a harder, firmer behavior, in which we notice an attitude rigor that may be excessive compared to the rest of the people around us who have not practiced performance sports. We assume that this type of behavior was influenced by the rules and character of the individual sport, especially by those sports in which there is direct contact with the opponent.

Neuron and neural networks

The nervous system is characterized by a vast complexity of the processes it can perform. Every minute he receives an amount of information through the sensory nerves and sense organs, information that he integrates to determine the proper response of the body.

The central nervous system contains over 100 billion neurons in the cranial box. The synapses are located both in the neuronal dendrites and in the cell body, and through them the signals enter the neuron. Depending on the type of neuron, the number of synapses it forms with the related nerve fibers can range from only a few hundred to 200,000 instead, the efferent impulse is transmitted through the single neuronal axon.

Neurogenesis

Until recently, it was believed that neurons, once born, no longer have the ability to regenerate and that no new ones can be born.

Neurogenesis refers to the production of new nerve cells. Scientists were very skeptical that the human brain is capable of producing new cells in a lifetime.

The researchers argued that in adults, the nerve pathways are unchanged, inflexible, that everything can die and that nothing is ruled out. This became the main idea of neurology, but the view began to change in the 1980s, when Fernando Nottebohm of Rockefeller University showed that changes occur in an adult's brain.

Thousands of studies in this direction have since been published, showing that the brain continues to produce new neurons.

Theoretical aspects of neuroplasticity

Until recently, it was believed that the structure of the brain could not change, that it was formed until the period when the growth process was over, and both functions and structure were clearly established. Each particle in the brain was responsible for a clearly established thing, with clearly specified functions. Recently, researchers have found that this is not true. The brain can and even changes throughout an individual's life. It is adaptable, can be remodeled continuously.

Researchers in the field of neurology have called this process neuroplasticity.

But how does neuroplasticity work? If we think of the brain as a network of electrical circuits, we can easily see that there are a multitude of paths, roads that are activated when a stimulus occurs both outside us and inside, that is, every time we feel , we think, various things or simply when we take action. Some of these paths are well beaten, these are our habits, our usual methods, our own and at the same time repetitive way of doing different things, of approaching different situations, of making certain decisions. Every time we think in a certain way, or do a certain action or feel an emotion specific to each of us, we strengthen these paths. It becomes easier for the brain to go through them. It's like creating high-

speed highways on which we can then drive very lightly because we know the "route" very well.

When we think of something different, when we do another action or when we choose to experience another emotion then we start on a new path. If we continue to walk on it, our brain begins to use other ways, making new connections, and this way of thinking, feeling or doing various things becomes a new approach. In this way we manage to identify a new style, and on the old road we will go less and less.

This process of forming new connections and using them together is called ***neuroplasticity***.

All people have the ability to learn and change things by forming new connections. If we ever want to change a bad habit through a different approach to the problem we will create a new path, new connections at the brain level. With special attention to how to approach both new and old situations, we can change the way the brain works, so we can change our attitude, behavior, we can change the result as long as we are attentive and aware of ourselves and our actions. .

The concept of neuroplasticity was first used by the American William James, about 120 years ago, in his book The Principle of Psychology. Although he was the first person to claim that the brain can reorganize, the one who officially used the term neuroplasticity was the Polish researcher Jerzy Konorsky in 1948. He suggested that, over time, the neurons that are connected to each other and it works together with the neuron it generates to produce both functional and structural changes.

The role of plasticity in human performance

The fact that, in recent years, the field of knowledge of neuroscience has expanded considerably, has also left its mark on the medical field, especially in the area of human recovery.

The effect of the knowledge gained in this direction can increase both the quality of life and its duration.

It is a certainty that when we manage to identify new solutions to solve problems, our performance increases regardless of its area of applicability.

For example, a mathematician can find the answer to a problem that has been bothering him for years, if he is able to give up going in the same direction of approaching the problem and look for another path, another path not approached before.

In performance sports, the search for new solutions to problems, giving up trying to learn technical-tactical procedures by the same method every time leads to increasing performance potential.

Neuroplasticity is involved in all these situations, whether or not we are aware of its effect.

Cognitive modifiability/ changing - conceptual definition

Starting from the premise that the result of athletes' actions is actually the effect of psycho-neuro-motor processes, the researchers sought answers to questions about both the implications of neural plasticity and cognitive modifiability in learning and behavioral correction in performance athletes.

The term "modifiable" is based on the adjective "modifiable", which means "transformable". This means that any behavior, any pattern, no matter how old and deeply rooted, can be changed.

The effects of cognitive modifiability on human behavior

One of the effects of cognitive modifiability is already certified through the prism of the theory of mediated learning which claims that anyone, regardless of the health problems they face, can improve their ability to learn. This theory is

one of the few theories that has stood the test of time. Studies in the field of performance sport psychology show that, due to cognitive modifiability, essential transformations of the learning potential have been achieved that have led to a total change in behavior.

The development of language and communication, personal autonomy, the ability to adapt and relate to people with disabilities on some of the structural levels of the human being are some of the effects of cognitive modifiability that changes human behavior.

The role of cognitive modifiability in sports performance

The effects that cognitive modifiability produces on the level of behavior are probably reflected on the behavior of the athlete's performance. But the performance athlete is guided by other laws, works according to other principles, performance rules are different and require different behaviors depending on the requirements of the industry.

Overcoming physical and mental limits in the competitive context without sacrificing career performance is the first important role of cognitive modifiability. The major change in the athlete's behavior can occur by providing a real opportunity to continue his career in the event of a serious injury. For example, training the non-dominant party in a situation where he is not physically fit to support sports training and learning to transfer information in the injured area without leaving the competition is the major gain in the career of a performance athlete.

The most important role of cognitive modifiability is to change the athlete's behavior enough to make him able to evolve to an increasingly higher level, in a fairly short time, assuming minimal risks in terms of bio-psycho-neuro-motor integrity throughout the sports career .

However, when we talk about performance sports, the demonstration of its functionality through research in the field is quite vague. There are not enough studies in which neuronal plasticity and cognitive modifiability are studied in performance sports.

This is an area where it is desirable to develop the area of knowledge in the area of sports performance by researching how it can contribute, develop or influence the sports career.

Perhaps the main benefit of studies in the field of neuroscience is the transfer of information from the area of human physiology to the area of high performance sports. If in the initial studies we started from the idea of researching the human body in order to detect and treat certain diseases to improve the quality and increase life expectancy, now the area of interest has begun to expand and we began to think not only to ensure the needs primary but also to increase human performance. All these aspects open new opportunities to streamline sports training.

Information, research and diagnostic methods in the field of physiology are now beginning to find a counterpart in the area of sports research by adapting and developing medical equipment to the needs and requirements of performance sports. If initially equipment was built to investigate brain activity in order to detect and diagnose certain neurological diseases, in order to increase health, now the area of interest has increased, and today there is the possibility to transfer these principles to sports performance and to be able to objectively measure brain activity during motor actions to discover how the athlete works, learns and adapts both to the needs and requirements of the sport and to the competitive situation.

Patterns can be highlighted or a dynamic of brain activity can be established, useful information for the coach in the process of growth and development of the athlete. Due to the fact that now the equipment is mobile and can be integrated directly into the training of athletes, the opportunities for research and development of performance sports have increased considerably

precisely because at present it can be measured directly, during the specific action of the sport, without the subject to be restricted by the laboratory conditions in which the simulation of the natural environment was attempted.

Depending on the sport practiced, measurements can be made during the performance of the technique or procedures, accurate measurements to help the athlete in his process of adaptation, learning and improvement by reducing study time, clarity, accuracy, awareness and integration of information in the training process.

2. The psychology of motivation. The role of beliefs in sport

It is difficult to imagine anything being more important to success in sport than motivation. In psychology, motivation refers to the initiation, direction, intensity, and persistence of behavior. Motivation is the foundation for all athletic effort and accomplishment. Without your desire and determination to improve your sports performances, all of the other mental factors, confidence, intensity, focus, and emotions, are meaningless. To become the best athlete you must be motivated to do what it takes to maximize your ability and achieve your goals.

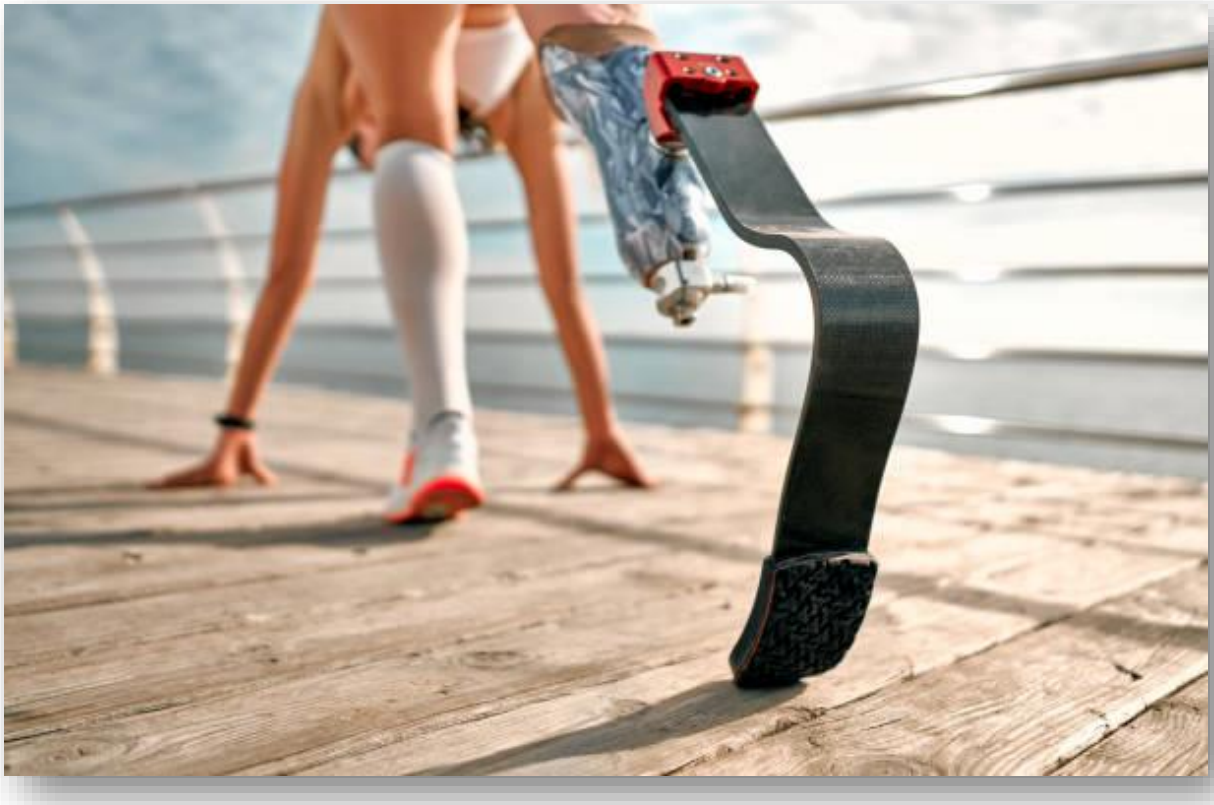
Motivation, simply defined, is the ability to initiate and persist at a task. To perform your best, you must want to begin the process of developing as an athlete and you must be willing to maintain your efforts until you have achieved your goals. Motivation in sports is so important because you must be willing to work hard in the face of fatigue, boredom, pain, and the desire to do other things. Motivation will impact everything that influences your sports performance: physical conditioning, technical and tactical training, mental preparation, and general lifestyle including sleep, diet, school or work, and relationships.

There are two primary types of motivation... Intrinsic and Extrinsic Motivation.

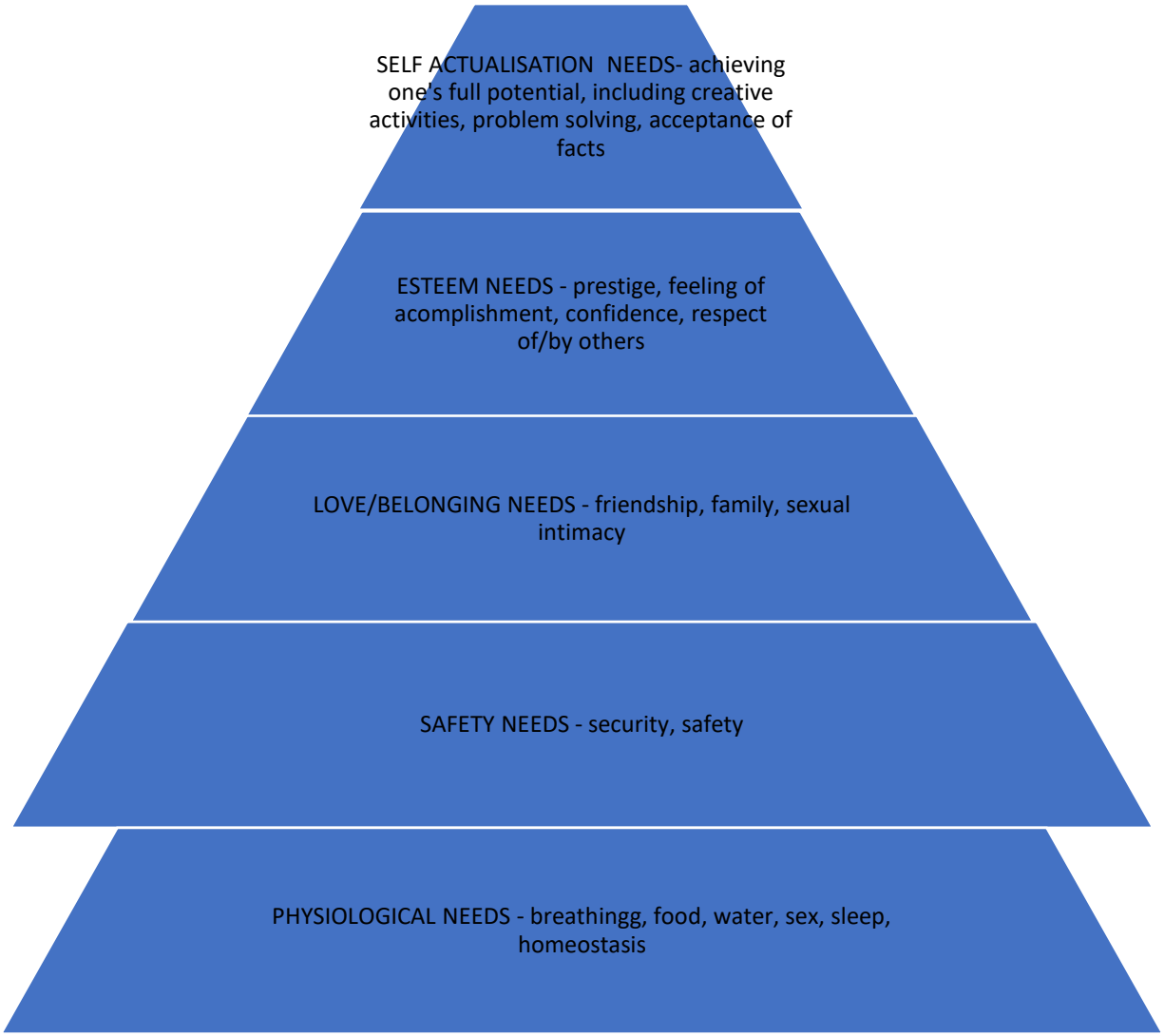
Extrinsic Motivation is geared toward external rewards and reinforces. Extrinsic motivation may come from social sources, such as not wanting to disappoint a parent, or material rewards, such as trophies and college scholarships. Extrinsically motivated athletes tend to focus on the competitive or performance outcome. An over-emphasis on extrinsic motivation may lead athletes to feel like their behavior is controlled by the extrinsic rewards. On the other hand, athletes may continue to feel like they control their own behavior even with the presence of extrinsic rewards.

Intrinsic Motivation is geared toward internal rewards and reinforces. Intrinsically motivated athletes participate in sport for internal reasons, particularly pure enjoyment and satisfaction, and intrinsically motivated athletes typically concentrate on skill improvement and growth.

One of the most important motivation theories is *needs theory*. Maslow's describe this section in his *hierarchical pyramid of needs*. The lowest levels of the pyramid are made up of the most basic needs, while the more complex needs are located at the top of the pyramid. As people progress up the pyramid, needs become increasingly psychological and social. Maslow emphasized the importance of self-actualization, which is a process of growing and developing as a person to achieve individual potential.



Maslow's Hierarchical pyramid of needs



Basic needs – physiological needs + safety needs

Psychological needs – love/ belonging needs + esteem needs

Self fulfillment needs – self fulfillment needs

We can conclude that motivation is a force, a drive which prompts, compels, and energizes and individual to act or behave in a particular manner, at a particular time, for attaining the specific goal or purpose.

Motivation is basic to overcome the hurdles which otherwise could have influenced the performance negatively. Without proper attention, setting of right

attitude, and the resulting optimum level of motivation, many top class athletes have failed to accomplish their task. It is thus necessary to find out ways and means of motivation athletes for better physical performance.

In psychology, the concept of "*motivational persistence*" is circulated in connection with motivation. It refers to the notions of perseverance and constancy in adopting a behavior or in solving a task. It is not enough for a person to choose a certain direction of his motivational involvement and to initiate behaviors consistent with the achievement of those objectives. The sine qua non condition in this case is the ability to resist in the long run in that motivational choice, ignoring routine, fatigue, disappointments or obstacles along the way.

Motivational persistence requires not only behavioral perseverance in achieving predetermined goals, but especially the ability to remain involved in long-term motivation, to find interest or satisfaction even when the task does not bring the same satisfaction as at the beginning. A brief definition of motivational persistence classifies it as "the ability to resist the temptation to give up when sustained effort is required."

It can also be defined as an observable behavior that causes the individual to either give up easily or make a long effort when tasks become difficult.

In conclusion, motivational persistence refers to the ability of a person to persevere behaviorally and motivatively in the effort to achieve ambitious goals, the tendency to persist in actions aimed at achieving the proposed goals, to invest time, effort, energy to achieve the goal, not to give up.

Specialized studies show that motivational persistence forms the "hard core" of individual motivation, which ensures its stability and consistency, while motivational involvement refers to the qualitative component of motivation, which ensures adaptation and modeling according to the particularities of the context. and personal needs.

And in sports, as in any other activity, what differentiates "success" from "failure" is neither motivational involvement nor dominant motivational orientation (intrinsic or extrinsic), but individual motivational persistence.

From another perspective, that of defining the forces underlying motivation, most analysts agree that motivation refers to a set of forces that provoke or mobilize the individual to engage in a given behavior, internal forces (personality or intrinsic) or external (environmental or extrinsic). There are many theories of motivation, which converge to those described above and to the analysis of motivational involvement or what is called motivational orientation or direction of motivational engagement.

By contrast, there are few motivation analysts who propose theoretical models and psychological assessment tests capable of capturing the other two essential components of motivation: effort - the component that represents the force or energy provided by an individual in pursuing his goals and persistence - component that makes refers to the notion of perseverance and constancy in adopting a behavior or motivational act.

Motivational involvement

Motivational involvement is what motivational analysts call motivational "activation," "targeting," or "orientation." Motivational involvement is the person's willingness to be attracted, to intend, to accept or to strive to achieve certain goals. The definition is in reference to the qualitative aspect, to the intrinsic and extrinsic forces that mobilize the individual, that initiate the behaviors, determine their form and direction. Intrinsic motivation makes people get involved in certain activities that they find interesting, and satisfaction comes from the nature of the activity they carry out, from the pleasure of the work itself or the novelty, challenge or interest aroused by each stage of the task. realizes. In opposition to intrinsic motivation, extrinsic motivation determines the individual

to make an effort and get involved as a result of an external conditioning, the satisfaction coming from the external gratifications obtained after performing the activity (recognition, reward, avoidance of punishment or an unpleasant consequence).

Motivation and performance. Optimum motivational

Motivation should not be considered and interpreted only as an end in itself, but put in the service of obtaining high performances. Performance is a higher level of goal fulfillment.

From the perspective of different forms of human activities (play, learning, work, creation), what is interesting is the value of motivation and its propulsive efficiency.

In this context, the problem of the relationship between motivation and performance has not only a theoretical importance, but also a practical one.

The relationship between the intensity of motivation and the level of performance depends on the complexity of the task that the subject has to perform (which can be a task of learning, work or creation).

Psychological research has shown that in simple tasks (repetitive, routine, with automated components and few alternatives for solving) the level of performance increases as the intensity of motivation increases. In complex tasks, however, increasing the intensity of motivation is associated with increasing performance to a point, after which the latter decreases.

This happens because in the case of simple tasks there is one, maximum two correct answers and their differentiation is easily done, not being negatively influenced by the increase of the motivational impulse.

In the case of complex tasks, the presence of several action alternatives hinders the action of the motivational impulse; its increase in intensity is unfavorable to discernment and critical evaluations.

At the same time, the efficiency of the activities also depends on the relationship between the intensity of the motivation and the degree of difficulty of the task that the individual is facing.

The greater the correspondence between the size of the intensity of the motivation and the degree of difficulty of the task, the better the efficiency of the activity will be ensured.

In this context, the idea of the optimal motivational appeared in psychology and the need to establish an optimal intensity of motivation that would allow obtaining high performances, as close as possible to those expected. This is expressed by the Yerkes-Dodson Act established in the early 20th century.

In obtaining the motivational optimum, two situations can be encountered:

a) when the difficulty of the task is perceived (appreciated) correctly by the subject

If the difficulty of the task is great, it means that a great intensity of motivation is needed for its fulfillment; if the size of the task is average, a motivation of medium intensity is sufficient for solving it, etc.

b) when the difficulty of the task is perceived (appreciated) incorrectly by the subject

In this case, we face two typical situations: either with the underestimation of the meaning or difficulty of the task, or with its overestimation.

In none of the situations will the subject be able to mobilize the energies and efforts corresponding to the fulfillment of the task.

In the first case he will be submotivated and will act in conditions of energy deficit, which will eventually lead to failure to perform the task. In the second case, he will be overmotivated and will act in the conditions of a surplus of energy, which could disorganize him, stress him, or could expend his energy even before facing the task.

The motivational optimum can be obtained by acting on the two variables that are related: accustoming individuals to appreciate the difficulty of the task as

correctly as possible (by drawing attention to its importance, by emphasizing its more difficult moments, etc.), or by manipulating the intensity of motivation. the meaning of its increase or decrease.

This involves a slight rebalancing between the intensity of motivation and the difficulty of the task.

For example, if the difficulty is medium, but is appreciated (incorrectly) as high, then an average intensity of motivation is sufficient to achieve it (hence a slight submotivation). If the difficulty of the task is medium, but it is considered (still incorrect) as low, an average intensity of motivation is obtained by a slight overmotivation.

An important coefficient in obtaining performance is the *expectance level*.

The level of aspiration is the motivational stimulus that leads to the achievement of obvious progress and self-overcoming. He is the one who measures the desire to achieve not any performance in a given activity, but performances as high as possible, which means not only a simple achievement of personality, but also a self-transcendence of its possibilities.

The choice of the aspiration level must be made in relation to the possibilities and aptitudes of the subject; too much discrepancy between abilities and aspirations can be dangerous for performance (it can cause demotivation, disappointment, regression, etc.).

Therefore, in order for the aspiration level to have a positive effect for obtaining performance, it is good that it is chosen a little above the person's current possibilities.

Beliefs are complex motivational structures that harmoniously combine cognitive information with deep interests, aspirations and feelings about certain facts, events, etc. As an expression of cumulation (between the mentioned aspects), the person in question feels strongly committed to promoting his ideas. Beliefs come into play in situations of conflict - value, respectively in situations

that require the choice between good / bad, ugly / beautiful, ie between different authentic values. Authentic beliefs are imposed in behavior, motivating the individual permanently, sometimes making him support his point of view even against his own instinct for conservation. However, beliefs do not always have a beneficial influence on the person or on humanity.

There are *two types of beliefs*:

- *Stimulating beliefs*, which have the role of helping us, of motivating us in what we undertake.
- *Limiting beliefs*, which block us, limit us to our true potential and do not allow us to express ourselves fully (I am not good at anything, I will never succeed, I am a failure etc.).

The moment we think this, we transmit to the brain this thought that we consider a truth. The brain takes it as such and then it will create situations in which it will prove to us that we are not good at anything and we tend to make mistakes much easier if we think like that.

Each of us has limiting beliefs that are based on dysfunctional beliefs formed over time and settled in the form of beliefs. These are negative patterns of thinking that, repeated over a sufficiently long period of time, come to determine the way we see the world and life and limit us in our choices. It is very important that we are aware and identify what limiting beliefs we have and turn them into stimulating (positive) beliefs.

From the point of view of neuroscience, these limiting beliefs were formed by repeating dysfunctional thoughts over a long period of time. These have led to the formation of neural circuits, paths that over time have become part of our way of seeing things, defining us as a personality, as a way of being, seeing life and functioning.

It is a known fact that each individual "runs" in the mind about 70,000 thoughts, most of them repetitive. Obviously we are not aware of the vast majority of them, but they are those "glasses" through which we have become accustomed to seeing and interpreting reality.

Neuropsychology states that this process of belief formation is not irreversible and that beliefs can be changed by working at their root - thoughts. By changing our thoughts, we change our reality in this way, creating a new one. It is true that the process is not an easy one, but rather a long one.

The first thing we have to do when we decide to change a limiting belief is to become aware of it, of the thoughts that led to its formation. For this, most of the time, a simple introspection is not enough, it is advisable to call on specialized help. Personal development courses / books are a good start in this regard.

Following their awareness, we can use a series of cognitive restructuring techniques, some of which are also mentioned in this manual. By way of example only, without detailing, we specify that among the most effective techniques are meditation, along with visualization techniques or positive affirmations. These have the role of helping us to project a new reality. The principle on which this model is based starts from the idea that, as I mentioned before, the brain does not differentiate between what is real and what is imagined. He perceives and takes every thought to be true. In this context, the secret to changing dysfunctional thoughts and limiting beliefs is to exchange these thoughts with positive ones that we can repeat for a long enough time to become our new beliefs.

Regarding the way of changing the dysfunctional thoughts and the time interval necessary to achieve this goal, at the beginning of neuropsychology, a time interval of 21 days had been advanced as optimal for this change. This meant that by repeating the new thoughts several times a day, the 21-day interval would have been enough to change the old neural pathways and create new ones.

Subsequent studies have shown that the 21-day interval is insufficient to truly modify neural circuits formed over the years, and practices for this purpose

have led to the conclusion that a minimum interval of six months is required to speak of a real change.

Even when we manage to change these beliefs through daily practice, it is important to be aware that old habits can always return in the form of sabotaging thoughts, so it is important to pay constant attention to our thoughts. Otherwise, we end up living our lives "on autopilot" and being guided by our thoughts, which, as I mentioned, turn into our beliefs, which will lead our lives and which we will call destiny.

It is important for each of us to be aware that, every second, with every thought we have, we create our own reality, our own destiny. As creators of our lives, we have a moral duty to ourselves to live consciously, to correct those deficiencies that do not help us in the manifestation of the highest scenario of life.

All these aspects previously discussed obviously have applicability in the field of performance sports. The principle of operation and the necessary steps to be taken in order to change the limiting beliefs are the same, and one of the most effective ways that can be practiced anywhere and anytime are positive statements. Without detailing how they can change our reality, we point out that, along with other techniques, positive statements have proven useful in changing limiting beliefs and, implicitly, in increasing sports performance.

We mention, without detailing, *the main steps that need to be taken in order to change these limiting beliefs*:

1. Awareness of the existence of limiting beliefs, dysfunctional thoughts that led to their emergence and creation.

2. It is important that once these thoughts have been identified, we lay them down on paper so that we can bring as many of them into the conscious mind. Once we are aware, negative thoughts no longer have the same power and the same destructive influence on us.

3. For those who want to remove the deepest causes of these beliefs, we recommend participating in a therapeutic program (personal development,

counseling, psychotherapy, etc.). This is a complex approach but one that probes the depths of our being, of the subconscious mind, bringing to the surface all those reasons that led to the creation of dysfunctional beliefs.

4. For each dysfunctional thought identified, we will formulate a counter-statement, very specific, which we will repeat daily, several times a day, as long as possible, until it manifests itself in our lives in the form of a new realities.

What I wanted to suggest through these ideas is that everyone's results, implicitly those of athletes, are closely linked to the beliefs we have. If we have positive beliefs (I am able to do this, I am good at it, I can succeed), our actions will be energetic and determined, this will lead to a good result, which result will strengthen our belief that we are good and we can succeed.

The same is true in the opposite direction. If we have negative beliefs (I'm not good, it's hard, I can't succeed) then our actions will be hesitant, which will lead to poor results, and again our belief that we are weak and unable to succeed is strengthened. So if we want to change the results we get, we need to change our beliefs.

3. Techniques of mental training

Mental training is a component part of the general training of the athlete, perhaps the main person responsible for their success or failure in a sports competition. Much of our sporting success depends on how we prepare mentally.

The arguments in favor of mental training were carried out by both researchers in the field and by athletes who practiced it successfully. Longitudinal studies were conducted in which a group of athletes performed only physical training while a second group performed both physical and mental training. At the end of the study there was a significant increase in the performance of the group that performed both types of training - for 90 minutes of mental training, the time to cover the distance on 110 meters fences was shortened by 0.33 seconds (Bodo Schmidt and Jessen) .

As for athletes, there are many who, after training hours, turned their attention to their own kinesthetic perceptions that they analyzed and updated after training, or to understand why they do not he managed a move, either to retain and imprint in his mind better those who succeeded, to increase sports performance.

Regarding the mechanisms of mental training, it was observed that, as a result of imagining a movement, changes in retinogram or electroencephalogram could be observed, which demonstrated the positive effects of mental training on performance.

In other words, our brain has the ability to update with words the perceptual-motor experience gained through practice.

Athletes must have clear representations of the movements they must perform and, moreover, have the ability to represent themselves in motion. The "working" movements of athletes are multisensory, they include visual sensations, kinesthetic, spatio-temporal orientation, skin, etc.

Mental training is, therefore, a form of "*repetition in representation*", not concrete, physical, but mental, of the movements necessary to achieve the expected performance. It refers to the awareness of one's actions, updating them only by thinking about them, repeating them in the mind, possibly expressing them verbally to give them more weight. It has been found over time that the imagined act produces changes in the neuromuscular system which, in the long run, leads to improvements in psychomotor functional indices.

Obviously, mental training must be doubled by physical training, as the former comes in support of the latter, in order to improve sports performance. This type of training is performed to consolidate and improve the skills already formed by athletes who have previously mastered the basic techniques. It follows from this, therefore, that the first requirement in mental training is that the athlete have a satisfactory level of movements and actions necessary in the sport practiced.

There are, in addition to this basic condition, a number of other requirements that we present below:

- Acquiring and developing the ability to execute movements, simultaneously with their mental representation;
- Performing a daily session of at least 10 minutes of mental imaging, after physical training;
- To consciously practice each mental imagery exercise, visualizing both the development of the movements and the finality (the success of his approach);
- To apply in practical training those practiced in the imagination.

The ability to concentrate is progressively educated - it starts with carefully observing how other athletes perform the movements, then observing their own movements. Later, in another stage, the athlete is asked to report on the spatial characteristics, speed, strength, coordination, etc. After that, a third step is to imagine how another athlete performs all the movements involved in the sport, so that in the end the athlete can imagine how to perform their own movements.

Depending on the ability to keep the proposed ideomotor image in the field of attention, training can take between 10 and 20 minutes. It has been found in practice that, in athletes who have a good ability to concentrate, the optimal interval is 10 minutes.

An extremely useful exercise is the following: in a competitive situation, it is advisable for the athlete to reserve an interval of 10-15 minutes in which to imagine in detail every detail regarding the way in which the competition will take place - the way in which he will act in the field, probable situations, the final result.

Mental training is extremely useful, at the same time, in situations where physical training is not possible, in these situations being a good replacement for real training, regardless of the reason why the athlete could not perform the training (poor medical condition, long trips etc.).

What emerges as a conclusion is that a consistent practice of mental training has educational values on the athlete, by inducing an increase in awareness of the activity, disciplines thinking, increases the ability to concentrate, all leading to better awareness of the activities carried out by the athlete in training or sports competitions.

Mental training model

(Epuran & Holdevici)

Stage I - Formation of representations of movements

Coach	✓ Demonstrates / explains movements (motor gesture technique) ✓ Explains the spatial, temporal, energetic characteristics of movements ✓ It uses, in support of its demonstrations, other means to clarify the representations of movements: photos, videos, etc. ✓ Effectively leads the concrete activity of the athlete ✓ Guides the mental activity of the athlete in all stages of training
Athlete	➢ Follow closely the coach's presentation / demonstrations ➢ Ask for additional explanations where he does not understand ➢ Reproduces verbally the execution instructions ➢ Try to execute the movements according to the instructions given by the coach ➢ Explain, verbally, what he wanted to achieve and what he actually managed to put into practice ➢ Performs repetitive movements that lead, through repetition, to learning the proposed motor gestures and forming the necessary skills ➢ Practically practices motor gestures ➢ Observe the performances of other sports colleagues, more advanced or more efficient, remembering for themselves what is useful for their own activities

Stage II - Educating the ability to focus on one's own representations

The athlete learns to study carefully photographs and dog charts of how motor movements are performed, both his own and those of others. Carefully observe different moments of the motor act, the phases of the movement or the segments of the moving body. It is very important that this observation process is repeated daily, for 5-10 minutes each time, in order to get acquainted and know every detail of the execution and, finally, to be able to accurately imagine the whole milcare and its particularities of execution.

The athlete is taught by the coach to represent exactly the executions he will perform in training. For that, before each training he will be given 10-20 seconds to focus on the image of the movement proposed for execution. After performing the movement, the athlete will be given another 10-20 seconds to mentally review the executed movement, then report what and how he did and receive feedback from the coach on the quality of the execution.

Arriving home, the athlete represents 3-5 times in his mind the execution considered to be the best in the training of that day, trying to repeat the same movements in the next training.

If the athlete has difficulty concentrating, this whole process of mental imaging will be fragmented, at moments of execution, slightly increasing the number of imagined elements until you reach the ability to fully observe the movements.

Stage III – The mental training

This stage is "reserved" for athletes who have reached a high level of performance. This type of training is performed when the athlete is calm and relaxed, starts with about 5 minutes and increases the duration to 10-12 minutes. The athlete represents his personal execution in the ideal way of execution, maintaining at the conscious level the "working" image. If fatigue, agitation or other disturbances occur, it is recommended to take a short break, after which the

cycle is resumed. It is also recommended that the room in which it will take place be ventilated before the start of the training and that any disturbing factors be removed.

It is also recommended that the athlete keep a journal of their training, in which to write down his observations on the subjective states that appeared during the training, and then discuss all this with the coach, to find together the optimal beneficial solutions.

❖ **Suggestion and self-suggestion**

The phenomenon of suggestion has been used since ancient times, being used when we want to influence the interlocutor in the direction we want, to change an attitude, a behavior, etc.

From a scientific point of view, the suggestion involves influencing a person or a group in order to obtain certain expected results, without this person / group realizing it. Suggestion can influence all psychic processes, from sensations, perceptions, to reasoning, attitude, decision. In this approach, the degree of suggestibility of the person must be taken into account, but also his reactions in the given conditions.

Regarding the use of the suggestion in relation to athletes, they can be general ("today I feel good, I feel very good", "I have a very good day, I get maximum results") or customized to the specifics of the sport that the individual practice it.

The specialized literature presents a series of self-suggestive formulas extremely useful in the case of injured athletes:

- "ice drives away pain and makes me feel very good";
- "the blood flows faster in the joint, nourishing the tissue that recovers faster";
- "as you perform mental training exercises, the ligaments become like a steel and rubber fabric, strong but flexible";
- "deep breathing floods my body with healthy energy";

- "the bones have acquired a network of fibers like steel, which resists stress";
- "when I inhale the painful area becomes vital, and when I exhale the pain disappears".

❖ **Positive thinking exercises**

It is not uncommon for our actions to be hindered by the appearance of doubts, irrational and deeply negative, counterproductive thoughts. These thoughts do nothing but sabotage us and hinder or delay the achievement of our goals. The success or failure of our endeavors depends on how we manage all these thoughts.

The consequences at the individual level are that they cancel the focus on the essence of the problem, undermine self-confidence and raise the level of anxiety.

At an intuitive level, it can be seen that negative thoughts lead to poor, unsuccessful results, while positive thoughts result in success in the approach taken.

This phenomenon can also be observed in the case of sports competitions. Studies conducted among athletes show that the ability to think positively maximizes the chances of sports success or recovery after an incident / accident. The formation of the habit of thinking positively is based on the phenomenon of self-suggestion and expression in internal language ("in our mind"), in affirmative form, of positive statements. On the other hand, the loud expression of statements allows their control by the coach / psychologist.

In order for an athlete to become effective, to be more confident in his own strength and to overcome objective (external) or subjective (internal, set by his own mind) barriers, an athlete must set reasonable goals and split big goals into smaller goals and easier to achieve.

The first step in positive thinking training is to start by *removing negative thoughts* as much as possible. This is not an easy goal to achieve. It is known that the human mind runs a number of about 60.000 - 80,000 thoughts a day, most of them repetitive. Imagine these thoughts as little monkeys jumping chaotically in a tree, from one branch to another, without a specific direction or soup. That's what happens to our thoughts.

The problem with these thoughts is that, repeated indefinitely, without being aware of it, they end up shaping us and leading our destiny and we call it "fate", without knowing that we are solely responsible for the way it looks. our life. Our thoughts "walk" on the highways (neural circuits) created by us, by repeating them. All we have to do in case we don't like what our life looks like is to change our thoughts. By changing thoughts, we change destiny.

Our mind does not differentiate between imagination and reality and this is a double-edged sword. Whether you are living a certain experience or imagining it, the mind interprets it as real. For this reason, repetitive images / thoughts tend to become reality ("self-fulfilling prophecy"). Negative thoughts, accompanied by the corresponding emotions, create the so-called "prophecy", followed by lack of energy, apathy, failure. Lack of confidence is the result of such thoughts, while self-confidence is the result of a positive image.

There are a multitude of mental reprogramming techniques that can be used successfully in the activity of athletes. One of the most effective is meditation. Other techniques include mental imaging, desensitization and more.

Meditation **is very effective when we want to stop those "monkeys" that are our thoughts to lead our lives. There are a multitude of meditation techniques, all of which are effective if practiced long-term. One of the simplest meditation techniques is the following: sitting on a chair, with your eyes closed and in the most comfortable position possible, your back straight, watching carefully how the air enters through your nostrils. I then imagine**

how it descends slightly, passes through the lungs flooding them with its freshness, then reaches the abdomen, and then resumes in the opposite direction, from the abdomen, through the lungs, out. All we have to do is watch the slow movement of the air as it enters and leaves the lungs. A daily practice, morning and / or evening, for a few minutes at the beginning (we can start with 5 minutes, then increase to 10 minutes, 15 etc.) and we can continue until we reach 30-40 minutes or even more, it ensures success. approach. It is better to meditate 10 minutes a day than one hour a week. Daily meditation is much more beneficial. Constant practice is a first step in stopping these sabotaging negative thoughts and replacing them with positive thoughts that make it easier to achieve goals.

Meditation can help you become more focused, less worried, find faster solutions to the problems you face, be more relaxed, get better performance in sports, in other words the practice of meditation can improve your quality of life.

But, more importantly, *meditation can help you understand your mind*. People generally lead a life "automatically", not aware of what they do and what they think. The agitation of everyday life prevents them from being more anchored in the present, in what they say and how they act. Meditation will help you find out how your mind works and understand yourself better. There are many types of meditation, but for beginners I recommend guided meditations and a silent meditation technique called the "100 breath technique". This technique will help you focus better using your breathing as a point of reference. It will take about 10-15 minutes depending on your breathing. It is a technique that you can use at any time.

Posture is important because you need to minimize your discomfort and not fall asleep. Sit on a couch, with your back straight and your feet on the floor. The eyes must be closed to have as little distraction as possible. Focus on your breathing and count each breath down from 100 to 1. Let your breath be natural,

not a force. Don't try to make it faster or slower. Inhale and exhale naturally and count in your mind until you reach 1.

When you practice this technique for the first time, you will have a lot of distractions. It is normal, become aware of these distractions and then continue. The more you practice, the less frequent distractions will become. Sometimes you have to adjust your position if you are not comfortable. Adjust the position and then continue where you left off. Although it is good to choose a quiet place for meditation, sometimes you will hear noises, muscle aches, memories, dreams will appear - the key is to become conscious again and return to breathing until the exercise is complete.

If you have problems with silent meditation (it is more difficult, sometimes you can't concentrate, you have to know how to calm your mind), you can use guided meditations. With guided meditations it doesn't matter if you know how to meditate or not, if you can or can't calm your mind, you don't have to make too much effort. In addition, guided meditation brings you the benefit of visualization. No matter how many thoughts appear and how far your mind goes, it is important to always return to the awareness of the breath in the present moment or to listen to the words spoken in the guided meditation. The more you practice, the easier it will be for you. Meditation is not always full of peace and quiet, but it has countless benefits.

Meditation has benefits proven even by scientists: it reduces the level of stress and anxiety, improves the quality of sleep, increases the power of concentration, improves blood circulation, helps you find solutions to your problems. The purpose of meditation is to go beyond the mind and experience our essential nature - which is described as peace, happiness and blessing. But, as anyone who has tried to meditate knows, the mind itself is the biggest obstacle between us and this awareness.

❖ **Breathing exercises**

Breathing is important for athletes to maintain physical vigor, for emotional balance, to stimulate all vital functions. There are three types of breathing: clavicular, costal, abdominal. For proper irrigation of the brain and other organs, the so-called "full breathing" is recommended, which engages all areas of the lungs.

Clavicular or upper respiration ensures that only the upper part of the lungs is filled with air. This type of breathing is considered defective as it consumes a very large amount of energy with it, while the amount of air entering the lungs is very small.

Costal or median respiration ensures that the median area of the lungs is filled with air. It is achieved by dilating the rib cage (moving away from the ribs). Through this type of breathing, a larger amount of air enters the lungs than in the case of clavicular breathing, but still insufficient.

Abdominal breathing is also called deep or diaphragmatic breathing. Experts say that this type of breathing is most effective for the body, as it ensures the penetration of air into the lower lungs. When the dog is practiced correctly, this type of breathing has profoundly relaxing effects on the body. This type of breathing is achieved by lowering the diaphragm and pushing the abdomen forward, the abdominal muscles being relaxed.

Complete breathing is a combination of the three types of breathing presented above. It is done in the following way: from the sitting position, with the right column, with the body relaxed, as much air as possible is expelled from the lungs, after which the inspiration is realized, which includes 3 stages:

- Lowering the diaphragm, pushing the abdomen forward (abdominal breathing), which is done with perfectly relaxed abdominal muscles to allow the entry of as much air as possible into the abdomen;

- Dilation of the thorax with the removal of the ribs (corresponds to the costal respiration), which ensures the filling of the intermediate area of the lungs with air;
- Raising the collarbones (clavicular breathing) - when the air has come to fill the upper lungs, the abdomen contracts slightly.

On exhalation, the air is eliminated, performing the movements in the same order as on inspiration - the abdomen contracts, the ribs approach, the shoulders are lowered.

Complete breathing ensures a very good oxygenation of the whole body, having positive effects on blood circulation and metabolism in general. It is calming for the nervous system, contributing to better self-regulation of mental states. Complete breathing should not be jerky, as if three breaths, but continuous, slow, to be achieved effortlessly.

All these techniques presented support the mental training of athletes, forming a basis for it and facilitating performance in sports. Without them, mental training itself would be much more difficult and with less effective results.

❖ Hypnosis and great performance

Hypnosis is essentially a way of regulating mental states. In hypnosis, the athlete experiences, with the help of suggestions offered by the therapist, certain mental states that he could not have obtained by other methods. These states are also called altered states of consciousness and are based on a process of directing and concentrating. Most experts agree that hypnosis is nothing more than a state of deeper relaxation. We experience hypnosis-like states when we are very absorbed in what we are doing - whether we are reading an interesting book, watching a movie, driving, etc.

Hypnosis is defined as an induced state, similar to sleep, but different from it from a physiological point of view, a state that is characterized by a high degree of suggestibility, resulting in a series of sensory, perceptual, memory and motor

changes more easily. than in the state of consciousness. Against this background, positive suggestions can be made to the athlete regarding the performances that he expects to have in the practice of the respective sport.

Regarding mental training techniques, the suggestions that can be made in hypnosis are:

a). Changes in the sphere of thinking - the “logic of the trance” appears, which makes the athlete accept as logical situations that he would normally accept with greater difficulty. These may concern issues related to the athlete's ability to achieve greater performance in the sport or to exceed certain limits imposed by his physical or mental abilities.

b). Changes in the motor sphere - muscle relaxation, automatic actions, the increase of certain physical performances beyond the limits imposed by the conscious mind.

Regarding the use of hypnosis in sports, it is often used in psychological training during training, as a method of regulating mental states. Sports psychologists have successfully used hypnotherapy in high performance sports, solving various problems of athletes using the technique of "targeted suggestions".

Hypnosis can be used in sports to solve various situations, including:

1. Treatment of competitive trauma by the method of affective catharsis (hypnotic mental reliving of feelings associated with a traumatic experience in the past);
2. Using directed imagination to increase self-confidence by mentally reliving past, positive events;
3. Analgesic suggestions for reducing post-traumatic pain;
4. Suggesting relaxation to reduce emotional strain during competition;
5. Suggestions for increasing the ability to concentrate and direct attention;
6. Amnesia suggestions to help athletes forget unfavorable performance experiences.

Through hypnosis it is possible to achieve the formation of a stable mental attitude through autogenic training and self-control in any situation. You can build mental sets on sports competition in terms of motor skills, on opponents, spectators, the entire competition situation or your own fighter self. It is also possible to develop the physical and mental skills required by the competition by self-observing the strengths and weaknesses of one's own execution, mastering the dynamics of relaxation-rapid mental warming, practicing motor skills for competition by consciously analyzing the most effective sequence. of movements and mental stress of motor skills without their awareness, in a state of hypnosis.

The main objectives of the psychological training of athletes, therefore, which can be achieved through hypnosis, are:

1) Reduction of negative emotions and (pre) competitive anxiety;

2) Increasing resistance to stress;

3) Removing mental barriers - fear of a certain opponent, the field, the competitive situation, failure, result;

4) Mental training for faster learning of motor skills, their improvement, their recovery after an accident or illness, familiarizing the athlete with the competition situation.

Regarding the positive suggestions that can be made to obtain an appropriate pre-competitive attitude, the "calm certainty of the competition", some of these are:

- ✓ I start the competition with full confidence and inner conviction.
- ✓ The competition is for me a day of celebration, the celebration of my enthusiasm, courage and energy.
- ✓ I trained a lot and thoroughly. The state of my training has improved a lot, my possibilities have reached a higher level.
- ✓ I did everything necessary, I also executed at the required quality. I am firmly convinced that I will achieve everything I set out to do.

- ✓ With the approach of the competition, I show a growing confidence in myself, calm and relaxation, endurance in any situation.
- ✓ I will react calmly in all situations that will arise during the competition.
- ✓ The more complicated the competition, the more energetically I will act to win.

All these suggestions can be made by the athlete, in the evening or in the morning, by repeating them immediately after waking up or before bed, when the mind is more suggestible. Each suggestion must be repeated as many times as possible in order to enter the subconscious mind and then act in the direction we want.

They can be used even more effectively by the therapist during the hypnosis session which lasts about 40-60 minutes.

There are also some difficulties in applying hypnosis in sports:

- Not all subjects are hypnotizable;
- A good collaboration with the coach must be done in order not to administer suggestions that solve the problem at the moment but that are inadequate for future competitive situations; the affected area;
- If the therapist is not experienced enough, there may be an increase in the athlete's dependence on him.

Sports performance is closely related to self-image, in the sense that clinical data and observations made in everyday life have highlighted the fact that people who do not have a strong psyche, depressed, anxious, lacking self-confidence, tend to in most situations to attribute the successes to accidental causes (eg chance), and the failures to stable causes (their own incapacity).

In contrast, balanced individuals who are successful in life have the opposite attitude - they attribute the successes of their qualities and the failures of conjunctural factors (bad luck).

Mental training consists of analyzing the causes of success and choice and training and coaching the subject to identify stable causes for success and accidental causes for failure.

You can also apply the technique of mental training of the ideal self-image (as the athlete wants it to be, in the ideal way).

A commonly used method in this regard is the mirror method, which is successfully used as a method of mental training. The suggestions made to the athlete are the following:

"Sit in a comfortable position in the chair and try to relax as deeply as you can. Relax deeper and deeper. Now imagine yourself sitting relaxed in this chair and having a mirror in the back and a mirror in the front. Look in the rearview mirror and look at your unwanted image (an athlete full of fears, frustrations, insecure about himself, unable to mobilize to achieve the desired performance. Then look in the front mirror where you can have the clear and distinct image of the person you want to be - the successful athlete, confident in himself and his strengths, who succeeds in every step he takes in sports.View every detail of how you achieve the desired performance in the sport. The positive image of the person you want to be.Now notice a small door in the mirror in front of you.Imagine that you enter that door and become one with that image, with the desired image, that you become the person you want to be.At the same time , tell yourself that you are very happy with the way you are now and try to live the feeling of well-being that you have in that state. ” a positive emotion to the act of visualization is extremely important for the success of the approach.

In the first three weeks, the athlete learns the relaxation technique. Then, gradually, the imaginative training exercises are introduced.

After mastering them, the athlete is taught how to practice those exercises at home daily for 20 minutes.

Clinical studies have shown that this mental training technique, practiced regularly for as long as possible, is extremely effective and has stable effects in achieving performance in sports competitions.

Five exercises to strengthen your mental strength in sports

Do you have enough mental strength? Do you want to always be one step ahead of your opponents? Do you know how to approach difficult situations and play as well as possible under pressure?

Mental strength means you can constantly play to your full potential in any given situation. Regardless of his level in sports or his talent, any athlete can learn to be mentally strong. Any athlete can use his mental strength to increase his potential and always be one step ahead of his opponents.

Athletes with great mental strength are those who take the ball when an important decision needs to be made, those from whom teammates expect to be guided in difficult situations, those who constantly play as well as they can in any situation, no matter what happens in around them.

1. *Improve your self-awareness*: be aware of your weaknesses so that you can improve them. Know your strengths so you can use them.

It is important to identify situations that you find difficult in a competition. For example, there could be certain mistakes or more mistakes, a frustrated opponent, bad choices and so on. Once you have done this, the next step is to make plans (which to stick to) how you will react when you face such situations in the future. This should include thoughts, body reaction strategies, behaviors and a plan for your game.

The last step is to practice the new plan, first in training and then in competitions. At first it can be a challenge to change your way of thinking, but like any other new skill, it will become automatic with exercise.

2. *Become resilient*: Develop a reconcentration routine that you can use to quickly overcome mistakes and focus on the present. The goal is to achieve the same winning mentality before each step, game or skill. This will help you play as consistently both in training and in competitions. If you use your routine successfully, you will become resilient and you will have more chances to have the best results in any situation. A reconcentration routine includes both physical and mental steps to follow each time you need to refocus.

3. *Increase your self-confidence*: in order to continue to believe that you can have the best results you must keep in mind all the successes of the past and the reasons why you can play at full capacity in any situation. The motivation can come to you remembering your past performances when you faced difficult situations and you were able to give your best.

4. *Strong thinking*: To be mentally strong, you must have a strong mind. To have a strong mind means to master your inner speech and to choose what thoughts you use. If you can control your mind, you will stay in this positive zone and you will keep your winning mentality. You need to be able to recognize when you are using negative or useless thinking and use strategies to stop or change your thoughts. You also need to be able to replace them with positive or helpful thinking.

When you have "black" thoughts, follow this easy exercise in 3 simple steps:

Immediately imagine the big red stop sign or a red traffic light;

Tell yourself immediately "STOP!"

Do both immediately at the same time.

Mental training plan

Stage I: Formation of representations of movements

Coach:

- Demonstrates and explains their movements and spatial, temporal, energetic characteristics;
- Uses other intuitive and verbal means: photos, sketches, drawings, indications, recommendations, appreciations;
- Guides the mental activity of athletes in all stages of training.

Athletes:

- I follow carefully the explanations and demonstrations of the coach;
- I reproduce verbally the execution instructions;
- Try to execute according to the "model";
- Report verbally what they have succeeded and what they have not succeeded;
- Repeats sequences of movements that can be reached by transfer - actual learning;
- Practically practices the actual motor gestures;
- Analyzes the level of execution and reports the progress to the coach;
- Complete the information about the learning movement, observing other more advanced colleagues;
- Make comparisons between him and other colleagues.

Stage II: Educating the ability to focus on one's own representations

The athlete learns to observe, to study carefully photographs, chinograms of the execution of motor gestures, his or others, progressively analyzing and in stages different moments of the motor act, the phases of movement or segments of the body in motion. The observation of the same images is repeated a lot at intervals of one day, 5-10 minutes each time, until every detail of the execution

is retained and the athlete can imagine exactly the whole movement and its particularities of execution.

The athlete is taught to represent exactly the executions he makes in training. There will be about 10-20 seconds of focus each time on the image of the movement proposed for execution.

After the execution, the athlete mentally reviews for 5-10 seconds what and how he performed, and then reports what and how he did and receives the coach's feedback.

2-3 hours after the last training, the athlete mentally repeats his techniques 3-4 times during the practical lesson.

Stage III: mental training itself

- It is performed by athletes who have learned the movements correctly, at a satisfactory level of performance;

- There are daily sessions, when the athlete is calm and relaxed, for 10-12 minutes;

- The athlete represents his own execution in the form and with the optimal characteristics as in the competition, keeping in the focus of the consciousness very awake the working image;

- If other effects of an effectogenic nature intervene, the athlete stops and mentally resumes the proposed movement;

- If he becomes anxious or nervous, he interrupts his training, relaxes, moves on to other light and pleasant activities, then returns when he thinks he can concentrate;

- It is recommended that mental training be done in an airy room, without disturbing stimuli.

Mental repetition, as a method of mental training, is useful because:

- It is a method accessible to all athletes;

- It can be done in a gym without requiring special arrangements;

- It does not require much time to complete, the duration being 20-30 seconds for each procedure / technical element, and can be done in a return pause after a medium effort;

- Athletes can perform mental repetition at any time, no matter where they are.

The concrete way of performing the training is the following: after a technical element or procedure is demonstrated and explained, the athletes repeat the exercise in parts, then globally, until they form the image of the movement. After acquiring the basic skills, they move on to mental repetition, about 20-30 seconds for a technical element. Athletes adopt the supine position, with their arms close to their bodies, in total relaxation and silence, receiving their task.

This workout can be performed in a return pause.

If the athlete has to master several movements in the same lesson, several repetitions of several techniques and procedures will be performed (4-5 maximum, preferably). This task belongs to athletes even in their free time, about 4 days a week, 10-15 minutes a day.

Heart rate is also very important and with major effects in terms of sports performance. Most athletes, regardless of the level of emotional balance, tend to overestimate the competitive situation they face, to give it more importance than it really has, which generates consequences both mentally (decreased power of concentration, distributivity of attention sa), as well as physiologically, by accelerating the heart rhythm. This entails a series of negative consequences that directly affect sports performance.

As ways to counteract these negative effects we mention:

- awareness of physiological changes that occur in the body during sports competition (ex-acceleration of the heartbeat, various neurovegetative reactions - pallor, sweating of the palms, trembling with the inability to

control it, etc.); awareness of this kind of reactions is the first step towards their conscious control;

- mental programming and preparation for controlling negative reactions;
- actual control of physiological / psychosomatic changes (breathing exercise); emotional self-regulation (control of emotions and inappropriate reactions, fear, anxiety; control of emotions in unforeseen situations - eg, shooting incident - in situations of overload - physical and mental difficulties, blockages, etc .; control of emotions through breathing, massage, relaxation anticipating possible panic reactions, controlling discomfort, controlling irritability / inner tension, controlling aggression, combativeness, eliminating fears while overcoming fear, the ability to internalize and control oneself, overcoming fear of success or failure / detachment).
- "Positive thinking" - in parallel with the control of breathing, a reassessment of the situation that the athlete is facing, objectives to be achieved will be formulated, "visualizing" (mentally) an optimal "route" that leads to obtaining results performance;
- implementation of the established plan.

Exercise to be practiced by the athlete before a sports competition

An effective way to counteract the negative reactions that can occur during a competition is the following approach:

1. *I am in a competition situation. I really want to win (I'm very motivated) and that makes me tense. I am aware that others (colleagues, friends, etc.) expect a lot from me, because I know that I am a good athlete. What if I disappoint them? I feel like I'm losing control, I can't control my heartbeat anymore and I'm sweating. This makes me no longer able to focus on the goal and achieve performance well below the level I usually reach*.

2. *I reevaluate the situation I face; the main psychic processes involved at the moment are: motivation (why I want so much to win / what motivates me; what are the consequences in case of failure - it is very important to have a proper motivation; both undercotivation (disinterest in the competition) as well as overmotivation (the desire to win at any cost) lead to failure) and attention (especially the ability to focus attention, to "focus" on the goal). At the same time, a program of "rebalancing" / "recalibration" begins, returning to the initial state of emotional balance, relaxation. It is very important at this stage for the athlete in a competitive situation to try to react rationally and not emotionally.*

3. *It starts with a breathing exercise, to control it and, implicitly, of the heart rhythm (which, as we have shown, has direct consequences on the ability to concentrate / react). The simplest exercise, accessible to all, is four-stroke breathing: inhale (number up to four), hold your breath four times, exhale four times, hold your breath four times. This exercise is repeated until a state of calm, relaxation, detachment is installed.*

4. *The power of positive thinking is (re) known, so we will not insist on defining it. Mainly, it consists in the mental visualization of the objective that we want to reach, as well as of the steps that must be taken in order to reach it. Attention: it is very important to program ourselves mentally for gain, to be perfectly convinced of the success we will have; any trace of doubt we have about success will have negative effects in terms of performance. Example: I am perfectly calm, balanced. Nothing that happens around me influences me. It's just me and my goal that I want, can and must achieve. My goal is to get maximum results, which will happen. I want, I can and I will succeed.*

Attention: The previously presented model is just an example, which has the role of helping the athlete to realize the importance of positive thinking, of

self-control in stress / competition situations. It is a starting point, but, depending on the situation you face, it can adapt to the specifics of each situation.

Visualization Techniques (practical exercises)

There is no generally valid technique because we are all different. A technique that works well for you may not work for me or anyone else.

1. The "Act as if" technique

In this technique you will visualize that you are already what you want to be. You will visualize that you already have what you want to have, for example, to achieve the desired performance in the sport you practice. In this view you already see and feel how you would like to feel: happy, healthy, full of energy, satisfied, relaxed, etc. In this view, you behave, move, act exactly as you would like to behave with yourself, your family, your audience, etc.

2. "Panel view" technique

The viewing panel is actually a visual-emotional anchor and a technique in itself. The panel helps you connect more deeply with what you want to be. It is actually a cardboard, plastic or light metal plate, to which you will attach images, symbols or small objects that represent the things you want to materialize in your life. You can attach images, photos, symbols that come to help you, to support you in every area of your life. This viewer helps you set your vision better, clear it up and focus more on your goals. That no matter what distractions you have during the day.

3. The technique of "visualization in meditation"

This is a visualization technique proposed by His Holiness the Dalai Lama. He has often spoken in his speeches about how simple this technique is. What

should you do? It is important to enter a state of meditation and try to focus only on the breath, to settle only on how the air enters and leaves your nostrils. When you manage to master this simple exercise, your mind becomes completely empty. And the more you go down in this state, you become deeper and deeper and after 15-30 minutes you start to visualize the scenes you want, the image you want. This technique is very powerful because in the state of deep meditation you have full access to the theta waves, to your subconscious.

The main steps of the viewing/ visualisation session

Step 1: Set a clear goal in your mind

Choose a clear vision or work on the scenario of your life. You can only choose a single goal. Whatever you choose, the idea you are working on must be clear.

The goals you want to materialize must be clear, motivating, and authentic. The images you create must be exactly as you want, express exactly what you want, be bright, full of detail, color, action and emotion. The clearer, more contoured, the brighter and more precise these images are, the faster your desires will materialize. So clear goals.

Step 2: Duration of the viewing session

The time allotted for the first viewing sessions should not be very long. For starters, it's a good idea to keep your viewing sessions as short as possible. If the period is too long it can cause a state of discomfort especially for people who are not used to the state of meditation.

Each session should be 1-2 minutes longer than the previous session until you determine the optimal duration of your view. The longer you keep a clear and concrete image, a bright image in your mind, the more you will be able to impress the subconscious with the new programs you want.

Step 3: Relaxation

When you start using visualization tools, it is important to learn to relax. For viewing sessions to achieve their purpose, you need to be in a certain state of mind. The calm, relaxed, peaceful mind is much more open, receptive and able to bring about changes in the physical world.

It is necessary to access the alpha state or better the theta state. The best times to practice visualization are in the morning when you wake up and in the evening before bed.

Step 4: Position in view

You need to choose your position in your view.

You can choose the position of the actor we talked about in the other chapter, a position in which you actively participate in the mental scene in which you get involved, you are inside your film. Or, depending on how you prefer, you can choose the position of the spectator in which you see yourself from the outside, you see yourself playing in the film of your vision.

Step 5: Forget the question "HOW?"

Is it useful to focus your question on the EC question in your visualization process? and forget the question HOW. How will my wish be fulfilled? That is what you have to eliminate from your mind, the way of fulfilling the desire. It really is not your job to make your goal a reality. It is not your job to know the way and the way in which the subconscious mind and the quantum field will deliver your desires. You just have to focus on the final image, on the final result.

Step 6: Use emotion in visualization

For your visualization to be powerful and effective, it must be loaded with powerful emotions. Emotion is the launching pad that sends information from the mental image, from desire, directly to your subconscious mind connected to the quantum field.

When you are in your viewing session, it is good to emit strong emotions that are in line with your wishes. Impregnating the visualization with emotion has

the role of loading the mental image with all the joy, happiness, contentment and gratitude possible when your wish is ready.

This is what you need to feel: that your wish is ready and how you would like to feel at that moment. Even if at the first viewing sessions you will not be able to generate very intense emotions, as you practice, you will be able to produce stronger and stronger emotions.

Ask yourself: How do you feel when you're in sight? How are you at that moment?

What are you doing at the moment?

What are you wearing at that moment?

What are you talking about and how are you behaving at the moment?

You can choose from a wide range of positive feelings: joy, happiness, passion, love, gratitude, appreciation, etc. In order to manifest the objectives you want, you need image, thoughts, emotion, you already need to feel your objectives fulfilled.

You need to know how you feel in those moments, you need to be first, to feel that you are, so that you can receive the materialization of your desire.

Step 7: Use absolutely all your senses

As you already know, visualization is not just a simple activity of creating mental images.

The visualization action involves bringing into your technique all the senses you have, even if they are not very developed: hearing, sight, smell, taste, touch, etc. For example: suppose you want to win 1st place in a shooting championship. First you create your script in writing to materialize the desire. And when you do your viewing session for the goal you want, all you have to do is see yourself on the podium, imagine how you feel, how you feel the cup in your hands, how you are applauded and admired for the result, etc. . All the senses used in your visualization only leave an even stronger imprint on your subconscious mind.

Step 8: State of gratitude

Throughout the viewing session, try to express your sense of gratitude for fulfilling your wishes. The feeling of gratitude is the simplest and most powerful tool with which you can change your energy frequency and in this way to align, to harmonize, to be on the same level with the energy frequency of your desire that you visualize.

Use gratitude because it works like a magnet to attract the reality you want.

Step 9: Something Better

This point is not necessary, but I wholeheartedly recommend it. Even if you use the visualization technique to accomplish your most passionate and lofty goals, you must be aware that the Universe may have prepared another path, another path, another answer to get where you want.

You cannot know in advance which is the right path for you, which is the door you must open, a path that will give you satisfaction and be for your supreme good. It is not good to know in advance how your vision will be fulfilled, which will bring you everything you want.

Simply abandon yourself and trust in the divine intelligence of the quantum field, in the intelligence of your Divine Self and at the end of each visualization session, he states:

"I ask to manifest this (or this vision of life) or something better for me, positively, in love, in grace and harmony, for the supreme good of all involved."

This is basically your divine insurance policy, as one of my mentors says so nicely. It is best to detach yourself, step aside, and let the Universe work through you and for you.

Techniques for overcoming performance anxiety and change or reorientation of maladaptive mental discourse

Reducing anxiety before the competition

Accept that pre-competition stress and nervous tension are normal. The nervous energy felt, the "wave" of adrenaline you feel is normal and is part of the body's natural way of preparing for the competition situation during the sporting event. Take into account the state of tension, but avoid focusing exclusively on this state. Once the contest starts, that feeling will diminish, as it often does.

Prepare yourself both physically and mentally. It is recommended to arrive at the event with enough time before the start of the competition, so as not to get into a time crisis, a condition that can increase the level of stress. Take a large enough time to prepare before the start of the competition (for heating, knowledge of the competition route / space, equipment, etc.).

Controlled imaginative visualization. Before the start of the race, for a few minutes, repeat mentally, the way you do everything about yourself, correctly, during the competition. Breathe calmly, close your eyes and use mental images to visualize how you can perform during the competition. This positive way of viewing can change the attitude towards the competition and towards personal performance. It is generally recommended that athletes be flexible enough to react during the sporting event according to the momentary demands of the event.

Reducing anxiety during sports competition

Focus on the most handy task (the most urgent to accomplish). Stay focused on the present moment and avoid distant sequences of the sporting event or imagining the final point of the competition. If you notice that you have certain negative thoughts about your future performance, focusing on your breathing rate

(so that you reach a rate of 10 - 12 successive breathing cycles - inspiration and expiration - per minute), will help you to "come back" automatically. back in the present.

Smile. If you face negative thoughts and you can't interrupt their rhythm, simply "force yourself" to smile, even if only for a few seconds. This simple action will change the attitude in a very short time. And it is very possible that only this very short period will be needed to restore the optimal state of personal functioning necessary for performance.

Compete as if you don't care about the result. "Just play. Have fun. Enjoy the game "… When you are caught in the trap of negative thoughts and expect the worst, it will be impossible to reach the peak of sports performance. If you start competing as if you don't care about the result, you will be able to relax and enjoy the competition for what he is - another event that takes place in your life. It is not the most important thing in your life, nor the one that defines you as a person, as a person.

Reducing anxiety after the end of the sports competition

Evaluate the stages of the contest and remember the things you did well. Focus on the actions, thoughts, and behaviors that helped you achieve the expected performance. This is a form of mental rehearsal of the skills that will be used in the next contest.

Take into account, but then reduce the intensity of the aspects that hindered performance. By focusing only on the negative aspects of evolution during a sports competition, no athlete will be able to improve their future performance. The goal of the athlete or coach "to avoid mistakes" is to keep these ideas about "mistake" in the forefront of thinking. The result of this trend is a defensive approach to the plan of action, accompanied by increased muscle tension, reduced concentration of attention and, finally, a weaker self-confidence; therefore, more

mistakes. That is why it is recommended to focus on the moments when things went very well, when the actions took place efficiently.

Training planning that reproduces the conditions of official competitions. Sports teams and clubs often organize friendly competitions. The most effective training is developed when the conditions specific to official competitions can be reproduced as much as possible.

Anxiety control programs involve training and perseverance on the part of the athlete. Assimilated correctly and properly, these control techniques are effective in the long run and contribute to increasing sports performance. Intervention programs (based on breath control, progressive muscle relaxation, development of concentration skills, control of maladaptive thoughts, guided imagination exercises, etc.) are adapted to each athlete, so as to suit personal resources, the pace of life of the person who appeals to this type of intervention and the sports discipline in which it operates.

Sport and performance in sport - factors of social integration for people with disabilities

Through specific methods and means, physical education and sports ensure an accessible educational environment, with strong formative and educational influences on people with disabilities. The European Commission calls on the Member States to adapt the infrastructure to allow these people access to sports grounds and, implicitly, their participation in specially designed programs and competitions. In recent years, physical education and adapted sports have emerged as subsystems with specific objectives for different types of disabilities. The adapted motor structures, the specific rules allow the facilitation of the expression of these people, according to their own abilities and capacities. On the other hand, in this way, the therapeutic-compensatory and developmental effects are possible, which allow the creation of a new self-image, favorable to social

integration. Modern programs of physical education and adapted sports promote inclusive education, by including, in common activities, people with and without disabilities.

The most important benefits that physical activity offers to people with disabilities

- ✓ **Recovery**

Sport is used as a complementary therapy, associated with physiotherapy. For example, sports such as lifting weights or archery help to develop muscles in paraplegic people. Wheelchair basketball requires the ability to work in a team and coordinate. Swimming is perhaps one of the most used sports in the recovery of physical disabilities, the buoyancy of the water helping the affected limbs to move more easily.

- ✓ **Social integration**

People with disabilities have special needs and feel the need for independence, group membership and acceptance in society.

Sport creates the framework for establishing contacts between people who have the same needs and problems and helps to make new friends. By interacting with other people who face the same type of difficulties on a daily basis, people with disabilities can understand that they are not alone and can be understood, they can share their experiences.

Often, people with disabilities have low self-esteem and are prone to depression and isolation, but physical activity can restore their ability to feel valued.

✓ **Recreation**

Physical activity is disconnecting, being a suitable way to spend free time. In this sense, people with disabilities, depending on the nature of their dysfunction, can enjoy either sports specially created for them, such as bocce (a game that involves reaching a goal with the help of balls), or adapted sports, such as darts, wheelchair basketball, spear throwing, dumbbells, or even ordinary sports, which have not changed: archery, bowling, swimming, table tennis, etc.

Disability should not be seen as a disease or a barrier to physical activity, but only the types of sports beneficial for each type of disability should be identified.

✓ **Sport for the blind**

The difficulty for the blind is the rigidity of the movements and the insecurity of the gestures, caused by the fear of not hitting the surrounding objects or the possibility of falling. However, many of the blind develop a "sixth sense", manifested by a good orientation in space, therefore, the most suitable sports for them are those in the field, but also those that take place on the track.

Blind people can experience throwing sports (eg, spear throwing), archery, long jump and high jump or run. Also, ball sports and even swimming are options to consider, but the latter require the guidance and supervision of another person, both for reasons related to the proper conduct of the game and safety.

✓ **Sport for the deaf**

People who do not have a sense of hearing have difficulty communicating, which makes their social life difficult. However, people with hearing impairments are the ones with the highest degree of participation in physical activities of all categories of disabilities. They can participate in most common sports, but are advised to avoid those that require good communication between participants and a special balance. However, it must be borne in mind that difficulties in

maintaining balance can be improved through the assisted practice of gymnastics, martial arts and even dance. Suitable sports suggestions: athletics, basketball, badminton, bowling, cycling, handball, martial arts, volleyball, tennis, water polo, football.

- ✓ **Sport for people with locomotor disabilities**

Forms of locomotor disability are often associated with the inability to play sports, but in reality, there are a variety of sports that can be practiced by those affected. Here are some of the most handy:

- *Wheelchair basketball* - is one of the most popular sports for people with locomotor disabilities, whether it is paralysis, muscular dystrophies or amputations of the lower limbs. It is famous for its ability to develop team spirit and for fostering coordination and socialization.
- *Archery* - can be practiced without problems by people in wheelchairs or who have difficulty moving due to amputated or paralyzed limbs.
- *Table tennis* - because it trains the arms in the first place, table tennis can be easily played by people with mobility problems.
- *Swimming* - It is the only sport addressed to both those who suffer from dystrophies and paralysis, or have amputations. In the case of people with amputated lower limbs, special prostheses with good buoyancy can be used.

In addition, sports can be practiced that require special conditions, usually adopted in Paralympic competitions, such as: weightlifting, gun shooting, volleyball and wheelchair tennis.

It should not be lost sight of the fact that any of these sports requires a prior consultation with a specialist, to avoid incidents of any kind, but also a permanent supervision by companions or coaches.

As a conclusion, we can say that an increase of physical activity is commonly recommended to those with physical disability, but it is necessary to distinguish competitive sport from fitness programmes, remedial gymnastics and active recreation. Potential benefits of enhanced activity are reviewed. Likely psychological gains include an improvement of mood-state, with a reduction of anxiety and depression, an increase of self-esteem and feelings of greater self-efficacy.

Sociological gains include new experiences, new friendships, and a countering of stigmatization. Perceived health is improved, and in a more long-term perspective there is a reduced risk of many chronic diseases.

It is concluded that the physically disabled should be encouraged to engage in physical activity, although further large-scale longitudinal studies are needed to determine the optimal type of programme for such individuals.

Sports participation has many physical and mental health benefits for individuals with a disability, including improved functionality and reduced anxiety. Despite this, a large proportion of individuals with a disability are inactive. This review will be the first to synthesise the literature on the experiences and perceived health benefits of sport participation for children, adolescents, adults, elite athletes and veterans with a disability. Investigation of these phenomena will enable an understanding of the positive aspects and benefits of sport participation specific to each population, which may help to improve participation rates and ultimately improve health through promotion of these benefits.

For this category of practitioners of sport there is a domain in sport named "*adapted sports*".

According to dictionary, "adapted" designates „*something that has been changed in order to correspond to certain requirements or to be used in certain circumstances, which is fit for something*".

Adapted sport constitutes a sports branch which uses motor structures, specific rules, material and organizational conditions which are modified and appropriate to different types of deficiencies (special needs).

Deficiency – it represents "the loss or disorder with permanent or temporary character of a physiological, anatomical or psychic structure; it designates a pathological, functional condition which affects the working capacity disrupting the process of adjustment and integration into the natural and social environment."

Infirmity – corresponds to structural and functional alterations in anatomic, physiologic or psychological plan which however, allows the individuals to carry on their activities. The abnormality given by infirmity occurs at the level of an organ, of a system (intellectual, speech, visual, visceral, skeletal, psychological infirmity etc.).

Handicap is defined as: - "the social disadvantage of an individual, determined by an infirmity and an incapacity, which limits or blocks the achievement of a normal role for the individual in society, according to his/her age, sex, cultural and social factors". - "it resumes the consequences of deficiency and incapacity, determining variable manifestations according to the severity of the deficiency and to the environmental exigencies".

People with special needs are included in social reintegration programs whose objectives can also be achieved through sports activities.

Adapted sport is a branch of sport that uses motor structures, specific rules, material and organizational conditions modified and adequate to the requirements of different types of disabilities. Its objectives are:

- ✓ maximizing the existing biometric potential;
- ✓ facilitating the expression of deficient subjects according to their own abilities and capacities;
- ✓ achieving therapeutic and sanogenetic effects (corrective therapy, recreational therapy, sports therapy, health programs);

- ✓ adaptation of sports activity for recreational purposes (free time);
- ✓ creating a new image of the group or one's own person, of a superior valorization of the existing competencies.

The organization of adapted sports is differentiated in the literature, as follows:

- Sports activities that do not differ in structure, rules, organizational conditions and material - from the known sports branches and events;
- Sports activities that keep the usual structure and rules, but benefit from material conditions that compensate to a certain extent the competitor's deficiency (a blind person who participates in a bowling competition benefits from a prominent delimitation of the ball launch lane);
- Sports activities in which both disabled and normal competitors participate, deficient subjects having some regulatory facilities (subjects participating in tennis competitions have the right to return the ball after two successive falls of it);
- Sports activities in which competitors with and without disabilities participate; all are subject to a modified version of the respective event or sport (competitors of any type participate in wheelchairs at any basketball game);
- Special Olympics sports activities in which he participates exclusively subjects with deficiencies of the same type and degree.

In adapted sports, depending on the objectives to be achieved, different types of programs are used: *recovery*, which include specific exercises and activities to correct bodily and other deficiencies; *adapted programs*, which include motor activities that maximize the existing potential and development programs, in which individualized activities based on specific needs aim to improve movement skills, fitness and socio-emotional integration.

Most of the times, they are applied in the system, each of them contributing to solving different tasks.

Adapted physical activities are based on adapting exercises, physical activities to the conditions and possibilities of the individual. It addresses to people with disabilities (motor, sensory, intellectual), as well as to people with chronic diseases (cardiovascular diseases, rheumatism, respiratory diseases-asthma, epilepsy, muscle diseases, etc.) or other people with different types of disabilities.

In order to reach the final goal, to increase the quality of life, through adapted physical activities it is pursued: the increase of the physical capacity, the increase of the fitness, the increase of the self-confidence, the increase of the pleasure for the physical activity. Through these activities, athletes with disabilities must find a place where to be understood and respected; that is feel safe while the motor, sensory and affective components are stimulated / activated; verbal and nonverbal communication lead to specific adaptations/ a meaning of communication; to improve motor and intellectual abilities, activities to complete socialization and reduce addiction.

SECTION II

Mental training techniques for stimulating performance in athletes with disabilities

1. VISUAL IMAGES IN SPORT

INTRODUCTION

Physical activity and sport are two fields that arouse great interest in today's society. In recent years there has been an increase in both active and passive participation in sports, which has led to an ever-greater scientific discussion of the issues involved in these contexts.

Sports practice is increasingly widespread even in a segment of the population that, in the course of human history, has not always received the consideration it deserves. This segment is made up of individuals with physical and mental disabilities or limitations.

For them, the sport has become the most promising resource that contributes to improving their quality of life, which is already very difficult to deal with.

The set of sports activities carried out by individuals with physical, sensory or mental disabilities, which require a series of material, technical or logistical adaptations to be carried out in conditions of equality with the rest of the subjects who practice these practices, is called "sport adapted ". It is the sporting modality in which some rules have been modified to allow the participation of people with disabilities, these adaptations being minimal, avoiding losing the very essence of sport.

It includes all the specific sports activities that people with disabilities can carry out, pedagogically and medically authorized.

Its orientation ranges from a therapeutic, or simply recreational, aspect to a high-performance competitive level, as in the case of Paralympic athletes.

The psychology of sport

The psychology of physical activity and sports is a specialization area of psychology that, in recent years, has grown rapidly as a supporting science in all areas of physical culture.

This area of psychology uses mental preparation techniques for the benefit of motivation, anxiety management, attention control, concentration development, personality management and self-confidence.

Likewise, through certain group strategies such as leadership, the development of communication and group cohesion, the sporting potential of athletes increases.

Furthermore, psychology applied to sport supports the processes of initiation into sports performance in basic sports training, as well as the management of eating disorders, injuries and disabilities.

Psychology is an autonomous scientific discipline dedicated to the production of ideas, tools, methods and procedures of activities that deal with the human mental and cognitive sphere.

Today, professionals specialized in this sector can play their role in several ways:

- Investigate study ways to improve performance in different sports, the influence of different pressures within the sports context, the consequences of stress on performance and sports performance, etc.
- Teaching: trying to disseminate the progress of the discipline, through courses, specializations, conferences and psychotherapeutic workshops aimed at strengthening the skills and cognitive abilities of athletes, coaches, physical trainers, among many other activities.
- Consultancy: with athletes (individually and/or in groups), coaches, physical trainers to obtain an increase in sports performance and training.

Here the myth that sports psychologists work with athletes who are sick or with problems breaks down, since, as mentioned above, basically the task is to collaborate in the development of mental preparation programs for athletes who tend to improve their skills or aptitudes.

It is important to recognize that the psychology of physical activity and sport is a specialization area of psychology, which is part of the so-called sports sciences.

According to the Association of American Psychologists (APA), *the psychology of sport and physical activity is the scientific study of the psychological factors associated with participation and performance in sports, exercise, and other types of physical activity. This includes children, young people, adults and the elderly. Therefore, the psychology of physical activity and sport deals with studying the psychological aspects during physical activity, whether it is oriented towards competitive performance or physical and psychological well-being.*

It has among its main objectives:

- Learn how psychological factors affect individuals' physical performance.
- Understand how participation in sport and physical activity affects personal development, health and well-being.
- The reasons why an individual plays or does not play a sport.
- The effects of stress on an athlete's athletic performance.
- The extent to which physical activity may or may not be beneficial to anxious or depressed individuals.

Role of the psychologist in sports

He deals with assistance to athletes, athletes, teams, as well as consultancy for coaches and physical education teachers.

- Advice and assistance are focused on optimizing the athlete's personal resources and contributing to the progress of the quality of tactical management and communication.
- Psycho-sport-logical profiles are drawn up to identify the mental variables to be promoted.
- Techniques are implemented to train mental skills: concentration, stress management, anxiety control, fear, confidence, among other variables to be trained.
- Professional secrecy is governed as in clinical practice. Subject to the athlete's consent, information is exchanged with the technical staff in order to optimize interventions.

Sports psychology seeks to improve the performance of athletes, to maximize their potential, not through the physical area, but through the mind, which is closely related to the functional or physical aspect. We thus justify the theory of Jean Piaget, who determined in his studies that mental development refers to the transformations resulting from the beginnings of socialization (in this case through sport) not only affecting intelligence and thinking, but influencing emotional life. with the same depth.

It is necessary to clarify and specify that the psychology of sport is not only concerned with studying the behavior of the sportsman during training and/or during competitions: it also deals with studying all aspects that are related to the athlete: the coach, family, environment, sport, etc. All factors that in some way influence the athlete.

So sports psychology can also be an axis of integration and socialization that plays a fundamental role in people with different abilities.

The sports psychologist and adapted sport

The figure of the psychologist in the field of adapted sport becomes relevant in an area in which the needs of sports practice and the specific needs of the group of people with disabilities converge. The functions that the sports psychologist performs in his traditional professional performance are also reflected in adapted sports:

- Concerning assessment and diagnosis, and given the characteristics of this population, particular emphasis should be placed on families, as their involvement and support for athletes with disabilities are of vital importance in this context.

Family protectionism and the independence and autonomy of the person with disabilities are always somewhat antithetical. The inclusion of the family in sports culture is necessary, since the start of sports mainly depends on it. It is above all the relatives who accompany the disabled child to the place of training or play of sporting activities. Seeing the progress in rehabilitation and social inclusion, they will be the ones who will most support their child's sports education.

- Regarding the advisory function, we must highlight the work in direct contact with the coaches of athletes with disabilities to plan the programs, adapting them to the specific needs of these athletes. The collaboration with the coaches of the athletes, who are well aware of their personal characteristics due to the disability that limits them, the potential that can be developed, as well as the appropriate communication methods according to the disability in question, must be broad and intense.

About the theme of communication, so requested by the coaches of sports psychologists, it is necessary to highlight that in this group of users it is a very specific point depending on the disability in question, which is evident with the

deaf, with those with whom sign language should be used (if necessary) or with the blind handicapped.

Considering the above, this is a different communicative world than we are used to: for example, the use of the palms to guide the long jumper, or the use of rubber poles to warn the blind swimmer to initiate the somersault, or with people with cerebral palsy since in the sport of bowls, specific for cerebral palsy, oral language cannot be used by the assistant, so you must learn alternative methods of communication with these people.

Some of the particularities of the group of people with disabilities that must be taken into account in sporting practice are the following:

- There are differences between congenital disabilities and acquired disabilities concerning their acceptance. In the former, as in the case of cerebral palsy, one accepts the disability and learns to live with it from birth or the first years of life. In those acquired in more adult stages, such as spinal cord injuries after a car accident, the need for acceptance leads to new situations not previously learned.

- The intervention must consider the athlete's suitability for the sport practiced as well as apply those techniques and psychological strategies suitable for athletes with disabilities. An example of the need for adaptation of psychological strategies is clearly seen in the case of relaxation. People with disabilities such as cerebral palsy, among others, have limitations or absence in the control of their muscles, so the usual muscle relaxation techniques are not adequate or should be adapted.

Another fundamental strategy in the world of sports psychology such as visualization requires a whole world of adaptations for the blind or visually impaired as well as for the deaf or hard of hearing.

The advantages and benefits that the exercise of a sporting activity bring, in addition to maintaining an optimal healthy state, as it is for anyone, to people

with disabilities, in particular, are also evident: adapted sport improves and strengthens those areas in which disabled person is effective, thus placing itself in clear antithesis to the widespread stigmatizing narrative that underlines the deficient aspects of the handicap.

- The practice of adapted sport has repercussions on the self-esteem of athletes with disabilities. The handicapped person has to constantly face references in his daily life that underline that he has a difference with others, which limits and discriminates him to the group of those around him. Seeing yourself continually as a victim of your handicap can greatly affect self-esteem. In adapted sport, the person finds an activity in which, thanks to the adaptations made in the exercise of this sport, he can achieve excellence in its execution, as happens to the rest of society. Finding an area where you are effective and competent increases self-esteem, with positive consequences for the rest of your life.

- The learning of skills acquired in adapted sports practice is generalized to other contexts. We can differentiate learning on a physical and sensory level. Regarding the first, we would find the case of a swimmer with an amputated limb that requires compensatory learning from the rest of the limbs for the execution of the tack technique. The supports that he must learn to perform to compensate for the contribution of the missing member and thus achieve a perfect performance, the result of which is equal to that of a person without a handicap, constitutes a goal that can be extrapolated to his daily life.

On the other hand, we have social learning; we point out as an example the case of a blind person who practices *Goalball*, a group sport in which they acquire social and communication skills such as teamwork or the need for the group to achieve a goal.

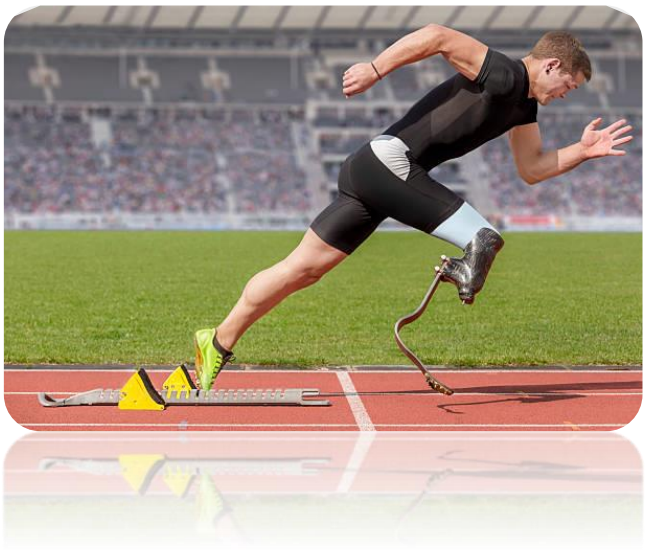
Another example could be the socialization that people with Down syndrome acquire through recreational activities that can be carried out by adapting certain sports such as athletics, swimming, ...

- The disabled person currently encounters not only architectural but also social barriers that sport can help to eliminate. Among these, the occupation of free time is to be highlighted and adapted sporting practice assumes particular relevance here. When this practice is carried out at a competitive level, it includes training programs, sports concentration and competition.

- In families, sport creates a parenthesis in the assumption of tasks related to the direct care of the person with disabilities, something that families often ask, since the family protectionism to which we referred previously, has two directions, towards the person with disability, and towards the overload of family, physical and psychological responsibilities.

The functions that the sports psychologist has in the field of adapted sports involve various reference figures in this context: the athlete with disabilities, sports coaches and technicians specialized in adapted sports, family, managers and managers of associations or sports clubs, sports assistants and guides.

However, we must refer to the requirement of specialization of the sports psychologist who wishes to work with people with disabilities, due to the needs and complexities of that group. One of the potential mistakes that sports psychologists can make in their professional practice is the generalization of their work towards the clinical field, which is even more frequent in the group of disabled athletes, due to the specific needs of this population.



2. MOTIVATIONAL TECHNIQUES

Profile of psychological intervention techniques for disabled athletes

To perform the techniques of psychological interventions it is important to keep in mind several indicators, which respond to the individual particularities of athletes.

- Athlete behavior before the request for psychological support: it is correlated to the pressures or requests (internal and external) that the athlete receives.
- Athlete's ability: the athlete's ability to satisfy both internal and external needs.
- Task control: ability to adjust the stimulation to which it is exposed, maintaining activation at an optimal level in a wide range of stimulating conditions.
- Coping style: assessments and behaviors that are assumed to reduce the disorder and the tensions that accompany it.

The technical profile will consist of two fundamental groups of techniques, those of body self-control and those of cognitive training.

Group # 1: Body Self-Conditioning Techniques.

The techniques based on the self-control of the body help the athlete to control himself before the different experiences in his exchange with the environment, other people and with himself. This group of techniques will be divided into three application subgroups, which allow better training of athletes.

They are formed as follows:

- Psychophysiological techniques.
- Specialized mind control techniques.
- Body conditioning and control techniques.

Below we will explain each of them and the aspects that must be taken into account for their application.

Psychophysiological techniques

This subgroup will consist of breathing and relaxation exercises, which are techniques that act on the psychic state of the subject causing changes in the biological functioning of the person.

The procedure consists in activating the physiological function of the organic systems to increase the energy level of the organism and develop the ability to consciously control the states of each of the systems, providing, in turn, the control of the mobilization of biological energies for conscious purposes of the activity.

These techniques cause, as a somatopsychic effect, changes in general emotional states, increasing or decreasing the excitability of the central nervous system, its expressive reactivity and its reaction time.

Psychophysiological techniques will be used as a complement to specialized techniques in mind control and body conditioning.

Specialized Mind Control Techniques

The mental visualization and experience of the athletes play an important role in concentration and meditation exercises. The experience that is acquired thanks to the practice and observation of what has been experienced during the exercises of concentration and meditation with the practice the athletes incorporate it into their personality. The athlete, through concentration and

visualization, must feel and experience the sensations deriving from the exercise. These are vital for achieving deep and widespread relaxation.

Body conditioning and control techniques

The exercises that make up this group will have a close relationship with the basic capacity of human beings, muscle movement. They will be characterized by the stimulation of flexibility, body balance, body compensation and proprioceptive stimulation.

Flexibility for physical exercise is considered a capacity that constitutes an elementary condition for the correct realization of any movement of the human body since its basic function is to give maximum amplitude to the joint system.

Each proposed exercise will exert a direct influence on the vertebral column, an articular organ that plays an important role in human bi-pedation which, in turn, is the result of the balance achieved thanks to muscular actions, on the skeletal-articular organization, subordinate to informational-executive relations of the nervous system. The proprioceptive afferents are part of the information of the nervous system that corresponds to the knowledge of the functional state of the muscles: vestibular, visual, auditory information is linked to spatial behavior and its control. Taking into account that the vertebral curvatures are mechanical results of the antigravity compensation and direct consequences of muscular work in the verticalization process of the human body, we believe it appropriate that the body exercises that we intend to apply to the disabled go first of all towards strengthening the vertebral column and in secondly, to work with the centers of gravity to stimulate the sensations of balance in the body, always taking into account the individual conditions of the athletes (trauma characteristics).

Proprioceptive stimulation as part of this exercise complex aims to facilitate the triggering of neuromuscular mechanisms stimulated by

proprioceptors. This proprioceptive reflex is fundamental in these athletes, as it acts as a self-regulating or compensatory element, allowing the activation of the organism's adaptive processes, which then become psychological experiences that will have a direct effect on the body's self-image and performance improvement. sports.

In light of this conceptual support, a whole system of exercises has been created, organized in movement patterns as close as possible to natural ones and those performed in everyday life, and must also be applied to the needs or possibilities of each athlete.

These schemes allow you to:

- Strengthen the muscle chains, especially the paravertebral chains.
- Making the joints more flexible.
- Stimulate the functioning of the nervous system.

Group # 2: Cognitive techniques

The main goal of cognitive techniques in disabled athletes is to identify the dysfunctional cognitions of each athlete by replacing them with more adaptive ones.

Techniques corresponding to group # 2 are mentioned below:

- Paradoxical intention.
- Stop thinking.
- Cognitive restructuring.
- Training in the imagination.
- Relaxation of the eyes.
- Paradoxical intention.

- Systematic desensitization.

Paradoxical Intention: Paradoxical intention is a cognitive technique designed to disrupt the concerns presented by athletes. To achieve this, the subject is instructed to try to stay focused on their thoughts for as long as possible, thus creating sudden interruptions when negative thoughts emerge and accompanying them towards more positive reflections.

Stopping thinking: Stopping thinking is a technique indicated when the behavioral problem is at the level of thinking and is indicated when thoughts and images are experienced unpleasantly and lead to unwanted emotional states. The technique aims to eliminate the appearance of destructive thoughts that can be the source of worries and anxieties.

Cognitive restructuring: cognitive restructuring aims to identify and replace the irrational beliefs that underlie maladaptive behavior, with more rational and constructive ones.

The steps to follow in applying this technique are described below:

1. The first task is to identify dysfunctional cognitions that interfere with athletes' thoughts. The task of the specialist in this first phase is to teach the athlete to obtain appropriate states of thoughts, beliefs and expectations.
2. Second, once dysfunctional cognitions have been identified, the next step is to explore and question their validity.
3. The last task allows us to finally arrive at the formulation of more adaptive thoughts that favor the optimization of thinking in athletes. To achieve this, it is recommended to use reinterpretation and re-evaluation techniques for conflicting hypotheses.

Imagination Training: The procedure is to teach athletes to imaginatively evoke a scene or situation. These images can also be associated with the display

of certain words or phrases with relaxing content. For example, with imagination, you can create a room facing the sea where the sound of the waves causes a pleasant and relaxing sensation.

Ocular relaxation: it consists in teaching the athlete to relax the ocular region, using the same procedures as the Schulz autogenic training exercises.

"My eyelids are heavy", "I feel warmth in the eye region", "My breathing is calm and relaxing", "My breath brings enough air to the eye region".

Systematic Desensitization: The basic idea behind the technique is that an anxious response to a stimulus that causes fear, worry, or uncertainty can be eliminated or weakened by generating a counter-anxiety response. For its execution, the technique involves four steps. It is important, before using this technique, to have an interview with each athlete to understand their experiential situations:

1. Relaxation.
2. Construction of hierarchies.
3. Evaluation and practice in the imagination.

Subsequently, some specific topics of the psychology of physical activity and sport are developed, which are used by sports psychologists or mental trainers.

"Mental training" is increasingly important in the field of sport, in psychological or mental work with athletes. Especially when we dedicate ourselves to training athletes aiming for high performance, professional work is not conceivable without considering this important variable. In developed countries, the psychological factor is no longer discussed and is fully integrated into the multidisciplinary work that the athlete receives during his preparation

and training. On some occasions, this work is carried out by the coaches themselves (prepared to do it), and on other occasions, it is the psychologist (specialized in sports), who has the task of directing and supporting the psychological support.

Starting from this premise, it is necessary to know some of the areas of specific interest that make up the intervention and development work of the psychology of physical and sporting activity.

Among the mental and emotional capacity enhancers that every athlete must have are:

- Concentration: it is essential to reach the highest level for which everyone is trained. The main element of concentration is the ability to focus attention on the task in progress without being distracted by internal and/or external stimuli.
- Attention: intimately linked to concentration, the different sporting needs require different attention needs, these can be narrow, wide, internal or external depending on the situation.
- Motivation: fundamental axis of life in general and of sport and athletes in particular. Motivation as a process, motivation that allows the athlete to participate in their sport duly oriented towards specific and defined objectives and goals.
- Self-confidence: it is the belief or degree of certainty that individuals have about their ability to be successful in sport, it is the belief that a desired behavior can be performed satisfactorily, which is why it is extremely important to work on this variable.
- Communication: another extremely important skill in life and even more so in sports. Communication is essential when working with athletes, not

only for them but to optimize the work of the coach and other members of the coaching staff.

Some of the tools that are used, trained and generated in the athlete for self-knowledge and self-control are:

- Self-knowledge: over time the athlete must know himself in detail to know how to react to certain situations or emotions that overwhelm him. Basically, it is necessary to know their responses, the influence of the environment on themselves, how their body responds, among other things, to be able to use a self-control tool correctly.
- Relaxation: relaxation can help eliminate local tensions, facilitate recovery when there is little time to rest, help avoid excessive muscle tension, help initiate sleep and reduce insomnia which can be common before the race and after the performance.
- Visualization: it is a technique that programs the mind for a task, it requires systematic practice to be effective. It involves all the senses, even if "seeing with the mind's eye" is more common, in sport all the senses are important.

This is how one works on basic mental skills such as motivation, self-confidence, self-esteem, self-perception, which collaborate in setting goals, self-discipline in training, attitude and positive thinking and in establishing general performance strategies.

Motivation

Motivation is a key element to achieve commitment and constancy in sport, since it is the most important and immediate determinant of human behavior, "because it activates it, gives it energy and regulates it", motivation is, therefore,

a mechanism psychological which governs the direction, intensity and persistence of behavior.

Some authors frame their motivational theories in the perspective of the objectives of success and recognition of the skills achieved.

Motivation is necessary for every psychic activity; it supposes the existence of an unsatisfied need and is experienced as a worry or a tension that disappears only when the desired object, be it real or ideal, is reached. The motivation of a behavior can be due to the impulses and needs of the person, as well as to stimuli coming from the outside world.

In sport, we can establish that there are two types of motivation: one **external** and the other **internal**. The first will have to do with recognition through the public, the prize (it can be money in the case of professional athletes), fame, etc. The second responds to their own expectations, which every human being carries with them: objectives, goals, desire for success, desire for competition and affirmation, etc.

Psychological aspects that influence motivation and sports performance.

Defence mechanisms

These are mainly unconscious mechanisms that individuals use to defend themselves from emotions or thoughts that, if they emerge into consciousness, would lead to anxiety, stress, depressive feelings or a wound in self-esteem.
Defense mechanisms are an integral part of the psychic functioning of each individual and are considered pathological only when they are abused or when they are too rigid.

Primary defense mechanisms:

- Dissociation
- Projective identification
- Introjection
- Denial
- Projection

Secondary defense mechanisms

- Suppression
- Withdrawal
- Reaction formation
- Idealization
- Identification
- Intellectualization
- Repression
- Regression
- Splitting
- Sublimation
- Isolation

Motivation and goal

Referring to the concept of motivation, what the coach asks is: *how to make athletes want to do something. What can push them to commit?*

The first question refers to the engine or force that directs action, while the second equates to a goal, something the athlete wants to achieve.

Therefore, the motivation shows two faces:

1. Impulse referring to the energetic components of motivation: how does an athlete activate? How much effort does it take to reach a goal? How is his

performance affected if the level of activation is higher than that appropriate for a specific sport practice?

2. The needs, linked to the directional components of motivation, with the objectives of the athletes. To understand them, the coach must know the individual needs of each athlete, based on each person's goals and milestones.

According to Maslow's theory, each person, each athlete, in this case, meets their needs according to their own priority system. Once physiological needs are met, those of security, love and affection, self-esteem and, finally, self-fulfillment are satisfied. The order established by Maslow is not absolute and allows you to change the order of priorities depending on the circumstances.

For the coach, the motivational process becomes a field of investigation of the motivations (impulse and need) of each of his athletes. Not only must he have previously analyzed his own motivation regarding the coaching work he carries out, but he must also analyze the motivational component of each athlete because, if the goals of both do not coincide, the performance in training and competitions will not be optimal. Hence the importance that the coach discovers in each athlete his level of impulse and direction to adapt the training as much as possible.

An athlete with a low level of motivation or activation for their sport will have to work to increase it during training and competition. And it is the coach who has to guide him in that specific direction to increase its activation.

An athlete with an unrealistic athletic goal is unlikely to achieve it and he will be more likely to be frustrated and not react constructively to defeat. The coach will have to rethink the inappropriate goal with him but, for this, it will be necessary that he has identified it first.

Schematically, motivation influences sports performance based on the two factors mentioned above, impulse and need.

MOTIVATION thus becomes a response oriented to the satisfaction of a need, be it an objective and/or an energetic control. In young practitioners the two most important needs they try to satisfy, and for which they are motivated to sport, boil down to two ideas: having fun (experiencing exciting situations) and feeling important while playing, which implies that they must be competent in this. sector.

As we can see, both aspects, energy and needs, are linked to the motivation that young people feel when they play sports. Also among the reasons why the opposite situation occurs, the abandonment of sporting activity, the two factors that define the motivation appear: lack of enjoyment, inadequacy both in energetic stimulation (or for excess, frustration, fear ..., or out of boredom) and in the direction proposed (wrong goals, lack of support from family members, coaches).

Let's now look at the theories on which motivation is based and the most effective ways to motivate in sport.

Personal perceptions

About motivation and the achievement of sporting goals, several theoretical approaches are widely reflected in the development of sport.

There are two basic styles:

- Sports domination orientation: the athlete attributes his success or defeat to lack of effort, so he believes that, with more or less training, he will be able to achieve better results than the current one.
- "Defenseless" orientation: the athlete attributes his defeat to his inability to show better sporting skills. He realizes that no matter how hard he tries, he won't do any better. His successes are attributed to the ease of the task, not the ability to solve it. He combines his inability to improve his sporting

skills with the sporting result, a phenomenon known as "learned helplessness".

The joint work of the sports psychologist and the coach (athlete-oriented) is aimed at 4 main points:

1. Knowing coping styles against the results that athletes achieve
2. Strengthen the “locus” style in athletes
3. Change the powers of "indifference" shown by the athletes: Objectively evaluate the results. Valuing the effort and strengthening it
4. Link effort to achievement through gradual sports planning as effort-related successes are achieved.

Another conceptual dimension linked to personal perceptions and motivations is the LOCUS OF CONTROL, the belief that every athlete has connections between successes and failures and their behavior or sporting conduct.

It has a dual nature:

1. Internal locus of control: the athlete believes that there is a direct relationship between what she has done (her sporting situation) and the result she has achieved.
2. External locus of control: the athlete believes that there is NO direct relationship between what he has done (his sporting situation) and the result he has achieved.

In general, the athlete with an internal locus of control is more productive because he has the feeling of being in control of his sporting situation and the possibility of modifying it in the competition to obtain better results. If the type

of locus of control and the dimension of stability are correlated, the attributions that the athlete can make and his sporting achievements are as follows:

LOCUS OF CONTROL

- STABLE
- INTERNAL
- EXTERNAL
- UNSTABLE
- CAPACITY (DOMAIN)
- DIFFICULTY OF THE TASK
- EFFORT
- FORTUNE

The skill and effort are under the athlete's control, while the luck and difficulty of the task are externally controlled by the athlete. In turn, the athlete's skill and the difficulty level of the challenge are fairly stable factors, they don't change much. Conversely, luck and fatigue are more unstable.

The athlete can also predict his emotional responses depending on previous successes or failures in a given situation that presents itself to him. Some coaches know the attribution (perceptual self-assessment) that any athlete will do after experiencing success or failure in a given competition. The average athlete, when successful, often attributes it to their ability and effort (internal factors). However, if what they experience is a failure, they will likely attribute it to external factors, namely luck or the difficulty of the challenge. The athlete with few sporting successes does not attribute his successes to any particular factor, but his failure is always attributed to a lack or a flaw in his own sporting ability. Finally, the athlete who achieves high recognition attributes his success to both his ability and the effort made, while failure or defeat attributes it to lack of commitment.

Within the personal perceptions of performance and motivation, we find SELF-EFFECTIVENESS, closely related to the athlete's self-confidence. This concept refers to the athlete's belief that everything he needs to perform optimally can achieve it, i.e. the internal belief that he can produce a positive result.

Anxiety

It is a negative emotional state that includes feelings of nervousness, worry and apprehension, related to the activation or arousal of the organism. Therefore, anxiety has a thinking component, called cognitive anxiety and a somatic anxiety component, which constitutes the degree of perceived physical activation.

There is a series of both personal and situational elements linked to the appearance of anticipatory anxiety in competitions which are linked to specific aspects and characteristics of each sport, to the athlete's personality level (taken as a cognitive-affective approach) and to some aspects that they come from the external environment.

There are not only personal elements related to the appearance of anxiety in successful environments (such as trait anxiety, self-efficacy, success goals, previous expectations, age, experience, skill level and gender) but there are also different situations that determine levels of anxiety before a sports competition, such as the type of sport and the complexity of the task.

Attention and concentration

Attention control should be one of the goals to be considered in any psychological training program and a skill that both athletes and coaches should perfect.

Attention could be defined as the interaction with the environment in which the subject comes into contact with the relevant stimuli of the situation (trying to

discard the irrelevant stimuli), in the present moment (except when the situation asks to interact with the past or the future, retrospectively or prospectively).

Attention is, that is, a psychological process that allows the individual to establish contact with the most relevant stimuli of the situation in the present moment, omitting or eliminating other distractors that are not useful or necessary. When the athlete performs a task that requires the use of attention, he is influenced by three types of factors: those of a personal nature (skills, interests, goals), those specific to the activity and environmental factors, and factors that determine their level of activation (arousal).

Attention should focus on concrete elements of the present, elements selected for their excellence and usefulness after having ignored others.

Similarly, it is necessary and important to define concentration: concentration is the maintenance of attention conditions for a more or less lasting time as required by the situation we are facing.

And if we want to deepen a specific sporting modality, we can refer to Liliana Del Monte (2000) who, in her study with 114 Cuban judokas, determines that concentration has to do with the development of the first phase of the psychomotor processes of any tactical action. (perception and analysis of the match situation), a phase that significantly affects the remaining phases of the tactical action (the mental solution of the special tactical task and the motor solution of the tactical task).

Personality and self-confidence

Personality can be defined by referring to the unconscious level, to the conflicts and various opposing anxieties at the conscious and cognitive level: a peculiar characteristic of man that emerges from his individuality in direct relationship with the environment with which he actively interacts. Regarding sport, however, based on the personality structure, some sports will be chosen

and not others, the level of competitiveness will be determined by aspects of this structure and by external factors that positively stimulate it.

Personality is a scientific construction developed by psychology to understand the particular way of being and doing that is typical of a person. It consists of the characteristics and typical behaviors of a particular human being. It gives individuality to each person: it characterizes the individual who is born as the child grows, matures and reacts to the many environmental stimuli. Personality is a product of the individual's interaction with his or her social environment.

Freud considers it as "the integration of the id, the ego and the superego"; Adler understands it as "the very meaning of an individual's life, his characteristic ways of solving problems and achieving the goals he has set" and Freeman defined personality as "the individuality that emerges from the interaction between an organism psychobiological and the world in which it develops and lives".

The practice of sport does not change the personality, it generally accentuates some traits that are already belonging to the individual or that are shaped at the beginning of the sport.

It is in the period of childhood-adolescence that the coaches who represent very important authority figures, who have great participation in the phases of personality formation, have great influence.

Conceptualization of self-confidence.

Athletes and coaches agree that trust is key to competing in a sport. Some athletes believe that confidence consists in thinking that they can win, but sometimes this is not enough.

The key to self-confidence lies in the realistic expectations that the athlete has, in the knowledge of their real abilities and limits. Therefore, self-confidence is defined as the internal belief of being able to do something, based on the suitability of one's abilities to achieve it successfully.

Similarly to the activation process, self-confidence is related to the level of performance as follows:

the increase in confidence and performance occurs in parallel until it reaches a point or a period after which excessive self-confidence causes a decrease in sports performance. As for the latter, it is an example of what usually happens when a "number one" team or player faces a much inferior team or player.

The confidence is such that, for this reason, he is neither focused on the game, nor interested in preparing himself nor making the most of all his skills, which means that his performance generally tends to decline, and can even affect the final score.

The opposite also happens, when the opponent is much superior: the "inferior" player feels that it is so difficult for him to connect with confidence in his possibilities that, generally, he ends up performing at a very low level, even lower than what could be expected of him. Either way, proposing appropriate goals is what would keep the confidence level in its optimal state.

The characteristics of the three types of self-confidence found in the athlete and the coach are:

Without self-confidence:

- he Has the firm belief that no matter how hard he trains, he will continue to hurt.
- he fears failure so much that he refuses to participate or acts without conviction.
- Shows high levels of anxiety and quickly loses focus.
- Tends to abandon sports (in the case of young athletes).

The optimal level of self-confidence

- Play according to his possibilities and set goals based on them.
- Knows that he must develop both self-confidence and the systematic training of his physical-technical skills.
- See mistakes and defeats positively, as part of the sport, as information to improve in the future.
- It is not limited to the fear of winning or losing.

Too confident

- The level of self-confidence is higher than what his abilities guarantee.
- This inadequate belief of the athlete can be reinforced by comments from the outside, from the parents, from the coach.
- This inadequate belief of the athlete can also be an external reflection of poor external confidence. The athlete can be aggressive and cynical on the outside, although on the inside they struggle to support their fears and doubts.
- Confuses what is now with what it would like to be.
- Avoid situations that can damage your image of high trust (which can be a false trust) with fictitious images, arguments with the referee ...
- Hardly admits mistakes.

The concept of self-confidence is frequently used in the field of physical activity and sport training, to refer to the perception that the person has of himself and his abilities as sufficient to face a certain task and if its results are positive.

However, it is important to define another important factor in the psychology of sport and physical activity, such as self-esteem, which is the

construct by which we define the assessment we make of ourselves based on the feelings and experiences we have incorporated to lifetime.

The person is not born with a fixed and static concept of what he is, but this is formed and develops progressively based on many variables such as personality traits, psychological needs and family education.

Some of the features for assessing self-esteem are designated as follows:

- Physical aspect.
- Relations with others.
- Personality.
- How others see you.
- Professional or academic performance.
- Carrying out daily activities.
- Intellectual functioning.

A person, in his process of maturation and development, acquires a series of rules or formulas that help him make sense of himself, the world and what surrounds him. These formulas determine how it will classify what the person perceives and observes and, with the passage of time and learning, it almost automatically ends up associating certain situations with certain characteristics.

Leadership, communication and group cohesion

Leadership is a concept that has been extensively worked on in many studies and surveys, because in every moment of the life of a human being, as a constituent element of a social group, particular behaviors are determined in the people who make up the group.

This is the case with leaders, people who have certain specific characteristics in their behavior within a group. For this reason, it is important to conceptualize leadership.

Leadership presents three important approaches to highlight:

- Attribution-leadership theory: leaders behave consistently with their ideas and have no doubts when making decisions.
- Charismatic Theory of Leadership: Postulates that followers establish attributions of heroic or extraordinary abilities to leadership when they observe certain behaviors.
- Traditional leadership vs. Transformational leadership: the former motivates through task clarification, the latter pays attention to the concerns and developmental needs of their followers, changing their perception of issues that affect their organizations, helping to focus old problems in new ways.

3. AUTOGENOUS TRAINING

Yoga and relaxation practice in the education of disability

Yoga is a stimulating and fun discipline that keeps the body in shape, regulates internal organs and balances the circulatory, respiratory and hormonal systems.

Yoga is not only a compendium of postures but also includes practices to improve breathing, mind and relaxation at all levels, very necessary elements in any person but even more so in an athlete since the execution of any sport requires discipline and that's what yoga brings.

Every day there are more and more athletes around the world who include yoga techniques in their workouts to maximize their performance as its

application to different sports makes a great contribution to physical, mental and emotional aspects. Coaches are increasingly aware of the benefits that this discipline brings to their athletes and how the lack of this practice can lead to injuries, poor concentration, lack of interest and performance.

If in Yoga we talk about self-realization, to overcome human limits, all the more reason we would use our strength to apply this knowledge to the service of people with a certain degree of disability, in its different aspects or varieties, both motor, sensory, intellectual.

Where the body may be deficient, awakening the spirit and consciousness is of great help. The practice of yoga will also inspire in them the spirit of transcendence, through breathing techniques, relaxation, simple postural exercises, visualization and, when the occasion requires it, chanting of mantra, encouragement, attention and concentration.

As part of the cultivation of healthy habits, we must commit ourselves to the formation of positive attitudes and for this we must put into practice the principle of education for diversity, as a further and fundamental component of human development, keeping it present in everyday life, such as hygiene, food, rest.

That education is the means for the renewal of the social order was already seen by Gandhi, when in social and economic terms India seems to have no future.

Practice

It is important to familiarize yourself with the concept of letting go. When we know and experience, through Yoga exercises, the phases of stretching and relaxation, we can enter more easily into the understanding of letting go, both physically and mentally.

Because in the execution of the asana (exercise) both the technique for assuming the positions is as important as returning to the starting position. So, in the most basic way, we would develop the exercise, tensing the body and muscles and then releasing and relaxing, before moving on to the next one.

By valuing understanding and experience accompanied by internalization, all of this will favor receptivity and mental attention, as this works beyond mechanical thoughts. With our attention focused on the present, we give new meaning to life by placing the mind under the control of the will. The postures exert an action on the Nervous, Circulatory, Bone, Lymphatic and Muscular systems. Thanks to the massage and pressure, they subjugate the body, naturally, without great effort, introspectively discovering the usefulness of posture.

Yoga is not limited to a series of physical exercises, oriented to effort and, above all, has nothing to do with competitiveness, but it is a great healthy technique with therapeutic benefits.

It should also be noted that many physical, mental and environmental factors affect breathing so we will apply the mobility of the diaphragm with breathing techniques and different forms of breathing. And with the twist positions, it improves the nutrition of the intervertebral discs. In this case, human resources must be facilitators, so that the approach to these training practices are transformed into something pleasant, comfortable, useful and meaningful, increasing confidence and security, with a greater sensation of presence in the body and a pleasant sensation of harmony and inner peace.

There are different types of Yoga.

- Bhakti Yoga is known as the path of divinity and devotion, it is especially for sensitive people with a calm nature, mantra chants and practices directed to God are performed.
- Hatha Yoga is more aimed at physical postures, it is for athletic and active people. Look for an integration between the body and the mind.

- Loo Jnana Yoga which uses meditation a lot, is ideal for rational and analytical people.
- There is Karma Yoga which is for selfless people who seek to serve humanity through actions without seeking anything in return.
- There is also Kundalini Yoga which focuses on the energy centers, on the purification of the body and mind through breathing, these practices are very demanding, so it is ideal to perform them with a teacher.
- There is also Raja Yoga which focuses on concentration and management of the mind as the ultimate goal.

Hatha Yoga is the most practiced type of Yoga in the West, it combines physical postures with breathing to achieve an energetic balance between mind and body. It is translated as Ha: feminine energy of the Moon, and Tha: masculine energy of the Sun.

Yoga means Union, so Hatha Yoga means union of the two, the ability to give and receive. The communion of both cerebral hemispheres through physical postures and breathing.

Breathing in Yoga is essential as it affects the flow of energy that is distributed throughout the body and mind with postures. Breathing is known as Pranayama, which translates as breathing control, this process is the most important because it affects the activity of cells and is closely related to the functioning of the brain. Proper breathing will lead to calm and pleasant moods.

This state is also essential for meditative practices, it has very specific physiological effects on the body that have been proven by science, the consequences of meditation are visible as it helps the development of consciousness, calms the mind and frees it from everyday worries, purifies the mind and makes it more creative, stimulates the areas of the brain responsible for happiness, stimulates the immune system, improves memory and increases intellectual abilities.

Yoga reduces stress, helps heal from physical injuries and illnesses, and helps us regain our sense of general well-being. But the feeling of well-being that yoga provides is very different from the "endorphin rush" experienced with Western exercise. The practice of yoga also increases the feelings of emotional well-being. Many doctors and psychotherapists agree that emotional trauma is not only contained in the heart or mind, but also in the body of each person.

Users of this program can recall ancient traumas and memories and can process them immediately, while practicing the poses and during the relaxation phase that follows. Many users report spontaneous feelings of love or forgiveness, while others have deep insights. All students talk about inner peace and greater relaxation, and this is reflected in their faces. Stress-reducing activities such as yoga have been shown to reduce the average number of visits to primary care physicians, suggesting that yoga can contribute to overall health and heart health, particularly in populations that are subject to significant mental stress.

Examples of exercises

Below are the guidelines that instructors should work on in this Yoga program. Try to avoid doing yoga sessions right after a meal so that exercise doesn't interfere with digestion, as there are postures that are performed tilted down and doing them on a full stomach can be uncomfortable. Also, it is not convenient to practice Yoga just before going to sleep, as there are energetic exercises that can disturb sleep. For example, a good schedule can be between 10:00 and 13:00 in the morning or between 5:00 and 8:00 p.m.

Breath control is essential for Yoga exercises. You need to pay attention to your breathing and focus on finding out how you breathe in and out. All exercises are accompanied by abdominal breathing, inhaling and exhaling through the nose. The exercises will be performed accompanied by long and prolonged breathing.

There are four different steps to perform yoga breathing exercises correctly:

- The first is called Puraka, it is inhalation. It should be slow and continuous, not forced or fragmented.

- Then follows a complete pause called Abhyantara Kumbhaka. This break should be relaxing. Don't strain your muscles, leave your abdomen full for a moment. Try to keep it that way for a count of four.
- The third step is the exhalation, called Rechaka. It should be slow and continuous. You need to feel relaxed as you exhale. All muscles should relax and air should slowly be expelled from the lungs.
- The last step is called Bahya Kumbhaka. Here ends the cycle. This pause is seen by some as a spiritual time when everything stops and the mind is calm.

All exercises are performed to reach the positions and then maintain them. These postures are called Asanas.

To practice Yoga, the environment and the environment are important, it must be relaxing and promote concentration, these are some elements that must be taken into consideration:

- Avoid strong lights, a dim light like a small lamp is ideal.
- You can light an incense that helps concentration, especially during the second half of the lesson which is less energetic.
- During the lesson, play soft, quiet music at a low volume. There are special CDs with music for Yoga or to perform exercises of this type. The sounds of nature are particularly pleasant. You can also use some videos with soothing images and sounds that are easily found online.

Parts of the sessions:

- *Heating:*

  • Exercises are performed to become aware of the breath and with standing asanas. For example, the asana of the tree, of the mountain, etc.

- *Main part:*

  • Stretches are performed in relaxation so that stretches are not painful.

  • The simplest exercises are performed in a standing position.

  • Other exercises are performed in a sitting position and others are performed lying down.

In this case, we will take into account that they are people with deficits and it could be that some users may have problems in certain positions or it may be laborious to lie down and get up.

- *Relaxation phase:*

  exercises are performed in a sitting position, looking for a comfortable posture. We help users focus and connect with their extensions. All relaxation begins with proper breathing.

4. MENTAL RELAXATION / MENTAL HEALTH / CLINICAL HYPNOSIS

Mindfulness in the field of physical and sporting activity

Introduction:

In the context of physical activity and sport, especially for athletes and high-level athletes, one of the fundamental objectives is the increase in sports performance. When it comes to improving sports performance, intense and rigorous training programs are immediately thought of. However, sport is

multidimensional by its nature and also requires psychological skills to improve and optimize performance.

Optimal performance has been described as "the right combination of cognitive, affective and physiological conditions that allow learned skills to be practiced seemingly effortlessly and automatically".

For decades, sports psychology has investigated the ideal climate or state of mind that favors athletes to achieve their best performance and this includes, of course, the acquisition and development of certain psychological skills.

To acquire and develop these skills, psychology applied to sport has mainly turned to techniques and tools that come from what in psychology is generically called the traditional cognitive-behavioral approach.

We say "traditional" because this approach corresponds to the so-called "second wave of therapies" and the therapies within this movement are known as "second-generation therapies"; in contrast to "third-generation therapies", among which we include **mindfulness.**

One of the major limitations of second-generation therapies are the experimental data which indicate that the attempt to control, reduce or eliminate private and internal events (for example, thoughts, emotions, bodily sensations, etc.), is the explicit goal of the traditional cognitive approach. behavioral, paradoxically, and in many cases, produce effects contrary to those desired.

Among these, significant increases in duration, intensity, frequency, related to unwanted memories or moods and intrusive thoughts (a phenomenon called *post-event misinformation effect*) have been described.

These data represent a clear challenge to the same principles and assumptions on which second-generation therapies are based: the need to change internal events (for example, thoughts, physical sensations and emotions). This

work invites us to consider mindfulness (awareness) as an alternative to the control of private and internal events, in the context of physical activity and sport.

Mindfulness involves bringing attention to the present moment with an attitude of curiosity and openness, radically accepting the experience, without judging or evaluating it.

Traditional goals and techniques to improve sports performance

The traditional cognitive-behavioral approach in psychology applied to sport is based on the assumption that the reduction of negative internal states is necessary to increase positive emotions and confidence levels, therefore, consequently, athletic performance will be improved. This hypothesis has promoted a whole series of protocols with the primary objective of providing athletes with control strategies to eliminate or reduce, or even modify, the internal states evaluated as negative, in the hope that this will contribute to improving their level of performance.

For example, an athlete may be trained to relax in moments of anxiety, to eliminate certain thoughts that are evaluated as dysfunctional or, for example, to modify certain emotions or alter feelings that may emerge. In summary, we could say that athletes are led to believe that they require to change and are taught to modify certain thoughts, emotions and physical sensations, to perform a correct execution or to improve their sports performance. The development of these skills has dominated sports psychology for decades. These techniques represent the main methods or tools to help athletes improve their athletic performance.

However, several models and theories support the idea that it is not necessary to change internal emotional states to reach the ideal state for performance.

For example, models such as the CUSP Catastrophe, the Individual Zones of Optimal Functioning (IZOF) and the Processing Efficiency Theroy (PET) argue that the ideal state for maximum and best performance may occur while one is experiencing thoughts, feelings or negative emotions.

For example, the PET (Eysenck and Calvo, 1992) argues that when the cognitive components of anxiety manifest, the efficiency in information processing can be significantly reduced through a reduction in working memory capacity as the focus of attention has been diverted from the related task (sports performance, in this case) to an irrelevant one (for example, eliminating a negative thought). It seems logical to consider that if an athlete has to control some thoughts, emotions or bodily sensations, evaluated as negative or counterproductive, especially if he believes he has to do it so that his sporting performance is optimal, he will have to invest energy and time in exercising control. necessary to succeed. The first consequence that follows is that if the athlete has to invest a certain amount of time and effort, consequently, he will not be one hundred percent, fully attentive or focused on the task itself, with all his energy, with the possible impact. negative on its sporting performance.

In summary, several negative consequences can derive from wanting to change or eliminate certain internal events in the context of the practice of physical activity and sports, especially in highly competitive sports where performance and efficiency are fundamental.

Mindfulness represents another path, a radically different alternative that involves relating to our internal events in a completely different way. Mindfulness does not claim to change or eliminate them altogether. Mindfulness represents a way of relating to them with serenity, with awareness and with the radical acceptance of the experience.

Let us abandon control efforts and adopt a contemplative position. This is one of the ways that mindfulness can positively contribute by helping athletes improve their athletic performance.

Mindfulness: the art of accepting experience instead of fighting it

In summary, we can say that Mindfulness (awareness) represents the "heart" or central teaching of Buddhist psychology and is, intrinsically, a state of consciousness that is realized by paying attention to the experience of the present moment.

Mindfulness has been defined, for example, in the following ways: "consciousness that emerges through intentional attention, in the present moment, in a non-judgmental way, to the flow of experience moment by moment";

"The clear and simple mental awareness of what is happening to us and within us in the subsequent moments of perception";

"It is the universal and fundamental human capacity, which consists in the possibility of being aware of the content of the mind moment by moment".

More generally, awareness has been described as a kind of present-focused, non-processing or evaluative consciousness, in which any thought, feeling or sensation that arises in the attentional field is recognized and accepted as it is.

There are two types of components involved in the practice of mindfulness.

The first is the self-regulation of attention, whose function is the maintenance and redirection of attention, in addition to the selection of specific stimuli. In this way, the recognition of mental events in the present moment is increased.

The second is the orientation towards experience. This component involves adopting a particular relationship with one's experience in the present moment. This type of relationship is characterized by an attitude of curiosity, openness and

acceptance. In this way, one learns not to automatically react to the stimulation that is perceived or experienced.

Seven essential elements could be outlined on the attitude towards the practice of mindfulness:

1. Don't judge. Mindfulness is cultivated by assuming the posture of impartial witnesses to our experience. Be aware of the constant flow of judgments and reactions to both internal and external experiences to avoid them. It is important, in practice, to be aware of this tendency to judgment and to limit oneself to observe the comings and goings of thoughts and evaluations. There is no need to act on them, block them, repress them or modify them, they simply observe and let themselves flow;
2. Patience: shows that we can understand and accept the fact that sometimes things just have to happen. The practice of patience reminds us that we are not forced to fill our moments with a thousand activities and ideas to enrich them. To be patient is simply to be open to each moment, accepting as such;
3. Beginner's mind. Mindfulness to see the richness of the present moment through what has been called the "beginner's mind", which is the mental attitude of being willing to see things as if it were the first time and remain open to new potentials;
4. Trust. Developing basic confidence in ourselves and our feelings is an integral part of awareness. It is recommended to trust our intuition: even if some "mistakes" can be made, it is always preferable to the continuous search for external orientations;
5. Don't try hard. The moment mindfulness is used as a goal or a means to achieve something, one is ceasing to meditate. As paradoxical as it may

seem, Meditation is “not-doing”, so trying to finalize meditation for a purpose hinders awareness;

6. Acceptance. Acceptance means seeing things as they are in the present. It is being receptive and open to what one feels, thinks and sees, accepting it because it is there and in that moment. It is one of the main components of Mindfulness;
7. Give in, let go. It means disengaging from things, simply observing them for what they are. All you have to do is leave the experience as it is.

In summary, the practice of mindfulness brings us to a state where we are aware of the reality of the present moment, accepting and acknowledging what exists in the here and now, but without being in the midst of emotional thoughts or reactions.

Mindfulness is a way of relating to the totality of experience (positive, negative or neutral) and provides us with a means by which we can reduce our overall level of suffering and increase the level of well-being.

Mindfulness does not involve controlling internal events, but being aware of them and being able to act according to our values and the needs that the situation requires, without having to fight or oppose these, wasting a large amount of time and energy, and this is particularly important in a context where attention and precision are required in execution, such as in sports.

Among the Mindfulness training programs the psycho-educational training program developed by Jon Kabat-Zinn stands out: Mindfulness-Based Stress Reduction or MBSR which is a general, non-specific training program for any psychological disorder, the application of which has proven to be effective in multiple problems in both mental and physical health, in patients as well as in non-clinical populations.

The main awareness training techniques and exercises used in the MBSR program are:

- the raisin exercise
- awareness of the breath
- contemplation of bodily sensations or body-scan technique
- yoga
- walking meditation
- awareness in activities of daily living (for example, dressing, washing dishes, grooming, etc.)

Recently, other psychological therapies have emerged that somehow use Mindfulness and integrate its principles. Some of these therapies belong to the so-called "third wave of therapies" and are known as "third-generation therapies".

Three therapies that explicitly teach mindfulness skills to patients stand out:

- Mindfulness-Based Cognitive Therapy;
- Dialectical-Behavioral Therapy;
- Acceptance and Commitment Therapy.

Also, it is worth highlighting the recent mindfulness training program called the **Meditation Flow**.

The goal of MF is not to try to control thoughts, sensations or feelings, nor to modify or change them but, on the contrary, to free them, accepting any thought, feeling, emotion or physiological sensation that may appear spontaneously.

MF consists in becoming aware of our breath and, at the same time, repeating a word or mantra. To do this, a meaningless three-syllable word is invented (for example, TE-LA-BA) which is repeated mentally softly and

effortlessly, while directing attention to the abdominal area to feel how air enters and exits naturally. when you breathe.

In addition to learning this meditation technique, the training program is completed with the presentation and discussion during sessions of various ACT metaphors and exercises, along with tales of the Zen tradition and Vipassana meditation.

Finally, another Mindfulness technique that makes up this training program is the practice of body scanning or **Body-scan**.

Body scan meditation is an excellent technique for people who experience physical pain and tension throughout their bodies. It involves focusing on different parts of the body in a gradual sequence, from the feet to the head. As the meditator performs the body scanning exercises, she becomes aware of every single part of her body, including pain, tension or discomfort. This way, she learns about the body better, which can lead to ways to better manage physical problems.

Although MF is very recent, the truth is that dozens of scientific studies support its efficacy for the treatment of multiple disorders (e.g., anxiety, depression, chronic stress, hypertension, fibromyalgia), in the educational field (performance education, self-concept, creativity, commitment, values, etc.) and even sport (reducing burnout and improving personality and stamina in athletes).

There are mindfulness programs developed specifically for athletes.

Particularly noteworthy are the Mindful Sport Performance Enhancement (MSPE) program and the Mindfulness-Acceptance-Commitment (MAC) program.

Conclusions

Taking the point, what we are interested in highlighting here is that the goal of mindfulness is not the control or suppression of thoughts, emotions or bodily sensations, but is the acceptance of them, experiencing them and considering them as transitory, impermanent and ephemeral events. which must not reflect the reality of the present moment. This is in direct contrast to the main goal of traditional techniques used by athletes to improve their athletic performance (e.g., controlling anxiety, eliminating negative thoughts, changing moods, etc.). The person who practices mindfulness learns to observe and accept the thoughts, feelings and emotions that she experiences. Through observation it dis-identifies, generates perspectives and transcends them. The practitioner does not attempt to eliminate, suppress, reduce or in any way alter his thoughts, emotions and bodily sensations, as attempts to control sometimes create more problems and suffering. Athlete who practices mindfulness will be able to develop awareness around their thoughts, emotions and bodily sensations without wasting time controlling anything but their own attention and without investing time and energy to eliminate or change anything that is being negatively evaluated.

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