

MOTOR EDUCATION – ELEMENTS OF GYMNASTICS KMSE I

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What is gymnastics?

- ❑ It represents one of the most important means of physical education.
- ❑ It has a very rich content, accessible to all ages, it has its own theory, it has specific organization forms and means and its own teaching methods.
- ❑ In its development, gymnastics valorizes the discoveries of bodily education, it is based on data from psychology, pedagogy, anatomy and physiology.
- ❑ Practicing this sports branch requires systematic activity during which willpower-related moral qualities are needed, such as: perseverance, courage, firmness and confidence in own possibilities.

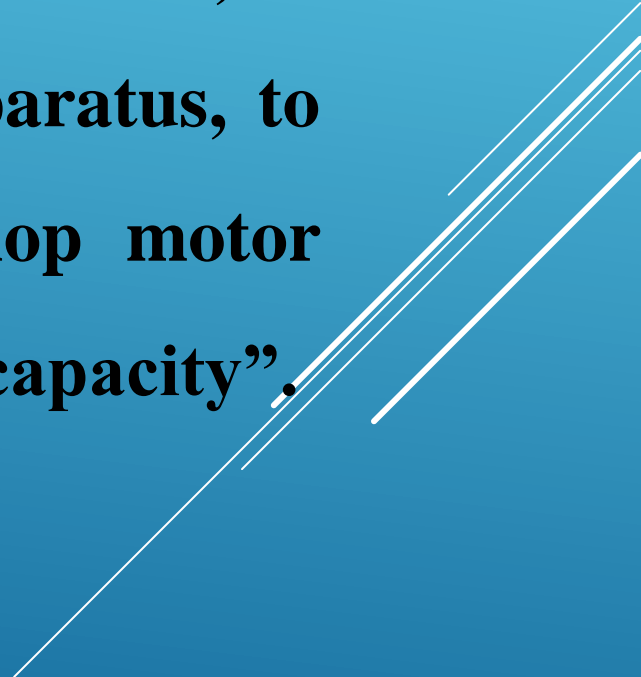
Definitions

R. Podlaha in "Terminologia gimnasticii" (Gymnastics terminology) defines gymnastics as a **“system of exercises analytically or globally applied which selectively and cumulatively influences the locomotory apparatus, in order to improve the movements of the human body, to form proper posture”**.

C. Kirişescu in "Palestrica" defines gymnastics as follows *“Gymnastics consists of method exercises made according to a systematic plan and according to certain rules in order to preserve health and increase the physiological capacities of the human body, implicitly the psychic ones, willpower, courage, etc”*.

Fekete Janos in Basic, Acrobatic Gymnastics and Jumps:

“Gymnastics represents a special system of natural and created physical exercises which have are meant to strengthen health, to selectively and precisely influence the locomotory apparatus, to enhance harmonious physical development, to develop motor qualities, to form and improve the human’s movement capacity”.

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History

- Gymnastics exercises were practiced with the purpose of **maintaining health** in order to cope with the working conditions and quite many **fighting activities**.
- Etymologically, "**gimnazein**" means to **get undressed**, to remain naked; "**ghimnos**" means **“naked”** in Greek language.

Gymnastics in antiquity

China

- **KUNG-FU** in the year 2698 B.C. established a medical gymnastics system based on breathing, stretching and relaxation exercises. The essence of this system went down to realizing that each disease was caused by certain internal organ paralysis or congestion. In order to get rid of these diseases, **KUNG-FU** recommended the execution of certain gymnastics movements accompanied by breathing, made from various positions.
- During **TANG** dynasty (1102-1142), in the 12th century, general **YO-FEI** renewed this gymnastics and created a system based on performing exercises which put to work the large muscle groups and targeted the development of correct body posture. **These exercises were accompanied by music and their stylized form, completed with fighting exercises, was practiced until modern times (Wu-shu).**

India

- The document that certifies the Hindi civilization is in the poem “The Vedas”, poem which was written in Sanskrit language and dates back to the 4th millennium B.C.
- The Hindi castes adopt laws which contain prescriptions regarding daily physical education accompanied by baths for personal hygiene purposes, as well as for “cleansing off the sin”.
- Later on, these exercises formed a national physical education system named *Pranayama*.
- Pranayama, as a physical culture system, comprised a series of positions and movements of the body and limbs, combined with breathing movements, between inhaling and exhaling there were prolonged periods of apnea.
- Later, the Yoga system, based on prolonged immobile positions, on suspending breathing, meditation, various forced attitudes which modify the rhythm of normal functions, became the most spread system, having more and more followers, up to present times. According to Hindi believes, Yoga is the union with the self, representing the path to self-education.
- Nowadays, yogism is a synthesis of several Yoga systems adapted to current necessities and improved by the discoveries of modern psychology

Ancient Egypt

- Ever since the 4th millennium B.C., the Egyptians created an outstanding civilization and culture represented by monumental works which still amaze us.
- The bas-reliefs of Ptah-Hotep and the well-conserved mural paintings are proof of the Egyptians' preoccupations for physical education and confirm the existence of respect for movement
- The mural paintings represented through the famous frescos from Beni Hassan show numerous movements of sports nature from gymnastics, athletics and other fighting sports. The acrobatic elements in pairs are often met in the monuments from Ptah-Hotep and on the lime stones of Sakkara.

Their dances were: folk, acrobatic and war dances (archers' dance)

Persia

- The most flourishing Persian civilization is related to the name of Darius who made Persia the most powerful state of those times. Referring to Persian culture, the Persians managed to combine elements borrowed from the neighboring peoples: Babylonians, Armenians and Egyptians. The Persians' education was based on developing self-restraint through bodily exercises performed during hunting.

Greece

- In ancient Greece, physical culture had an institutionalized character, practiced in “**palestra**” **and gymnasiums**, being part of the citizenship education. The objective of the educational system foreseen by the Greeks was **the development of both body and spirit.**
- Their conceptions about physical exercises have evolved in three directions: hygienic, military and harmonious. “**The Greeks created the word "gimnastica" to generally denote all the physical exercises practiced with the purpose of contributing to maintaining health, to strengthening the body and to make spiritual life more beautiful"** (Kirişescu 1964).
- In ancient Athens, *the harmonious ideal conception* was the center of education objectives. The human ideal was conceived as a sum of several qualities that should lead to perfection.
- Plato and Aristotle were the most important representatives of this conception. The ideal of human perfection was materialized in the formula "kalos kai agatos" – beautiful and kind human being – endowed with all the physical, soul and moral qualities. *Kalokagathia* became a notion widely used by the great thinkers of ancient Greece.

The Roman Empire

- The Romans did not have a physical education system based on a well-defined concept applied in education.
- After the expansion of the empire, they came in contact with the civilizations of the conquered peoples, these civilizations having an influence upon them, to the extent that it supported their idea of conquest.
- The physical exercises practiced by soldiers in preparing for battle were carried on Mars' Field, often ended with swimming exercises in the waters of the Tiber River. The gymnastics they took over from the Greeks was only an imitation of the external forms, without the content of Greek gymnastics. The Romans' physical exercises have not become an institutional occupation.
- The Greek palestra have been adjusted according to Romans' taste, materialized into the famous Roman baths. Caracalla and Diocletian's baths are the most famous ones. The rich Romans used to spend their spare time there.

Gymnastics during the Middle Age

- The ideology of medieval organization neglected for centuries the idea of physical culture as the ancient peoples meant it. The strictly religious believes disregarded the preoccupations for body culture; even body hygiene was considered a “sin”.
- Later on, in order to maintain feudal governing with the sword, for the medieval man, especially for the knights, physical exercises have an important role. The wooden horse, used ever since Romans times, was re-discovered and used in preparing knights, the set of physical exercises being continuously enriched.
- Towards the end of the 16th century, within various folk festivals, acrobatic physical exercises start to occur. The drawings and pictures of those times stand to prove this.
- On one of Peter Bruegel's paintings, representing a folk celebration, the peasants perform jumps over the vaulting horse, somersaults and exercises with the circle. The applicative exercises, especially the climbing one, often occur in the program of folk celebrations organized on various occasions.

Renaissance

- In the 16th-17th centuries, the Renaissance humanists had a special role in orienting the preoccupations towards physical culture. Their biggest contribution was recognizing the role of gymnastics in the multilateral development of youth.
- Hieronimus Mercurialis (1530-1606) rediscovered the value of gymnastics practiced in ancient Greece. In his work "The Art of Gymnastics" (Ars gymnastica), he renewed the Greek word "gymnastika", using it instead of "exercitium" or "exercitatio". This book has a high documentary value, contributing to rising the interest for ancient gymnastics.
- Another representative, whose performances in the domain of acrobatic gymnastics made him famous, was Archangelor Tuccaro "saltarin du roi" at the court of emperor Maximilian and then at the court of the kings of France, Charles the 9th and Henry the 4th.
- In 1599, he elaborated the volume "Three Dialogues about the exercises of jumping and vaulting into the air" (Trois dialogues de l'exercice de santer et voltiger en l'air), divided into three parts: the first part – history; the second – the technique of movement with drawings, sketches, kinograms, and the third – indications about hygiene.

Gymnastics in modern era

- Starting with the second half of the 19th century with the process of differentiating sports branches, their technical content was enriched, fact which led to the decrease of the area of the term “gymnastics”. The philanthropical tendency had as purpose of its activity the harmony in personality development.
- Basedow’ "Philantropinum", founded at Dessau, and that of Christian Gotthilf Salzmann (1744-1811), founded at Schnepfentahl, paid special attention to bodily education and its content comprised: runs, jumps, swings, vaults, games, swimming and horseback riding.
- Johann Cristoph Guts-Muths (1759-1839), in his work “Gymnastics for the Youth” (Gymnastik für die Jugend), put the bases of school physical education pedagogy. According to him, “gymnastics is a system of bodily exercises which have the purpose to improve it”. It is related to his name the use, for the first time, of oblique poles, the wooden vaulting horse and the gymnastics portico.

- Johann Henrich Pestalozzi (1746-1821), in his work "Elementargymnastik", elaborated an exercise and movement system starting from the structure of the locomotory apparatus, from the children's age particularities and from observing their activities and games. He conceived the practice in three versions: individual, in groups and in class.
- Don Francesco Amoros (1777-1848) and Henri Clias (1782-1857) are considered the founders of the old gymnastics school in France.
- Amoros divides exercises into three categories: civil and industrial gymnastics, military gymnastics and medical gymnastics. He built some apparatus such as: the gymnastics portico, the vaulting horse, the trapeze, etc., at which working with the upper limbs is of utmost importance.
- Clias put the bases of children's gymnastics, his principle being based on the freedom of movement.

- The founder of the German physical education school was Friedrich Ludwig Jahn (1778-1852). In 1816, Jahn published the work "Die deutsche Turnkunst" (The Art of German Gymnastics) in cooperation with Eiselen.
- The book contains four parts: terminology, gymnastics exercises, gymnastics games and method.
- The gymnastics founded by Jahn has the purpose to reestablish the human being's balance and to regain the lost body liveliness.
- He emphasizes the youth preparation for battle, which takes place outdoors, on "**Turnplatz**", with various apparatus, among which the parallel bars had an important role.
- Besides the youth physical preparation for battle, Jahn's contribution was also developing a taste for knowing nature's beauties, a taste for hiking and tourism.

- The creator of Swedish gymnastics is considered to be **Peer Henrik Ling** (1776-1839).
- In 1814 he founded the Central Gymnastics Institute in Stockholm, where he created the Swedish gymnastics system.
- Based on pedagogical, physiological and psychological criteria, he divided gymnastics into four branches: *pedagogical gymnastics, military gymnastics, medical and orthopedic gymnastics and aesthetic gymnastics (for women)*.
- Between the two systems – Swedish and German – there was a strong battle for many decades, the followers of one system or the other trying to bring pro and against reasons.
- Jahn's gymnastics tries to impose the exercise to the human being, adjusting the body to the exercise, therefore it is more violent, made for strong people, in order to create the superior race.

- Ling's Swedish gymnastics adjusts the exercise to the man and is meant for the weak people. Connecting the exercises to the human body's structure and functions represents important steps in creating the scientific base of physical education.
- P. F. Leshaft (1837-1909), Russian scientist, put the bases his own gymnastics system.
- He stated that *intellectual, aesthetic and moral physical education are sides of the same educational process*. He emphasizes the principle of effort dosing, of continuity and consistency and that of respecting individual particularities. He can be considered one of the school physical education promoters in Russia.
- In the Czech Republic, after the failure of the 1848 revolution, in 1862 Miroslav Tyrš created a true national liberation movement whose organizational form was the movement of the schools from Bohemia. The physical exercises had as purpose a harmonious development of all organs, coordination of muscle functions in order to increase efficiency and to obtain movement improvement.

Gymnastics in the 20th century

- Niels Bukh made a commitment to reform Ling's Swedish system. He started off from noticing that Ling's ideas were applied in a wrong way by his successors. *"It was forgotten that the purpose of gymnastics is to give back to the human body its health and bodily beauty, eliminating the gained attitude defects and deformities and giving back to the human beings their beauty, health and strength"*
- Elli Bjorksten also brought important changes to Ling's gymnastics regarding its conception, purpose and technique.
- The end of the 20th century was marked by the creation of the first national federations of gymnastics which, later on, by joining together, created the International Federation of Gymnastics.


The characteristics of gymnastics

- The multitude and variety of movements allow adjusting them in various forms accessible to all categories of performers, irrespective of age, gender or level of training.
- The possibility to exercise precise and selective influence upon the body, due to the analytical character of many movements from the contents of gymnastics.
- Gymnastics implies executing movements with maximum correctness and rigorously establishing the execution form in close connection to the content of the movement.
- Practicing gymnastics determines a basic and multilateral mastering of the locomotory apparatus under usual and unusual conditions.

- It develops general psycho-behavioral skills, such as: motor intelligence, learning and execution ability, energy mobilization capacity, physical and psychic recovery ability and psycho-motor skills: coordination, balance, kinesthetic and special-temporal perception.
- Through its specific contents, gymnastics meets certain unusual requests of daily living, contributing thus to the development of certain volitional psychic qualities such as: determination, perseverance, resistance to tiredness and pain.
- The help given to a partner in the learning process in gymnastics develops the social adaptive regulation capacity of: cooperation, solidarity, self-assessment capacity and the sense of collective responsibility.

The tasks of gymnastics

1. Ensuring optimum conditions for health enhancement and correct and harmonious body development.
2. To contribute to the development and improvement of certain basic motor qualities such as strength and mobility of certain muscle groups, as well as of movement coordination capacity.
3. To develop the relaxation capacity of various muscle groups or of the entire body.
4. To develop the main body functions which provide the basis for health and working capacity.
5. Forming and developing correct and expressive posture and movements, thus contributing to the performers' aesthetic education.

6. Correcting certain deficient attitudes and fighting negative influence upon the body, caused by certain unilateral professional activities.
 7. Correcting certain motor deficiencies resulted after traumatism.
 8. Maintaining and developing physical ability in old age.
 9. By its means, gymnastics determines the acquiring of any movement's basic technique.
 10. Providing proper physical support to other sports branches.
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Basic gymnastics

This branch has a very rich content, made up of:

- ✓ Front and order exercises;
- ✓ General physical development exercises performed freely, in pairs and at special apparatus;
- ✓ Specific and non-specific applicative exercises which are addressed to all age categories and their purposes are, first of all, harmonious physical development, maintaining health and acquiring the general bases of movement.

Gymnastics applied in other domains

Hygienic gymnastics (or recreation gymnastics)

- It has the purpose to increase the daily physical and mental working capacity; to engage the great functions in passing from resting condition into the vigil one; to maintain health and create a good mood for physical activity.
- The basic means of hygienic gymnastics is represented by the harmonious physical development exercises introduced into sets of 5-6 exercises.
- To increase the efficiency of these exercises, it is recommended that they should be performed with open window, accompanied by self-massage and breathing exercises.
- If systematically performed, these exercises contribute to the formation of certain personal hygiene habits, of tidy living habits, without excesses.
- The exercises which form the content of this branch can be performed from an early age until old age.

Production gymnastics

- It has the purpose to improve the function of breathing and circulation organs, to compensate for the effort of unilateral activities, to improve general movement coordination in order to increase efficiency.
- General physical development free exercises which form the main means of gymnastics in production are introduced in those moments when it is noticed the decrease of working capacity, of attention, of movement speed and precision.
- By adapting certain positions, which should differ from those in the professional activity, by engaging the antagonist muscles into effort, the exercises should have compensatory actions.


Medical gymnastics

- Its purpose is to recover the functional capacity of the body, the motor functions, if they were affected in accidents or by disease.
- Its means are specialized, they are performed freely, with objects or special apparatus, accompanied by associated means.
- According to necessities, these exercises contribute to the functional reeducation, to correcting physical deficiencies, to restore muscle volume and elasticity, to restore muscle mobility and neuro-motor rehabilitation in the case of balance and coordination disorders.

Gymnastics as preparation for other sports branches

- High performances cannot be reached unless the sportives have a high level of general and special physical training, also using gymnastics means which are adapted to the content of the sports branches.
- Besides developing the muscle groups and strengthening the joints, besides developing muscle elasticity, the adapted exercises also help in acquiring faster a rational technique specific to each sports branch.
- ex.: the boxer adopts exercises with the jumping rope to develop specific resistance; the athlete uses exercises from gymnastics for the physical training necessary in practicing certain events. The skiers use the exercises specific to dynamic balance development; the climber adopts the static and dynamic exercises from gymnastics in their specific training, etc.

High performance gymnastics

- High performance gymnastics is the competitive branch of gymnastics formed of four sub-branches:
 - Artistic gymnastics (the current name of sportive gymnastics).
 - Rhythmic gymnastics
 - Acrobatic gymnastics
 - Aerobic gymnastics
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Artistic gymnastics

It contains the exercises performed on special apparatus.

Men (6 apparatus): floor exercise; pommel horse; rings; vaulting horse; parallel bars; bar.

Women (4 apparatus): vaulting horse; uneven parallel bars; balance beam and floor exercise (order established in 1960), performed in the competitions organized by the International Gymnastics Federation on international level and by the Romanian Gymnastics Federation on national level.

Rhythmic gymnastics

It is an Olympic sports branch, with a very rich content specific to women, which contains both individual exercises and in teams (ensemble) with portable apparatus:

❖ rope; circle; ball; clubs; ribbon, all accompanied by music.



▶ **Acrobatic gymnastics**

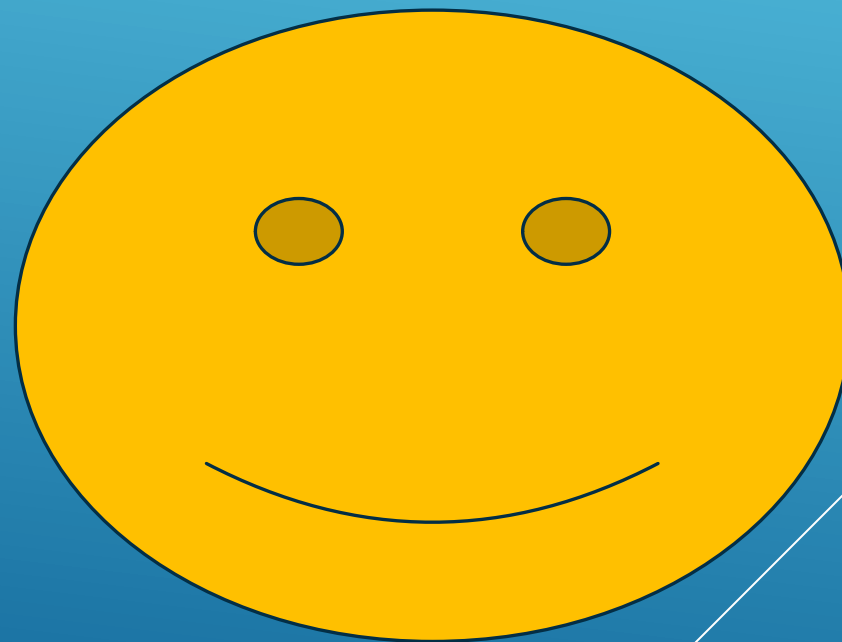
- ▶ It has become a self-standing branch ever since 1972 when I.F.S.A. (International Federation of Sports Acrobatics) was founded in Moscow.
- ▶ The content of this sub-branch is made up of exercises on the acrobatic slope, acrobatic exercises in pairs, mixed pairs and male or female trios; exercises on special apparatus: elastic net, executed individually and synchronized.
- ▶ The rigorous specialization in the domain of acrobatic gymnastics requires special acrobatic qualities such as: vertical jump, orientation in space, coordination, balance.

Aerobic gymnastics

- It is a new competitive sub-branch, guided at international level by I.A.F. (the International Aerobic Federation), recognized by I.O.C. (the International Olympic Committee). Aerobic gymnastics comprises the following events:
- Male and female individual;
- Mixed pairs;
- Trio optional (male, female or mixed);
- Group (5-8 participants);
- The component elements are chosen from artistic gymnastics, acrobatic gymnastics and sportive dancing, accompanied by alert modern music. The competitions take place on a square platform. The first world championship took place in Paris in 1995. In our country, this sports branch is coordinated by a special committee founded within the R.F.G. The first national championship was organized in 1995.



THE END



Gymnastics terminology



Gymnastics terminology

General information, importance

- The terminology specific to each domain serves as communication means between people and helps to a unitary understanding of the content.
- The richness and variety of physical education means requires that terminology should be wide, containing conventional terms from the main sports branches.
- The new orientation of gymnastics led to the adjustment of terminology according to its contents and to its development direction, process which cannot be considered finished, taking into account its continuous character.

- Terminology is a sub-system of the physical education terminology system. It contains all the terms used to denote positions, moves and exercises, as well as the way these exercises are represented and described.
- Describing the exercises by using specific terminology has major importance in motor skills formation, in understanding the content, in creating the correct image about movement.
- It makes easier the communication between teachers and students, sportives and coaches, competitors and referees, it makes considerably easier the understanding of specialty journals.
- Categorizing various movements in groups with resembling structures makes the teaching and learning process shorter and easier.

Evolution of terminology

- Gymnastics terminology has evolved in parallel with the development of this sports branch. We can notice in its evolution various stages related to the more or less clear influence of different gymnastics systems and the supporters of these systems.
- Since 1862 – the year when Gheorghe Moceanu settled in Bucharest, for three decades in a row, this specialist, passionate about gymnastics, folklore and folk dances, had a major contribution to the evolution of gymnastics terminology.
- He published several books, out of which we mention: "Cartea de gimnastică cu figuri și text explicativ" (Gymnastics book with explicatory figures and text), appeared in 1869, a successful processing of Jahn și Eiselen's work: "Deutsche Turnkunst" – “The history of gymnastics in our country”, a work in which Gheorghe Moceanu acknowledges his affiliation to the German gymnastics. In this book appears the term “giant cartwheel”, the element which was then considered the most difficult one, difficult to execute and very spectacular.

- Dumitru Ionescu, a collaborator of Spiru Haret, was a supporter of Demeny's French school and he had a significant contribution in the terminology evolution. He elaborated the first work related to terminology: "Terminologia exercițiilor de ordine, libere, cu instrumente și la aparate" – "Terminology of order, free, with instruments and apparatus exercises" There are explanations regarding "the fundamental positions and holds" such as "suspension", "leaning", "sitting" "on the knees", "rotation" "jumping", "walking" "standing".
- Ion Bucovineanu, by means of his translation from German language of the work "Practical manual of Swedish gymnastics" in 1893, positively supports Swedish gymnastics
- The translation into Romanian language of Thulin's work "Terminology of Swedish gymnastics", by Iacob Mihăilă and Ben Nilsen states the superiority of Swedish gymnastics over the German one. This terminology was taken over by Professor Virgil Roșală who improved it according to the renewal and improvement process of the Romanian language.

- This evolution was accelerated by the preoccupation of Robert Podlaha and Adina Stroescu, specialists in gymnastics, who improved especially the sportive gymnastics terminology.
- They tried to eliminate the gerund from the fundamental positions description, they explained the rules of describing gymnastics exercises and systematized gymnastics exercises into structural groups.
- Their works: “Evolution of terminology” and “Gymnastics terminology” are still considered as valuable bibliographic materials.
- Another work, elaborated and appeared under the coordination of Nicu Alexe, the result of the cooperation remarkable specialists in the domain of physical education, entitled “Physical education and sports terminology”, edited in six languages, reflects our specialists’ preoccupation for the improvement of terminology.
- This material reflects our specialists’ value and places our country in the “international flow of values in the sports science domain”.

TERMINOLOGY REQUIREMENTS

So that the gymnastics terminology could contribute to the development of this discipline and, at the same time, to accomplish its communication function, it must meet certain basic requirements:

1. ***To respect the language particularities*** regarding the used terms. In denoting a position or movement, there should be used words from the main lexicon, respecting the grammar particularities of the language.
2. ***It should be scientific, however, accessible at the same time***. Categorizing the exercises based on certain scientific criteria – morphological, functional, biomechanical – should not hinder the proper understanding of the effect created by one exercise or another.
3. ***It should be unitary***, a notion, if it expresses the same content, should have the same meaning, whether it is about basic gymnastics or sportive gymnastics.

4. It should be precise, in order to avoid different interpretation of certain terms.

5. It should be clear, in order to reflect as real as possible the image of movement.

6. It should be concise. The terminological description of movements should be short, without additional elements, it should not make more difficult the understanding of the term. There should be used only notions which are strictly necessary in understanding the movement.

- In order to avoid the lack of clarity or precision, and in order to meet the concision requirement, certain conventional terms can be used, such as: “bridge”, “split” “jumps like the ball”, “cartwheel”, “instead of lateral rollover”, but only when these terms suggest the structure of movement. Certain suggestive terms are justified, such as: “**wheelbarrow**”, “**dwarf walk**”, “**spider walk**”, “**roller**”, “**caterpillar**” – especially due to their accessibility and the primary school children’s ability to understand.

7. *It should serve as international communication means.* This requirement refers especially to the gymnastics sports branch guided by the I.F.G. The official language of the I.F.G. is gymnastics and the documents contain certain conventional terms in order to respect the concision requirement, accepted by the affiliated federations. These terms bear the names of sportives who invented the respective elements. Their complexity would require a detailed, difficult description, which would oppose clarity. Thus, in describing certain elements, there are used terms as: "Danilova", "Gienger", "Jager", "Deltsev", "Winkler", "Kovacs", "Gaylord", "Comănesci", "Suarez", "Tsukahara", "Endo", "Stalder", "Healy", "Diamidov", etc.

BASIC TERMS

Exercise - related basic terms

- The physical exercise is a motor act, repeated systematically, which represents the main means of accomplishing the tasks of physical education and sports, implicitly of gymnastics. The term exercise has two meanings in gymnastics:
 - *Motor act, repeated systematically, synonymous with physical exercise, movement, element, technical procedure;*
 - *The combination of several structural elements in a whole, which can be performed individually or in a group, free, on apparatus or with portable objects (Podlaha 1976)*

- **The free exercise** is a type of exercise based on analytical or synthetic moves performed without apparatus or portable objects.
- **The optional exercise** is the combination of moves conceived by the gymnast with or without the coach's help, in order to participate in a competition, based on certain requirements mentioned in the regulations.
- **The compulsory exercise** is the combination of elements, conceived by the competition organizer, which the gymnast must perform accordingly.
- **The technical element** is the movement with unitary structure, or a component of an exercise, which begins from an initial position and ends in a final position.

- **Static element or static position** of the body and its segments, without movement, the body and its segments being in a condition of relative repose. Example: supported lying, standing lunge, supported squat, set square sitting, etc.
- **The dynamic element** represents the movement of the body or the change of its segments in relation with each other. Example: leg swinging, arm extension, trunk bending, etc.
- **Connection** is the uninterrupted execution of two or several elements in which the final position of the previous element represents the initial position of the following element.
- **Combination** is the creative and balanced mix of various technical elements, components of an exercise.

- ▶ **The exercise content** is provided by the totality of elements and specific characteristics which compose it and determine the influences upon the body, guiding them especially towards a certain motor quality, skill or ability and emphasizing, more or less, the formative character of these influences in relation to the affective, volitional or intellectual side (Mitra-Mogos)
- ▶ **The form of the exercise** is determined by the totality of external aspects of the exercise, by the time and space relations in which the component movements are situated. Form is determined by the internal and external organization of the moves which compose it – the sequence and combination of within the time-space relation of its component elements (body and segments position, trajectory, strength, movement amplitude and rhythm) (Mitra-Mogos)



NOTIONS DEFINING THE FORM OF EXERCISE

- **The velocity of movement** is given by the ratio between distance and time:

$$v = d/t$$

v = velocity; d = distance; t = time

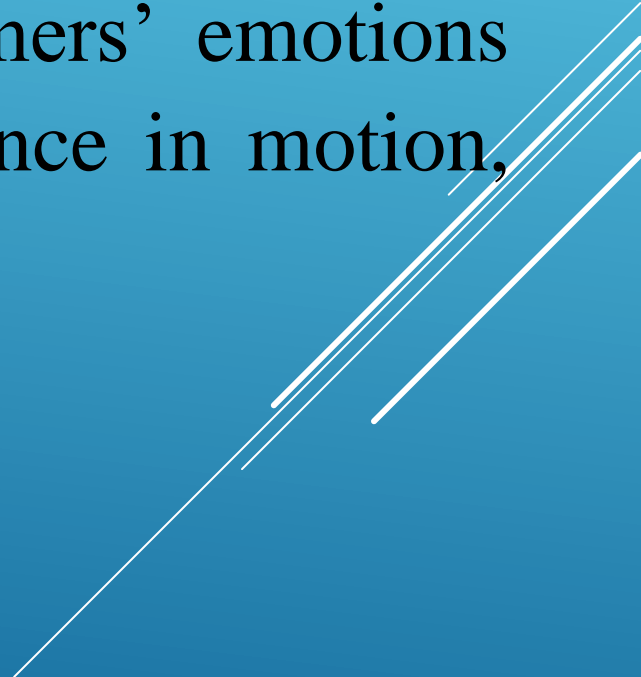
The velocity of movement is one of the determining characteristics of the execution form. In gymnastics, velocity can be of various types: uniform, varied, accelerated, optimum.

- **The duration of movement** represents the necessary time for its execution in order to obtain a physiological effect, favorable to the body.

- **The trajectory of movement** is a straight way (or distance) traversed by the body or its segments in space between two positions (initial and final position)
- **Direction** is the way towards which the body or its segments moves. According to the plans and axes in which the move occurs, there are some main directions: forward, backwards, laterally (left-right), downwards, upwards; and there are some intermediary directions: forward-downward; forward-upward; laterally-downward; laterally-upward; oblique-downward; oblique-forward; oblique-upward.

- **Amplitude** is the size of the body's or its segments' movements between two points. Moves in gymnastics are characterized by high amplitude which is achieved through repeated, maximum use of the optimum degree of mobility. From the point of view of the trajectory form, in gymnastics there are rectilinear and circular moves, expressed in degrees and cm.
- **Rhythm** is the sequence of emphasized and un-emphasized times in the structure of a movement. It is closely connected to the movement velocity and it is one of the determining temporary characteristics of movement. Each move has its own rhythm which must be respected in the learning process. There should be formed the ability to accelerate or slow down partial actions, to break the moves of certain segments or to increase movement amplitude.

- **Tempo** is the number or quantity of moves accomplished within the time frame (8 tractions in 10 seconds). In gymnastics, tempo can be:
 - slow (the move of lifting the arms, the leg in various directions);
 - moderate (trunk movements);
 - alert (arms rotations and swings);
 - fast (pushing movements in push-ups);
- **Cadence** is the rhythmical and uniform sequence of actions transmitted through various ways (counting, sound signals, etc.)
- **The degree of strain** is defined by the intensity of the muscle contraction which accomplishes the action, meaning that the number of active neuro-muscular units which take part to the contraction. The degree of strain is provided by a rational correlation of the internal and external forces, of the active and inertia forces.

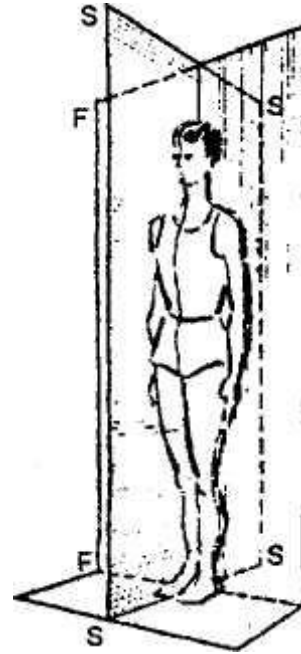
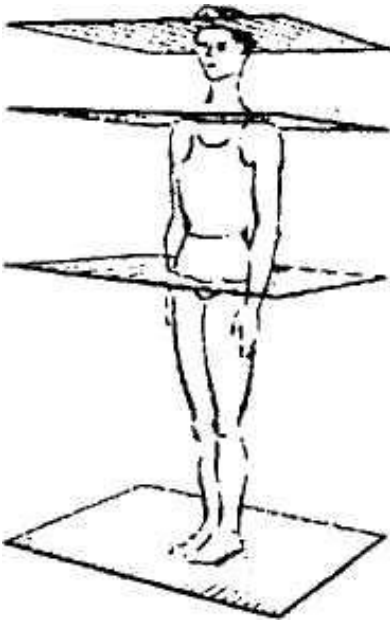
- **Correctness** implies respecting, when executing the moves, the space-time characteristics of the move, direction, amplitude, muscle control, rhythm and action coordination.
 - **Expressiveness** refers to expressing the performers' emotions during the movement. It is shown through elegance in motion, easiness in execution and serenity of the soul.
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- Three parallel white lines of varying lengths are positioned in the bottom right corner of the slide, slanted diagonally upwards from left to right.

NOTIONS DEFINING THE MOVEMENT

- **Movement** is the action of moving the body or its segments in space, due to the interaction between various internal and external forces.
- **The simple movement** is a motor act with reduced neuro-muscular stress, performed **in a single direction with an elementary kinetic chain**.
- **The compound movement** is a **sum of simple moves** made by the body segments simultaneously or in a sequence which provides unity.
- **The analytical movement** is a **motor** act through which its structure determines effects localized **in various joints and muscle groups**.
- **The global movement** is a motor act with **compound or complex structure, with general effect upon the body**.

“Position” related notions

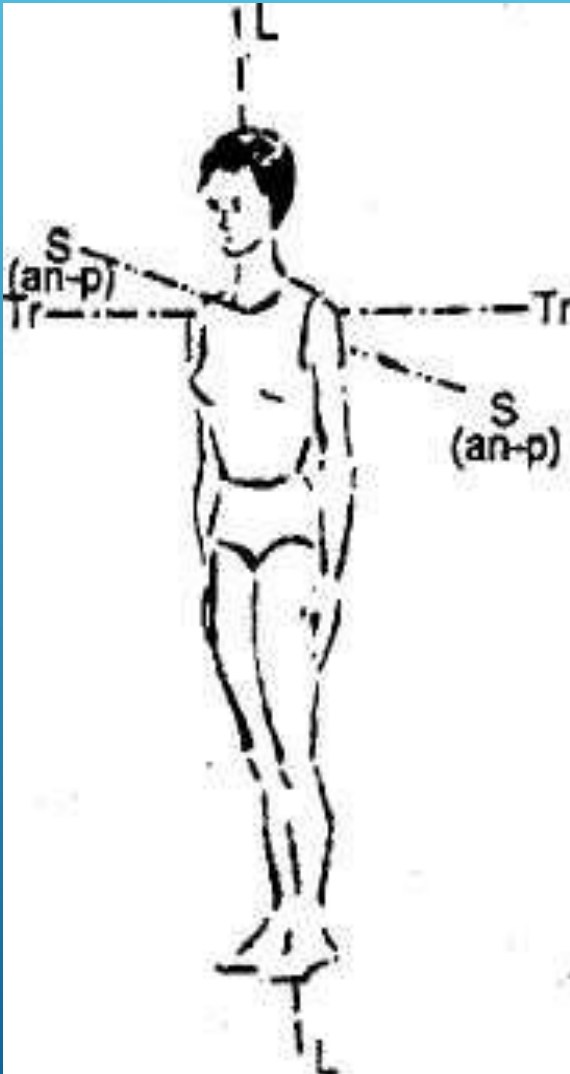
- **Position** is the static situation of the body or its segments – a momentary state in the unfolding of the movement. In relation to the ground, the body can adopt a vertical position (orthostatic), horizontal position (clinostat or supine) or inclined or prone position.
- **The initial and final position** of moves in gymnastics determines the element's degree of difficulty.
- **The fundamental position** is a conventional position established for didactic purposes, according to the type of support in relation to the floor or apparatus. The fundamental positions are: *standing, sitting, lying, supported and hanging*. These positions are diversified by combining them: supported standing, supported-lying, supported sitting, etc.
- **The derived position** results from the fundamental position by the change of segments position in relation with each other.
- **The compound position** is the sum of several segments' positions situated in different plans and directions.



THE PLANS AND AXES IN WHICH THE MOVEMENTS ARE EXECUTED

- ▶ **The frontal plan (F)** divides the body into an anterior and a posterior side.
- ▶ **The sagittal plan (anterior-posterior) (S)** perpendicular on the frontal plan and divides the body into a left and a right side.
- ▶ **The horizontal plan,** perpendicular on the two plans – frontal and sagittal – divides the body into a superior or upper side and an inferior or lower side.

THE AXES



1. **The transversal axis (Tr)** is the imaginary line which connects the two acromial points of the scapular-humeral joint.
2. **The longitudinal axis (L)** is the imaginary line which connects the points from head to heel.
3. **The sagittal or anterior-posterior axis (S/an-p)** is perpendicular on the frontal and longitudinal axes and “penetrates the body”.

Fig. 3a

Plan
Sagittal

Axe
de rotation
Transversal

Fig. 3b

Plan
Frontal

Axe de
rotation Sagittal

Axe de rotation Longitudinal

Fig. 3c


Plan
Transversal

Static Positions of Segments and Body

THE MAIN POSITIONS OF THE BODY

1. **STANDING - STÂND**
 2. **SITTING - AŞEZAT**
 3. **LYING - CULCAT**
 4. **SUPPORTED - SPRIJIN**
 5. **HANGING - ATÂRNAT**
- 
- Several white lines of varying lengths and slopes are positioned in the bottom right corner of the slide, creating a modern, abstract graphic element.

Head positions

- Head leaned forward;
 - Head leaned backwards;
 - Head leaned laterally to the left;
 - Head leaned laterally to the right;
 - Head twisted to the left;
 - Head twisted to the right.
- 
- Three parallel white lines of varying lengths are positioned in the bottom right corner of the slide, slanted diagonally upwards from left to right.

Hands positions

1. Straight palm (close fingers) upwards;
2. Straight palm (close fingers) downwards;
3. Straight palm (close fingers) forward;
4. Straight palm (close fingers) backwards;
5. Straight palm (close fingers), mixed directions (right upwards, left downwards);

Straight arms positions (main ones)

- ✓ Straight arms downwards;
- ✓ Straight arms forward;
- ✓ Straight arms upwards;
- ✓ Straight arms laterally;
- ✓ Straight arms backwards

(HARMONIOUS) GENERAL PHYSICAL DEVELOPMENT EXERCISES (GPDE)

What is – physical development?

In time, the term has undergone changes depending on the meaning attributed to it: **as objective of physical education**, or **as means to accomplish this objective**.

It had several names: formative exercise, basic exercise to prepare the locomotion system, correct and harmonious development, etc.

The notion of physical development encompasses both the **growing process and the development one**.

Growing represents a quantitative accumulation and amplification process, a process of gaining weight, volume, diameter, length, etc.

Development implies qualitative improvement and adjustment of organs and of all systems, and improvement of their functional indices.

CHARACTERISTICS OF GENERAL PHYSICAL DEVELOPMENT EXERCISES

- GPDE are constructed moves of a wide variety, both from the point of view of influence and from the point of view of execution.
- Being created exercises, the possibilities to change the movement structure and the structure of requested effort particularities are unlimited.
- GPDE are analytical moves executed with various body segments, with and without loading.
- Being analytical moves, they selectively influence the contraction and relaxation capacity of each muscle chain, they increase joint mobility, muscle suppleness and elasticity.
- GPDE increase sensori-motor acuity and coordination, they improve the nervous processes which guide the locomotion system.
- They increase the circulation system capacity, vital capacity and strengthen the correct attitude reflex.
- GPDE get the performers used to alternate contraction with relaxation in order to execute the moves with precision, proper rhythm and amplitude.
- They influence the performers' psychic by focusing attention, observation ability, motor memory, sense of discipline and order, etc.
- They allow precise effort grading, from the point of view of both volume and complexity.

TASKS OF PHYSICAL DEVELOPMENT EXERCISES

- **Selective and qualitative processing of muscles and joints accomplishing the general warm-up of the body.**
- **Formation of the skill to alternate muscle contraction with relaxation.**
- **Formation of the skill to guide the movements of the body segments according to the time and space characteristics.**
- **Development of muscular elasticity and joint mobility.**
- **Formation of correct posture.**
- **Education of the aesthetic sense, of action and gesture control.**
- **Creation of initial conditions for practicing various sports branches.**

CLASSIFICATION OF PHYSICAL DEVELOPMENT EXERCISES


a. The criterion of influence upon the body:

- ex. which stimulate muscular tonicity and trophic feature;
- ex. for analytical development of segments' muscles;
- ex. for vital functions improvement;
- ex. which form correct posture by strengthening the attitude reflex.

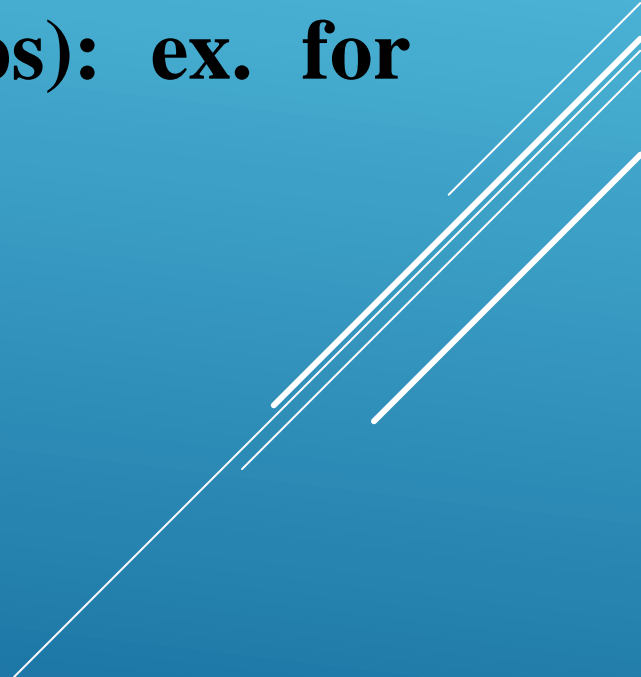
b. According to purpose and main action, we have:

- ☐ **Ex. of involving the body into effort;**
- ☐ **Ex. of general and multilateral development;**
- ☐ **Ex. of special training with regard to: involvement of a muscle, muscle group or joint into effort; formation of kinesthesia sense; development of physical qualities necessary for the element execution.**
- ☐ **Ex. of prevention and fight against locomotion deficiencies.**

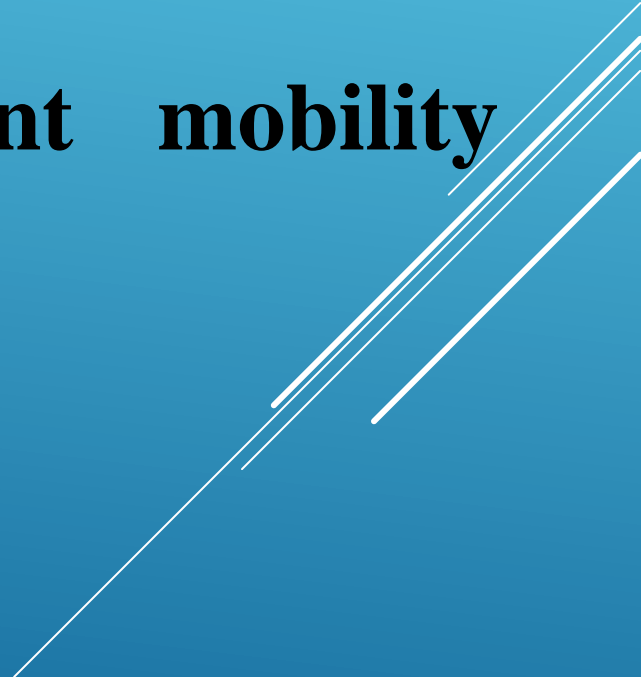
c. Criterion of practice form:

- free exercises;**
 - ex. with partner;**
 - ex. with objects;**
 - ex. with and at apparatus;**
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d. According to the number of muscle groups which get involved into action, we have:

- **simple structural groups: ex. for arms, trunk and legs;**
 - **complex of exercises (several muscle groups): ex. for arms-trunk, arms-legs, trunk-legs, etc.**
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e. According to muscular activity

- ❖ **Ex. for muscle strength development;**
 - ❖ **Ex. for muscle elasticity and joint mobility development;**
 - ❖ **Ex. with relaxation character.**
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Strength exercises

- the main feature of the muscle is to contract;

- contractions are of three types:

1. *dynamic,*

2. *static and*

3. *mixed – (intermediară)(self-tonic/lb. rom. auxotonică)*

1) ***Isotonic-dynamic contraction***

-it is characterized by the shortening of the muscle fiber;

-it is the most natural form for strength development;

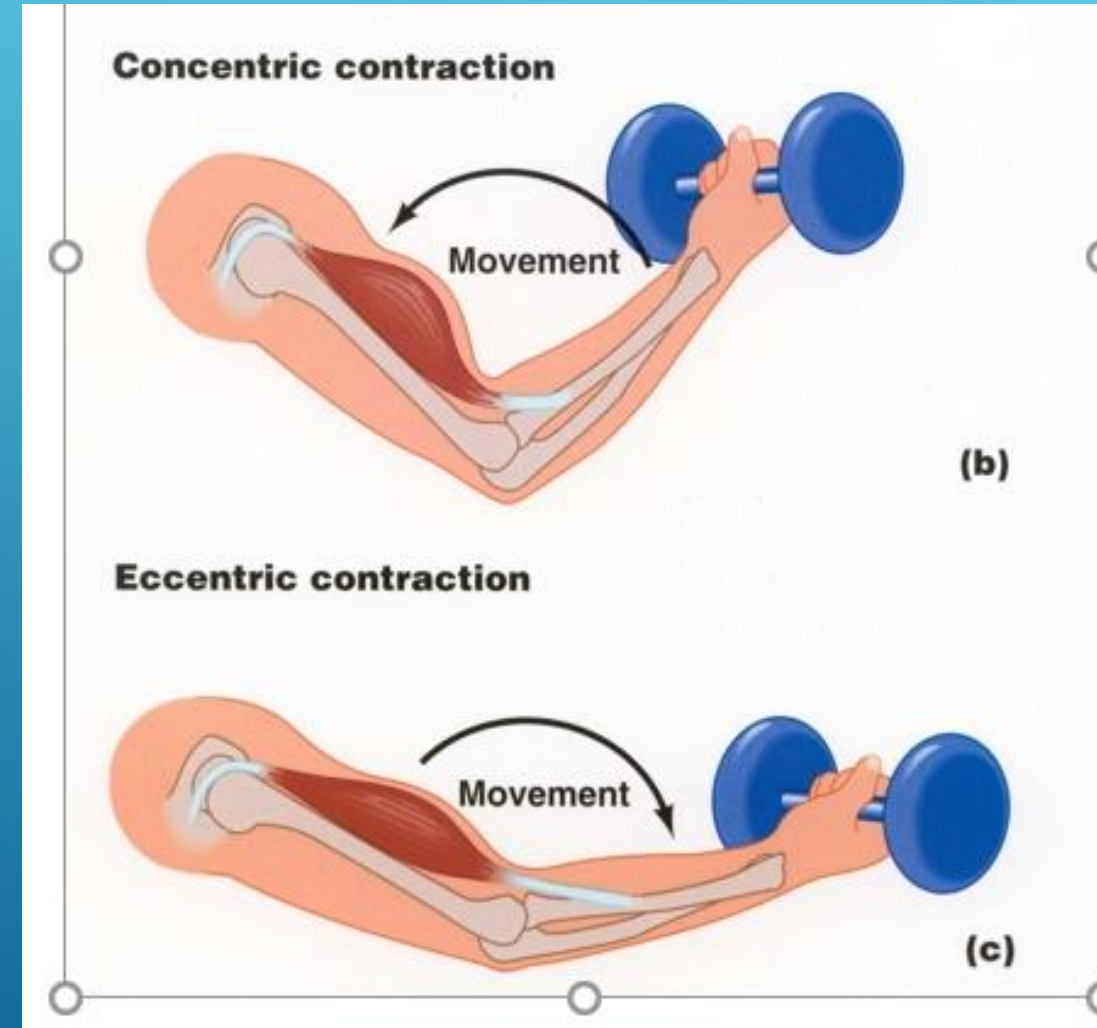
-it implies a combination of contraction with relaxation;

Ways of action of the dynamic force:

■ The overcoming force (**concentric contraction**) has three forms of manifestation:

- *lift force;*
- *traction force;*
- *acceleration force.*

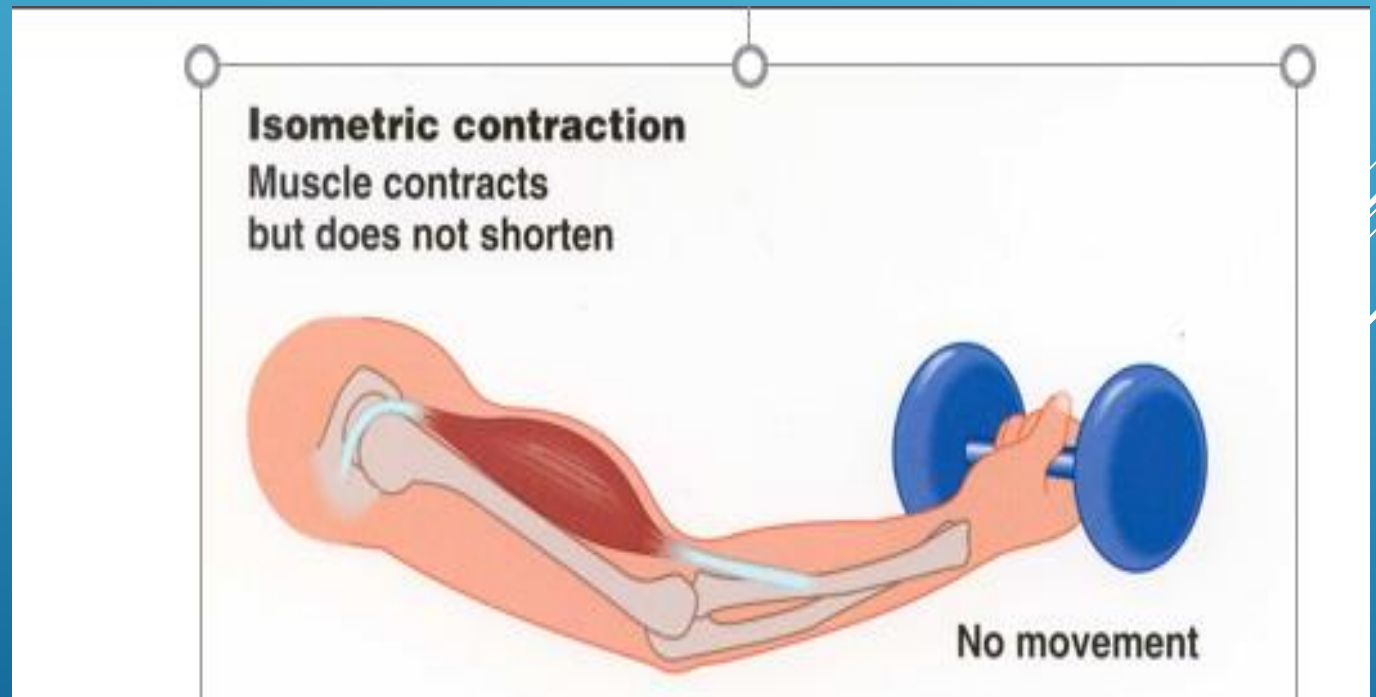
■ The submission force (forța de cedare) - **eccentric contraction**



The strength developing exercises with dynamic character contain:

- **Exercises which use their own body weight**
- **Exercises with partner**
- **Exercises with loads**
- **Exercises with and at apparatus**

2. ***The static-isometric contraction*** is when the internal tension increases without changing the size of the muscle fiber.



Manifestation forms of the isometric contraction:

- **Anti-gravitational physiological tone;**
- **Voluntary increase of internal muscle tone;**
- **Internal tension increase at the lifting action;**
- **Tension dimension to overcome antagonistic muscles resistance with upwards traction;**
- **Tension dimension to overcome other external resistances with upper traction;**
- **Internal tension dimension to overcome antagonistic muscles resistance with downwards traction;**
- **Tension dimension to overcome other external resistances with downwards;**
- **Internal tension dimension to overcome antagonistic muscles resistance with horizontal traction;**
- **Tension dimension to overcome other external resistances with horizontal traction;**

3. *Combined-self-tonic contractions* (contractii intermediare sau auxotonice)

- **They combine the two manifestation forms;**
- **The ratio between the two forms depends on the specifics of the event;**

Manifestation forms of gymnastics specific strength:

- ***Maximal strength*** – is developed by means of dynamic movements performed in slow tempo and by means of maintained static exercises;
- ***Explosive strength*** – is developed by means of dynamic exercises performed in fast tempo;
- ***Resistance strength*** – is accomplished by increasing the number of repetitions within series;

Factors determining strength value:

- The number of muscle fibers involved in contraction;
- Muscle thickness – transversal section surface;
- Multiplication of the component fibers of a muscle, as a result of very intense efforts (Beninghof and Gudz)
- The quality of metabolic processes and energetic substances at muscle level;
- The development level of the other motor qualities involved in performing the action of strength-velocity, resistance, suppleness.
- The individual's psychic profile, his/her power of concentration, attention, etc.

Favorable conditions for strength development:

- The weight used in developing strength should be chosen according to individual particularities;
- The exercises for strength development should be performed systematically;
- The exercises should be much more intense than the regular muscle activity;
- While the body is adjusting to effort, volume, intensity and effort complexity increase is necessary by means of:
 - changing the initial position;
 - increasing the duration of practice;
 - changing the execution tempo.
- The structure of exercises meant to develop strength should partially or totally correspond to the structure of the element proposed for learning;
- The rhythm and dynamics of the muscular activity should correspond to the characteristics and dynamics of muscle activity during the execution of the technical element;
- Overcoming difficulty should happen as shortly as possible.

EXERCISES OF STRETCHING TYPE

- **Amplitude** is one of the movement's basic components, expressing the distance covered by the body or its segments between two markers.
- The achievement of maximum amplitude is provided by the muscle relaxation and stretching capacity, as well as by the articular mobility degree.
- The increase of muscle elasticity positively influences the learning of the rational technique, harmony and aesthetics of movement. In unforeseen situation, through extreme mobility of the locomotion system, imminent injuries can often be avoided.
- The development of these capacities implies knowing aspects regarding the manifestation of elasticity and mobility in the motor activity and the factors which influence and determine their degree.

Mobility manifestation ways

- **General mobility** refers to all joints and allows execution of movement with high;
- **Segmental mobility** provides high and maximum amplitude only in the joints involved in the execution of certain specific elements;
- **Uniarticular mobility**.

Classification criteria

1. According to the achievement manner:

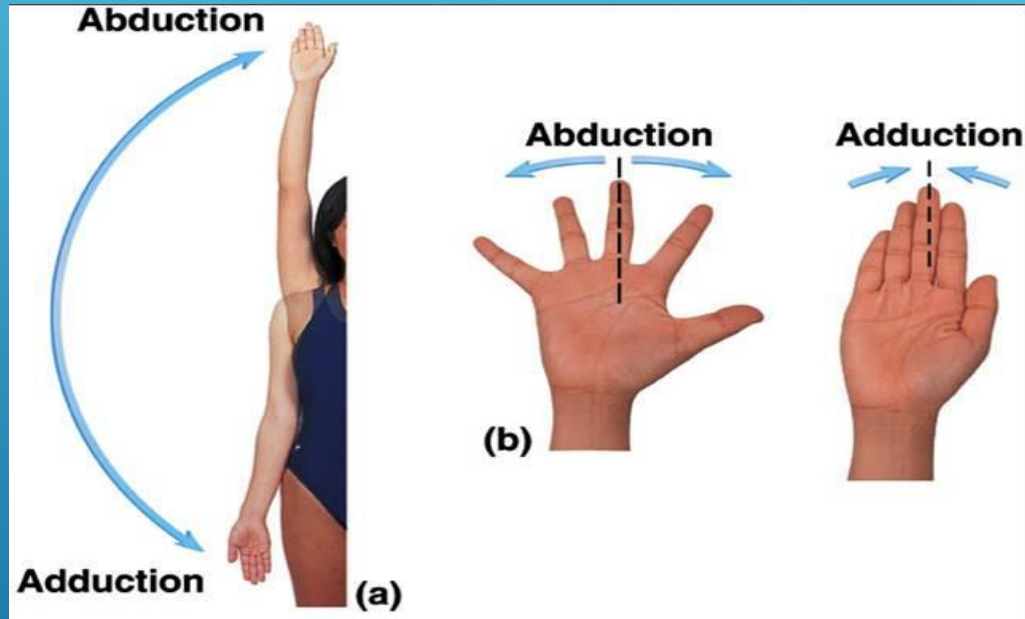
- **active mobility** is a joint's maximum mobility achieved exclusively through own muscle activity;
- **passive mobility**, achieved with a partner's support or the support of another external force.

2. According to the plans in which the movement is made:

- **mobility in frontal, anterior-posterior, horizontal plan;**

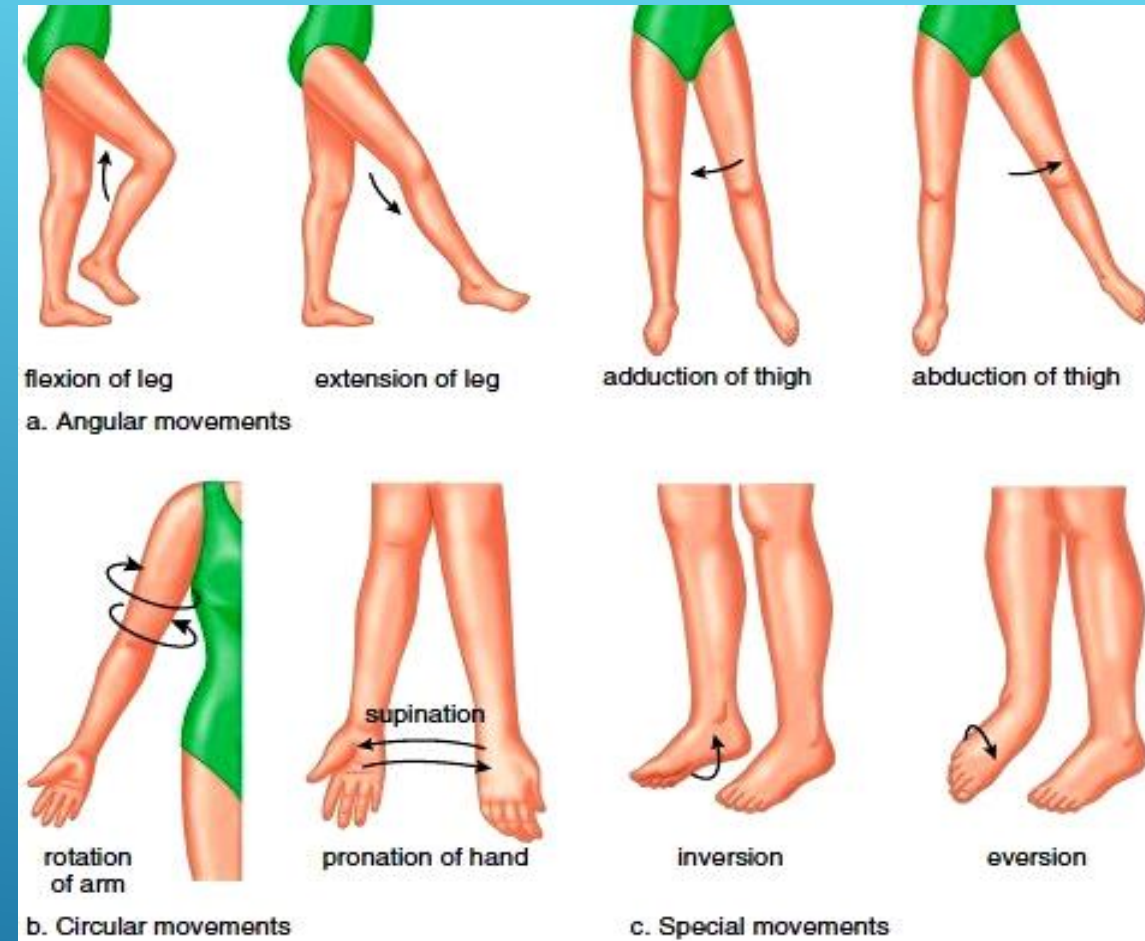
3. According to the type of movement allowed by the joint:

- In flexion; in extension; in foreduction;
- in retrodictions; in adduction;
- in abduction; in twist; in rotation.



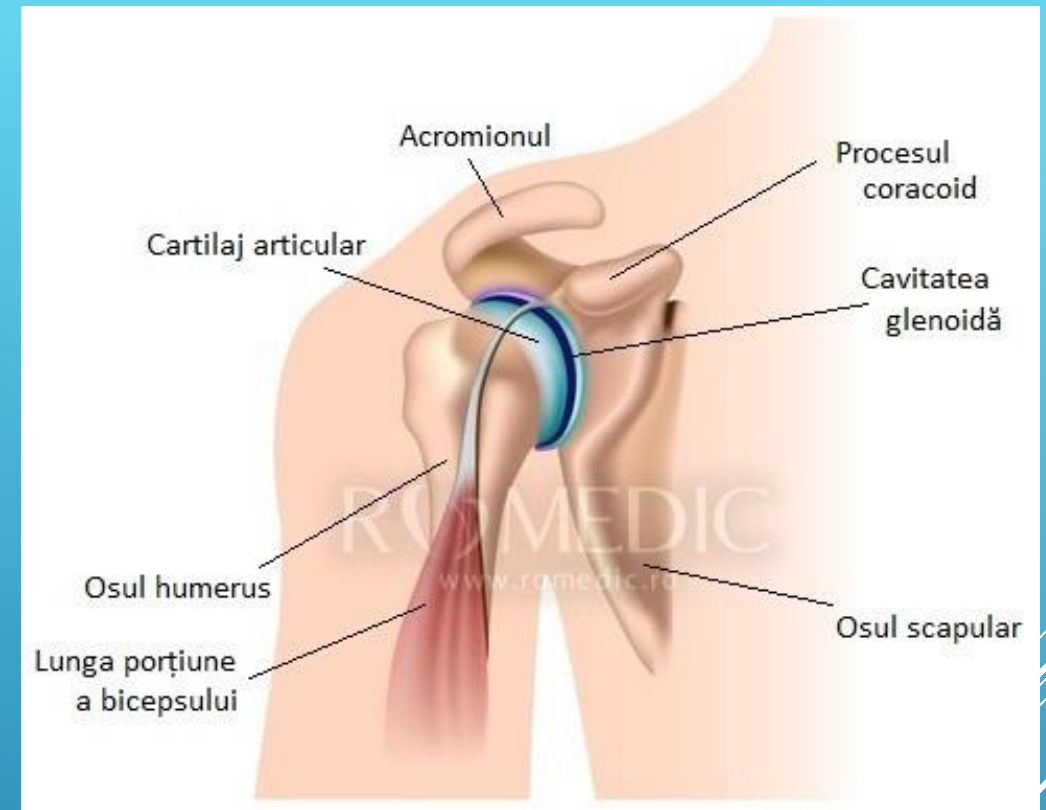
4. According to the working regime of antagonists:

- isotonic;
- isometric;



Factors which determine the degree of muscle elasticity and articular mobility:

- The form of articular surface;
- The capacity of muscle relaxation;
- The stretching capacity of muscles, ligaments and tendons;
- The coordination capacity of muscular contraction and relaxation of agonistic and antagonistic muscles;
- Muscle temperature;
- The environment and the current psychic condition;



The means and methods of articular mobility and muscular elasticity development

- The limits of passive mobility should be reached through active mobility, capable to provide the raising and holding (fixation) of the segment in the desired position. This objective can be achieved through:
 1. Swings with arching;
 2. Arching with holding;
 3. Stretching with passive holding;
 4. Prolonged stretching;
 5. Active proprioceptive neuromuscular training (P.N.F.);
 6. Passive proprioceptive neuromuscular training (P.N.F.);
 7. Relaxation method;

- **Swings** are performed in various plans with the arms, legs and trunk, having as purpose the gradual increase of the range of motion. They are active movements performed with the strength of agonists, valorizing the segments' insertion.
- **Archings and holds** (Ballistic and Hold) are 3-4 repetitions of a movement with stopping the segment in extreme position for 6 seconds.
- **Stretchings with passive holds** (Passive Lift and Hold): raising the segment with the partner's help in the extreme position and holding it for 6 seconds with the help of the isometric contraction. The passive stretchings, followed by active fixation, for one minute, is repeated with 6 seconds intervals
- **Prolonged Stretching** is the stretching of muscles with the partner's help to the extreme position, which is held for a minute, without touching the pain threshold.
- **Active proprioceptive neuromuscular training** (P.N.F.). It consists in executing the active movement for 6 seconds followed by a maximum isometric contraction against the resistance exercised by the antagonist muscles, then the range of motion increases through active muscular activity of the antagonist muscles for one minute against resistance. The movements are repeated at 6 seconds intervals.
- **Passive proprioceptive neuromuscular training** (P.N.F.). The joint which is about to be worked-out is taken by the partner in extreme position in 6 seconds. It follows the isometric contraction of the antagonist muscles against the resistance exercised by the partner, the stretchings and passive contractions of the antagonists are repeated at 6 seconds intervals for one minute.
- **Relaxation method**. With the partner's help, a slow passive stretching is executed to the extreme position. This position is held for one minute while the performer relaxes through self-control.

Relaxation exercises

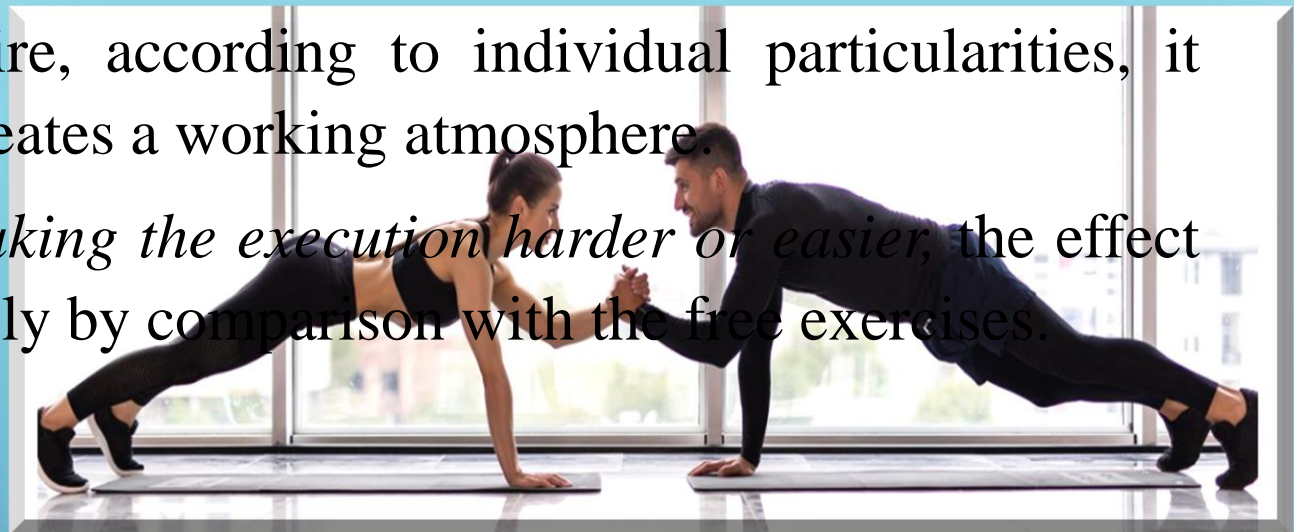
The correct technique of executing various movements specific to gymnastics implies the co-existence of contraction and relaxation (the agonists are contracting, the antagonists are relaxing). The performer of this activity must aware of it and willing to do it.

- *Simple forms*: passive drop of certain segments from a high position into a low one; shakings of the segment by using own weight inertia.
- *More complex forms* are the segment swings made in frontal plan or the drop of the entire body from a higher position into a lower one.
- *Relaxation exercises without movement* by focusing attention on the relaxation of certain segments or of the entire body from dorsal or facial lying.

EXERCISES WITH PARTNER (IN PAIRS OR IN GROUP)

Characteristics

- *The content* of these exercises is made up of exercises of strength and stretching nature and some of them constitute even elements from applicative exercises specific to gymnastics (balance-raising).
- *They can be executed on the spot or while moving* simultaneously (the partners have the same tasks) – or alternatively (each partner has different tasks).
- *The less strict execution form* of some exercises allows the free manifestation of own initiative, of the task relaxation desire, according to individual particularities, it increases the emotional character, it creates a working atmosphere.
- *By using the partner as element of making the execution harder or easier*, the effect of these exercises increases considerably by comparison with the free exercises.



- *By comparing* their own execution with that of the partner's, the competition spirit is favored (emulation) – having a special educational character.
- *By using the partner as support point*, it is allowed the precise location of the movement at joint level.
- *The partners' participation* in performing the exercises implies knowing the general bases of the movement formed with free exercises, it also implies a higher level of action coordination, of active awareness regarding the effects of exercises.
- *Depending on the set purpose*, the partner can be: element of making the execution harder, element of making the execution easier, direct help, opponent, being able to grade the effort in multiple ways.
- In order to perform these exercises, it is necessary to know the initial positions and the holds performed at hand, forearm and arms levels.

Positions and holds:

Costal standing:

- 1. Costal standing compared to the partner, grabbing with the hand from the inside: down; lateral down; lateral; lateral up; up, with arms stretched.**
- 2. Costal standing compared to the partner, grabbing with the hand from the inside: lateral down; lateral; lateral up; up, with arms bent.**
- 3. Costal standing, grabbing by the hands with arms crossed in front of the body.**
- 4. Costal standing, grabbing by the hands with arms crossed behind the body.**

Standing face to face:

- 1. Standing face to face, grabbing by the hands with arms stretched down; forward down; forward; forward up; up.**
- 2. Standing back to back, grabbing by the hands with arms stretched backward down; lateral down; lateral; lateral up; up.**
- 3. Standing face to face, grabbing by the hands with arms crossed forward down; forward; forward up.**
- 4. Standing face to face, grabbing by the hands with arms bent forward; forward up.**
- 5. Standing face to face, grabbing by the hands with arms stretched lateral down; lateral; lateral up.**

Methodical indications

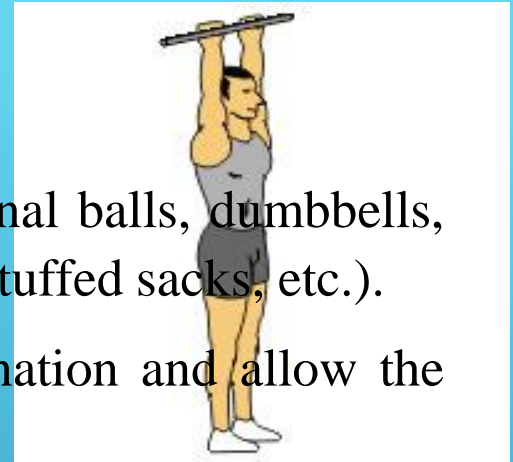
- 1. Exercises in pairs should be used only after they learned the general bases of movements, with the help of free exercises.**
- 2. At the beginning, within the free complexes, two or three easier elements should be introduced, their difficulty increasing gradually.**
- 3. Exercises should be selected according to age particularities and training level.**
- 4. If addressed to undemixed groups, exercises should be accessible to both girls and boys.**
- 5. The description of exercises should be clear, concise; it should include the initial position, the name of the movement, the direction in which it is executed and the manner in which it is made.**
- 6. The performers should be arranged from walking, respecting the requirement that they should have approximately equal heights and weights and, in the case of group exercises, each of them should take their place according to the task they would perform.**

- 7. If someone remains without a pair, they will be engaged in work in different ways: they will be the teacher's partner in demonstrating the exercises, they will work with pairs or groups, working alternatively or they execute the same tasks individually.**
- 8. The beginning and interruption of practice should be made by means of a determined and energetic command or of the whistle, all having the obligation to interrupt their activity.**
- 9. Changing positions and roles should be made operatively.**
- 10. Exercising should be free, each pair is grouping, running the proper rhythm and tempo, making corrections in the partner's execution, while the teacher should stimulate correct executions through positive appreciations.**
- 11. The racing spirit should be stimulated within pairs or inter-pairs.**
- 12. The purpose of racing should be equally fastness, precision and holding certain positions.**
- 13. In the case of complex elements which require balance, strength, coordination, safety measures should be taken (mattresses, help).**

EXERCISES WITH OBJECTS

These are executed both with specific objects: **batons** (wooden or iron), medicinal balls, dumbbells, ropes, rubber bands, small flags, etc., and with unconventional objects (towels, small stuffed sacks, etc.).

Exercises with objects contribute to the development of neuromuscular coordination and allow the localization of movement on joint level:



1. By engaging into effort of the entire muscle and articular system, these exercises have higher efficiency than the free exercises.
2. The satisfaction of success in handling various objects increases significantly the performers' emotional state of mind.
3. Defeating the weight of some objects, such as heavy medicinal balls, iron batons, etc., implies the mobilization of volitional reserves, influencing the performers' psychological side.
4. They allow posture control of the segments and of the entire body.
5. Most of the exercises with objects are executed individually, however, there are some exercises which can be executed in pairs (exercises with medicinal balls, gymnastics baton, rubber bands).

Methodical indications regarding exercises with objects

- Before using objects, the students should receive information about the specifics of each of them and the effects which can be obtained by performing exercises with these objects.
- They should receive information about manners in which objects are maneuvered and passed from one another, about the advantages of using them and the eventual disadvantages if used in improper conditions.
- In order to increase the lessons' density, it is recommended that the objects should be prepared in time and their distribution and gathering, according to the collective's particularities, should be made on the move.
- The start and finish of exercises without counting are made at command, thus avoiding situation of indiscipline which can cause injuries.
- In order to increase the exercising efficiency, emphasis should be laid on correct maneuvering of objects.
- Students should be educated in the spirit of keeping objects in good condition and they should be encouraged to make these objects themselves.



EXERCISES AT THE ESPALIER

- **The exercises executed on this apparatus by fixing certain positions help greatly to the formation and holding of correct posture.**
- **They provide the possibility of changing the support or hanging point at various heights, thus allowing an optimum effort grading, regarding both amplitude and complexity.**
- **Most exercises executed at the espalier are individual exercises, but they can also be made with a partner, especially the strength related ones.**
- **It can be used as segment support or fixation apparatus in learning certain static acrobatic elements: handstand, headstand, balance, etc.**

Methodical indications

- In making up the complex exercises at the espalier, there should be considered the gradual increase of effort by involving all body segments into effort.
- Within the strength exercises, dynamic and static exercises should be used equally.
- Strength exercises should alternate with active or passive stretching exercises.
- Effort grading, based on the increase of range of motion, can be made by gradual raising of the segments' support point height on the espalier.

- The organization of exercising should be made according to the number of students in the class and number of existing espaliers:
- The optimum variant would be if each student had an espalier;
- If the number of students is higher, the exercising can be organized in two manners: two students at one espalier, or alternative work in groups – one group executes the exercise at the espalier while the other group executes supplementary tasks (exercise with similar or different action).
- The teacher's position during exercising should allow them the simultaneous supervision of all students in order to make the necessary research.
- The demonstration of exercises should be simultaneous with the explanation while the students are watching from a distance of 2.00 – 2.50 m from the espalier.
- The beginning and ceasing of work, as well as the changing of groups should be executed on command.
- In the case of exercises executed from hanging, the height of the hold should be stated, the dismount manner from the espalier, especially to groups of primary school students: the manner of turning into dorsal hanging (right hand grabs the slat from below by crossing the right arm under the left arm and 180°).

EXERCISES WITH AND AT THE GYMNASTICS BENCH

- The gymnastics bench is a Swedish origin apparatus made of wood of various essences: pine tree, ash tree, sycamore maple, elm tree and it has various dimensions: length between 3 m and 4.5 m, height: 30-33 cm and width: 23-27 cm. The inferior part is formed of a beam (connective slat), 10-12 cm wide, rounded or rectangular.
- It is a multifunctional apparatus which allows the execution of both strength movements and the muscle stretching type.
- The exercises executed with and at the gymnastics bench have a large diversity, they are accessible to all groups, from pre-school students to high performance sportives.



Methodical indications regarding the use of exercises with and at the gymnastics bench within the physical education lesson

Using gymnastics benches demands organizational preoccupations from the teacher even before the beginning of the lesson:

- The benches can be prepared on the side of the work space, the students being organized in groups of 4-6-8 who, while moving, lift the benches to hip level and place them on the spot decided by the teacher, or the benches are placed ever since the lesson is prepared and the exercises which involve the body into effort should be adjusted to the actual situation.
- The distribution of students to benches is made taking into consideration the number of existing benches, the number of students and available space.
- To the 3 m benches, 4-6 students are distributed, to the 3.5 m benches, 5-7 students, while to the 4.5 m benches, 8-10 students.

- **Students should be distributed to the same bench according to their height and if the groups are mixed, the distribution of girls into the group of boys should be avoided. In case this indication is not respected, the effect of exercises will be considerably diminished for the shorter students.**
- **The distances and intervals between students should be equal and their position compared to the bench can be different: all on one side or, alternatively, left coastal and right coastal.**
- **In the case of the longitudinal sitting position, it is recommended the use of the alternative variant.**
- **The exercises which make up the complex should be selected so as to gradually involve in effort various muscle groups.**
- **Alternation of the contraction effort with relaxation should be made by changing the various initial positions.**

- In the case of using benches during the applicative route, their stability must be provided (those who do not exercise may help).
- In executing exercises with and at the gymnastics bench, correct execution and formation of correct posture should be the aim, respecting the movement parameters.
- In the case of pre-school and primary school children, the benches should be used especially for learning of different crawling and balance elements, using an inclined plan.
- The way the benches are placed can help considerably the learning of different movements in figures (crisscross, wavy, loop), especially in the case of pre-school and primary school children.
- When jumping over the benches in various ways, they should be placed one after the other, lengthwise.

Requirements for making up the general physical development exercise complexes

- Within the general warm-up from the physical education lesson or the gymnastics lesson, the exercises are systematized in complexes of 10-12 exercises, involving all body parts.
- In making up complexes, it should be respected the body segments involvement in a logical sequence: arms, trunk, legs, from high, medium and low positions, finished with jumping exercises which demand reactive strength and coordination.
- Within the complex, the gradual increase of effort should be taken into consideration.
- By combining basic exercises which have as purpose strength, muscle elasticity and joint mobility development, new exercises are formed, thus avoiding monotony during lessons.

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Methodical indications regarding the teaching of general physical development exercises

Teaching general physical development exercises is a complex activity which contains a series of actions:

- Passing on information materialized under the form of explanation (description) and demonstration;
- Practicing and conducting practice by counting, hand clapping, imposing rhythm through sound signals or music;
- General and particular observations regarding the quality of exercise and correction of mistakes.

The description of the exercise must include:

- indication of the initial position(STANDING, KNEE STANDING, SITTING, LYING, SUPPORT, HANGING...knee standing support, facial lying support);
- the name of the movement,(bending, twisting, lifting...)
- The segment involved the movement;
- indication of direction, (forward, back, sideways/lateral...)
- amplitude and other movement characteristics as well as the position at which the movement ends.

Example of the exercise description when we compose exercises on the paper

The name of the initial position(I.P.): **Standing:**

Movement name:

1. **Lifting of the arms forward ;**
2. Lowering the arm down;
3. Bending the knees **into squatting support;**
4. Stretching the knees in standing or return in I.P.

- **The movement;**
- **The segment;**
- **The direction.**

Exercises in 8 times

I.P.: **Standing:**

1. Left side step with bending of the arms, hands on the neck;
 2. Bending the trunk forward;
 3. Arching;
 4. Lifting the trunk and the left leg close with stretching the arms down;
or return to initial position.
- 5-8 Exercise repeats to the right side.



ATTENTION

- WHEN THE LEGS POSITION IS CHANGED **BY STEPPING** OR **BY JUMPING**
PASSING TO STANDING WITH SPREAD LEGS OR IN THE OTHER
POSITION...THE DESCRIPTION OF THE EXERCISES **starts from the feet.**

The teacher's leadership exercise includes:

- setting the initial position;
- the beginning of the exercise – Attention –Start!;
- print counting;
- interruption of execution (end of the exercises- Attention stay/halt!).

Gymnastic symbols for describing harmonious physical development exercises

ARROW



the direction of the movement

☐ Can be straight or curved



the movement return

by jumping passing in....



arching



X – NUMBER OF
REPETITION

+

on the
other side
or with the
other
segment

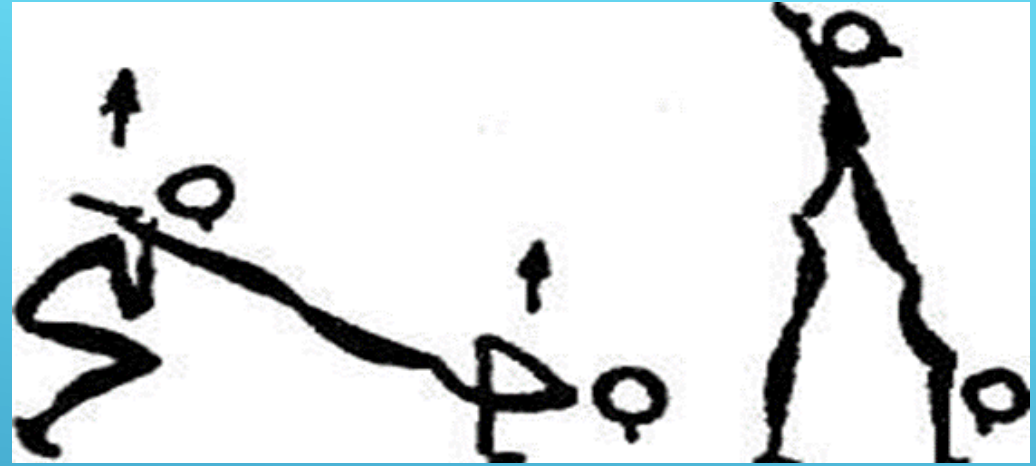
+ (3)

time 3 is also
done on the
other side

KEEP IN MIND

For precision of describing exercises is mandatory to mention:

1. **Initial position** (standing, sitting, lying, supported, hanging and combined: squatting supported, Knee standing supported, facial lying supported).
2. **The movement** (twisting, bending, swinging, rotation, streatching, extension of the trunk, arching s.o).
3. **The segment whitch execute the movement** (arms, trunk, legs, knees).
4. **Direction of the movement** (forward, laterally- sideways, up, down, backward).



APPLICATIVE EXERCISES



- ❑ These movements have utility purpose and serve to control the individual's attitude and motor behavior in circumstances resembling daily living.
- ❑ All these actions constitute the base of natural movements which support the formation of motor skills.
- ❑ Applicative exercises are usually movements which engage all muscle groups into effort, contributing to the general and multilateral physical development.
- ❑ They also contribute to the development of movement abilities necessary in life and to their adjustment to changing circumstances.

❖ Besides developing motor skills, strength, speed, stamina, abilities, the applicative exercises constitute an important means in the development of psychic qualities such as:

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- attention,
- willpower,
- courage,
- racing spirit,
- collective feelings, etc.

CLASSIFICATION OF APPLICATIVE EXERCISES

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graph TD; A[CLASSIFICATION OF APPLICATIVE EXERCISES] --> B([NON-SPECIFIC]); A --> C[SPECIFIC APPLICATIVE EXERCISES]; B --> D[walking, running, jumping, throwing and catching.]; C --> E[Balance exercises, Crawling, Climbing and escalation, Weight lifting and carrying, Traction and pushes];
```

NON-SPECIFIC

- walking
- running
- jumping
- throwing and catching.

SPECIFIC APPLICATIVE EXERCISES

- Balance exercises
- Crawling
- Climbing and escalation
- Weight lifting and carrying
- Traction and pushes

NON-SPECIFIC APPLICATIVE EXERCISES

