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## PHYSICAL ACTIVITY FORMATION BY MEANS OF DANCE SPORT

*The article reveals the problems of special physical training of athletes-dancers. To master competitive programs, dancers need special physical training, which includes various parameters of locomotor skills and non-standard skills for performing complexly coordinated dance elements. Dance is not only a physical exercise, but also one of the forms of psychological relief. Unlike other physical exercises, dancing has no age restrictions. By examining the structure of dance movements, it can be stated that they have the dynamics of movement abilities, an emotional component, and the rhythmic content of music, which in general create a deep and interesting artistic image. High-speed dance movements performed with maximum amplitude require increased physical effort, strength, endurance, flexibility, and coordination of movements. Athletes-dancers of different age groups and skill levels need not only to improve, but also to maintain their physical form, which allows them to successfully perform at competitions. Therefore, when building the training process, it is worth paying attention to both the complex of general physical exercises and the complex of special exercises.*

*Nowadays, it is impossible to achieve success in dance sport without a high level of development of these qualities since a decrease in their level in athletes-dancers leads to a deterioration in sports results.*

***Key words:*** *dance sport, physical training, special physical training, training process competitive period, functional training.*

***Лаврентьєв Олександр, Марченко Катерина, Дьомін Володимир, Хоменко Володимир. Формування фізичного навантаження засобами танцювального спорту.*** *У статті розкриваються проблеми спеціальної фізичної підготовки спортсменів-танцюристів. Для освоєння змагальних програм танцюристам необхідна спеціальна фізична підготовка, яка включає різні параметри локо- моторних умінь і нестандартних навичок для виконання складно координованих танцювальних елементів. Танець - це не тільки фізичне навантаження, але й одна з форм психологічного розвантаження. На відміну від інших фізичних вправ, танці не мають обмежень за віком. Розглядаючи структуру танцювальних рухів, що можна констатувати, що вони мають динаміку рухових здібностей, емоційну складову, ритмічний зміст музики, що в цілому створюють глибокий та цікавий художній образ. Танцювальні швидкісні рухи, що виконуються з максимальною амплітудою, вимагають підвищених фізичних зусиль, прояви сили, витривалості, гнучкості, координації рухів. Спортсменам-танцюристам різних вікових груп і рівня майстерності необхідно не тільки вдосконалювати, але й підтримувати свою фізичну форму, що дозволяє успішно виступати на змаганнях. Тому при вибудовуванні тренувального процесу варто приділяти увагу як комплексам загальнорозвиваючих фізичних вправ, так і комплексів спеціальних вправ.*

*З метою ефективного управління тренувальним процесом з позицій спортивної фізіології та біохімії необхідно орієнтуватися на такі показники, які адекватно відображають оперативний стан організму спортсменів: готовність до виконання певного фізичного навантаження, швидкість перебігу відновлювальних процесів після занять, ефективність функціонування різних фізіологічних систем як у цілісному організмі*

*В даний час досягти успіхів у спортивних танцях, не маючи високого рівня розвитку цих якостей, неможливо, оскільки зниження їх рівня у спортсменів-танцюристів призводить до погіршення спортивних результатів. Формування навантажень при розвитку спеціальної фізичної підготовки (спеціальні якості) повинна бути доступна у практичному виконанні, не викликати перевтоми організму вцілому. При побудові навчально-тренувального процесу потрібно враховувати індивідуальні особливості спортсменів за віковою класифікацією, за їх морфо- функціональним показниками, психологічним станом, сенситивними періодами розвитку фізичних якостей, статі тощо.*

***Ключові слова:*** *танцювальний спорт, фізична підготовка, спеціальна фізична підготовка, тренувальний процес змагальний період, функціональна підготовка.*

**Formulation of scientific problem and its significance.** Currently, dance sport is developing rapidly, and the requirements for athletes-dancers relate not only to the musicality, ease, and plasticity of the performance of the competition program, but also, above all, to their physical training.

During dance classes, you need to pay attention not only to dance movements, but also the development of physical qualities, it is advisable to engage in it from an early age. However, one can improve their level of physical fitness with a correctly constructed training process.

Strength, velocity, endurance, coordination of movements, flexibility, which are important physical qualities for athletes and dancers, are successfully developed with the help of special exercises. Athletes-dancers of different age groups and skill levels need not only to improve, but also to maintain their physical form, which allows them to successfully perform at competitions. Therefore, when building a training process, it is worth paying attention to both complexes of general developing physical exercises and complexes of special exercises.

**Analysis of recent research and publications.** Dancing increases the level of interaction of dancers with each other and with the choreographers in the dance hall. Dance helps people in the process of self-discovery, which is aimed at the development of communicative interaction using the language of dance, movements, and joint actions to express their ideas. This helps to increase the level of social cognition and get acquainted with the capabilities of your body.

Dance, the unity of sport and art is an original type of creative activity. The modern theory of dance does not give an unequivocal answer to the question of its origin.

(Table 1) shows the patterns of the origin of dance as a sociocultural phenomenon of human acquisition and as a tool for physical culture, sports, and health activities of various population groups.

Table 1

Dance in society

| | |
|---|---|
| **«Pure sexuality»** | the origin of the dance is purely sexual: the dance arose because of the liberation of eroticism (V. Kandinskiy, S.M. Kurakina); |
| **Technological process** | the reason for the appearance of dance movements is the rhythmic way of working, technological processes (K. Biukher, H.V. Plekhanov); |
| **“Homo ludens”** | dance is considered the purest and most perfect form of play (Y. Kheizinh); |
| **Utilitarianism** | in the non-verbal period of human development, the first expedient movements, which became the prototype of dance, had a utilitarian character: any expedient movement is subject to a certain rhythm, meter, organized space-time conditions of people's actions. It was these body movements and postures that were the subject of learning, as nature and human life required it (V.V. Selivanov); |
| **Non-verbal dialogue** | dance as a non-verbal form of communication arose in the process of satisfying the primitive man's need for communication, vital communicative connection |
| **The language of dance was the language of human feelings** | dance movements were used rather not to denote, but to express the realities of human life (E.L. Martinez, E.K. Luhova) |
| **According to the original history of dance development by K. Zaks** | The origin of dance refers to the time when the dual essence of human nature was formed. |
| **E. A. Koroleva states that dances (originally domestic) and games emerged from synthesized ritual actions** | Hunters performed the first totem dances with no less energy than during the hunting process. Reality for the primitive man did not have uninterrupted boundaries between the inner and outer world. This worldview gave birth to fantastic images, but it was not an illusion. The expression of the desire to discover the other side of the world was in familiarity with this world. Today we want to consider the reverse side of known processes. It is an expression of our time. |

*The purpose of the article:* to investigate the peculiarities of the organization of educational and training activities of athletes-dancers and the formation of special physical training by means of dance movements.

*Objectives of the study*: substantiate and develop conceptual and theoretical and methodological principles, combining them with the main components of sports training.

The scientific research is carried out in accordance with the research topic of the State Tax University for 2021-2026 on the topic "Increasing the physical capacity of various population groups in the process of physical education and sports" (state registration number 0121U113261).

The relevance of the topic is that it is advisable to engage in the development of physical qualities from an early age, and it is also possible to improve the level of physical fitness with a specifically constructed training process by means of special dance movements.

**Presentation of the main material and substantiation of the obtained research results.** Sports dance reflects all the beauty of the world, which can only be conveyed by a person using their own body: the beauty of rhythm and sound, lines, feelings, strength. This sport demonstrates the capabilities of the human body as an elastic material, as a non-verbal language, understandable to representatives of any nation.

Sports dances develop at a rapid pace. Like any physical discipline, dance sports require constant training. (Table 2) shows the modern training program for a dancer, proposed by the author [2], as an athlete aimed at achieving high results, consisting of four interrelated parts, see (Table 2).

Table 2

Structure of dancer training

| Theoretical part | Technical part | General physical part of training | The emotional part |
|---|---|---|---|
| 1. The dancer receives auditory and visual variation from the coach (educator), learns the terminology, learns the principles of connecting dance figures and composing a dance composition,<br>2. Receives information about possible options for rhythmic improvisation when performing a dance. | 1. Multiple repetition of movements by the dancer (repeat each step, movement of the body, arms, lowering and lifting to achieve natural and graceful movements). | 1. Associated with breathing and physical endurance;<br>2. Correct distribution of breathing when performing dance movements, which allows the dancer to endure prolonged physical exertion;<br>3. Demonstration of moral and volitional abilities to maintain strength throughout the competition. | 1. Developing mutual understanding between dancers;<br>2. Creating a psychological mood for the couple to achieve the highest results;<br>3. Formation of an emotional pattern of dance, as a means of aesthetic transfer of information from one dancer to another or from dancers to the audience. |

Dance movements are the result of complex combined actions of muscles, which largely determines the structure of the physical qualities required for this type of sport.

The dances of the European program have a very diverse historical and geographical origin, a different rhythmic pattern and character, but they also have common features: throughout the performance of the dance, both partners are in a closed position and in constant close contact with each other, which is carried out due to the correct body posture. It is ideal if the hands of each partner, form a straight horizontal line that runs from one elbow to the other of each performer. This allows the partner to lead the movement in the pair ("lead the pair"), and the partner to follow them without interfering. All this requires significant static efforts of the back muscles [1].

Based on personal experience of practical work, we note that insufficient attention is paid to the complex approach to the sports training of athletes-dancers. As a result, most athletes and dancers aged 12-16 years have a low level of physical fitness, which does not allow them to achieve high sports results.

In sports practice, general physical training is mandatory and necessary to achieve the appropriate level of performance, which creates the conditions and opportunity to further increase the volume of specific loads and increase the degree of training in the chosen sport. In this regard, the issue of developing special physical qualities, considering the specifics of dance sports, becomes relevant. As you may know, sports dances are a unique combination of sports and art, by nature they belong to technical and aesthetic sports, which are characterized by a variety of movements and a special performance technique and are aimed at improving locomotor functions [3]. Therefore, at any stage of the athlete's training and training system, it is necessary to select special and general training exercises that would contribute to the development and improvement of his coordination abilities.

Dance sports include 10 dances: five dances of the European program (slow waltz, tango, Viennese waltz, slow foxtrot, fast foxtrot) and five dances of the Latin American program (samba, cha-cha-cha, rumba, pasodoble, jive). All dances are significantly different from each other in rhythmic pattern, pace of performance, geometry of movement on the dance floor, specific body movements, etc. To achieve a high result in dance sports competitions, it is necessary to flawlessly master a large number of various body movements and their combinations. And this is possible only with a reasonable and logical structure of the training system [4].

Special physical training must meet the specific requirements that are characteristic of dance sports. This purposeful process should include techniques and methods aimed at developing and maintaining a certain level of manifestation of coordination abilities (dynamic and spatio-temporal parameters, maintaining balance, sense of rhythm, orientation in space, voluntary muscle relaxation, coordination of movements). Insufficient attention to the development of at least one component of special physical training can be the cause of unstable sports results.

(Fig. 1) shows the characteristics of movements in European dances, which have their own specifics for training and improvement, namely:

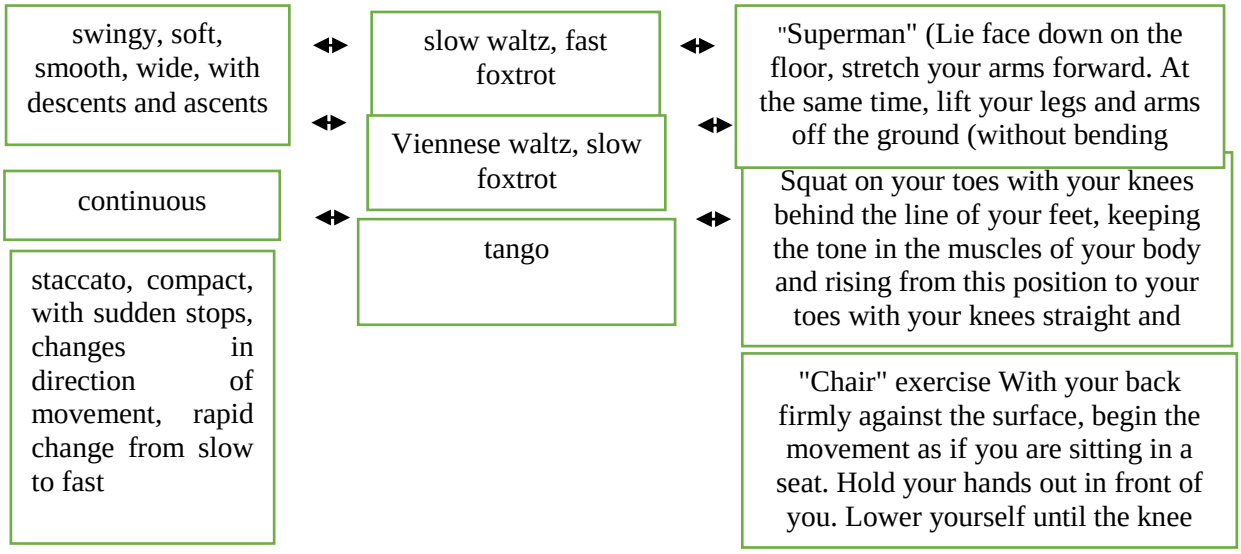



Fig. 1. Characteristics of dances of the European program

Most movements in Latin American dances (for example, samba, paso doble, rumba) are associated with the manifestation of active flexibility, which also necessitates the development of this physical quality [5].

(Fig. 2) shows movements from Latin American dances, which also have a special character, namely:

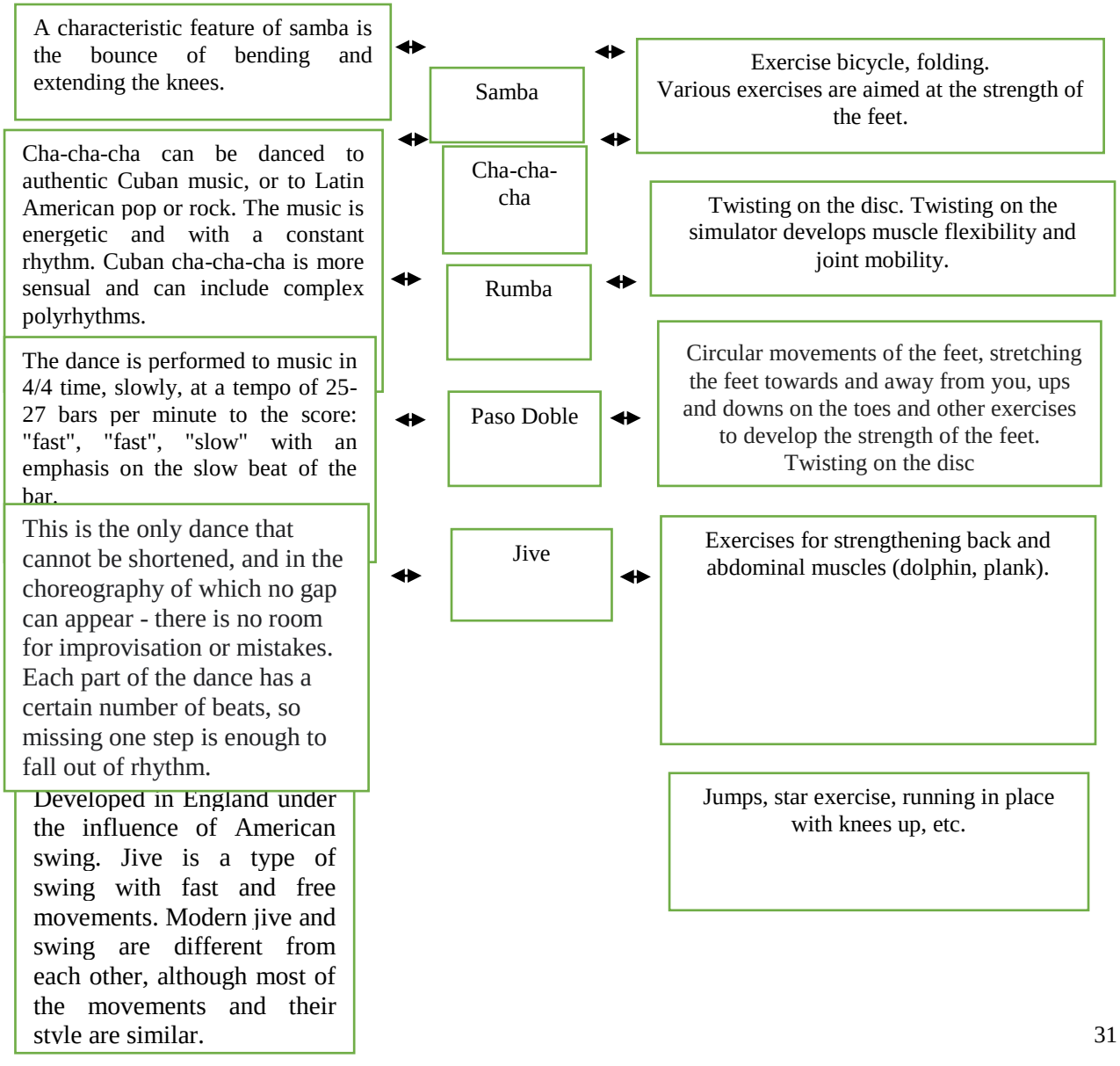


**Fig. 2. Characteristics of dances of the Latin American program**

Based on the specifics of movement in dance sports, it is possible to determine the leading physical qualities of an athlete-dancer: strength, velocity, coordination, endurance, flexibility.

Table 3 shows the main components of the manifestation of physical qualities of athletes-dancers, which was noted by the author S.V. Krivosheeva.

Table 3

Physical training of dancers

| Physical qualities | Manifestation of physical qualities |
|---|---|
| Velocity | reaction rate speed of single movement requency (pace) of movement complex motor reactions |
| Coordination abilities | nervous (sense of rhythm, balance, posture, etc.)<br>muscular (group interaction of muscles that ensures body stability (when walking, running, etc. movements) motor (the process of coordinating the movements of links in space and time) |
| Endurance | aerobic energy saving system<br>functional biomechanical economization |
| Strength | "explosive strength" (the ability to overcome tension with maximum muscle tension in the shortest time)<br>power endurance |
| Flexibility (plasticity) | active form (due to independent muscular efforts) |

With the help of dances, we can form a personality and direct the child's development to a healthy lifestyle, active and athletic longevity by following the following recommendations:

- dancing contributes to the natural development of the necessary and beautiful muscle corset, both in men and women;
- develops correct movement coordination, posture, respiratory system;
- during training, there is the minimum level of danger of injuries, with a high level of natural physical load on the body;
- different dance techniques allow you to engage not only the main muscle groups, which are rarely used in ordinary activities, and popular sports**.**

In (Table 4), the open weekly microcycle (training) of children aged 7-9 years (age category of children juveniles 1 - juveniles 2 E class) educational and training sessions are developed and conducted by the trainers of the sports ballroom dance club “Adagio” K. Marchenko and V. Domin during the organization of classes, there were mandatory rules:

1) at the beginning and at the end of the class - performance of the “bows”;
2) a break to change clothes and shoes;
3) preparation for working out the next program. The duration of educational and training classes is 60 minutes.

Table 4

Weekly microcycle for children aged 7-9 years of the sports ballroom dance club “Adagio”

| |
|---|
| *1 Training (Latin American program, LA (Latin), dance - Samba):* General warm-up with elements of classical choreography and physical exercises (push-ups, plank, squats) |
| Theory, repetition and verification of the passed material, features of Samba dance performance, musical and rhythmic features, nature of the dance, its historical and ethnic features. |
| Practicing basic figures (Basic) using dance exercises.<br>Figures: rhythm bounce, basic steps (movements), wax, stationary samba step, batafoga, volta, cruzado steps.<br>Exercises: rhythm bounce, coordination exercises, exercises for moving one's own body weight, balance exercises, building an axis and dance lines, complex coordination movements with twisting and moving body weight between built axes, maintaining internal tone during exercises and elements, foot exercises, movement technique.<br>Working out the schemes and directions of the steps of each figure, as an individual athlete (dancer), as well as the interaction of both partners, when performing figures in a pair. |
| Independent practice of received information, work on errors |
| Athletes (dancers) practice their own competitive compositions (choreographies), considering the material covered, with the aim of improving own and partner skills. |
| *2 Training (European program, ST (standard), dance - Tango):* General warm-up with elements of classical choreography and physical exercises (push-ups, plank, squats) |
| Theory, repetition, and verification of the passed material, features of Tango dance performance, musical and rhythmic features, nature of the dance, its historical and ethnic features. |
| Practicing basic figures (Basic) using dance exercises.<br>Figures: basic Tango steps, basic and open reverse turns, five step, closed promenade, progressive link, corte, etc.<br>Exercises: coordination exercises, exercises for moving one's own body weight, balance exercises, building an axis and dance lines, complex coordination movements aimed at moving body weight between built axes, maintaining internal tone during exercises and elements, exercises for work feet, movement technique.<br>Working out the schemes and directions of the steps of each figure, as an individual athlete (dancer), as well as the interaction of both partners, when performing figures in a pair. |
| Independent practice of received information, work on errors |

| |
|---|
| Athletes (dancers) practice their own competitive compositions (choreographies), considering the material covered, with the aim of improving own and partner skills. |
| *3 Training (Practice):* The purpose of the practical session is to repeat the material covered during the week, the athletes practice their own competitive compositions (choreographies), both dances of the European and Latin American programs (depending on the level of the athletes, one of the programs may include from 1 up to 5 dances), improvement of partner interaction, physical form and endurance, work on mistakes and comments of coaches, honing skills, practicing changes in choreographies.<br>European program – Slow Waltz, Tango, Viennese Waltz, Slow Foxtrot, Quickstep.<br>Latin American program - Samba, Cha-cha-cha, Rumba, Pasodoble, Jive.<br>Practical classes are more aimed at independent work, which creates in athletes a sense of responsibility, independence, psychological stability and teaches to find compromise solutions when working with a partner.<br>The coach's task is to motivate, correct and guide athletes, resolve conflict issues, and help with emerging errors. |
| General warm-up with elements of classical choreography and physical exercises (push-ups, planks, squats) |
| Theory, repetition and verification of the material passed, peculiarities of performing dances of the European program, musical and rhythmic peculiarities. |
| Practicing basic figures (Basic) using dance exercises.<br>Briefly, repetition of basic elements, features. |
| Independent practice of received information, work on errors<br>The group is divided into 2-3 groups (depending on the number and level of athletes) and goes on to perform and practice their own competitive programs.<br>Each dance of the program is given 1 minute and 30 seconds, after which the groups change. After one to two sets, athletes move on to the next dance until they complete the entire program. |
| Working out the program of the final<br>After the main cycle of work, the athletes are given the opportunity to perform a dance program under conditions as if the pair had advanced to the final part of the competition.<br>All dances of the program are performed completely in one move, without stops to correct mistakes or comments from trainers. Dances are performed one after the other (1 min 30 sec - 1 min 40 sec - per dance, at the decision of the trainers) with a break between dances of 10-15 sec, to change the musical accompaniment. To increase the interest of the athletes, the coach can practice the program of the finals in the format of a mini-competition in the hall. |

**Conclusions.** When building a training process, it is important to remember that general physical training exercises can be performed without musical accompaniment. Special physical training must be performed to music, as it contributes to the development of both physical qualities and a sense of rhythm and musicality.

A reasonable organization of the training process, aimed at the development of the physical qualities of athletes-dancers, will provide the necessary conditions for creating an adequate motor technical base for achieving the highest sports results.

**Prospects for further research.** We see a further direction of research in the experimental clarification of the model of preparedness of athletes-dancers regarding the combination of the main components of training activities with a dance composition.

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