The features of construction of recreation and recreation classes are revealed, their importance for the able-bodied age people has been proved. The results of the application of functional training in the fresh air with the use of TRX in the system of recreation and recreation classes with women of the middle age are presented. It is shown that the developed method of functional training using TRX in the fresh air, which is combined with healthy running, is safe and effective, provides a positive dynamics of indicators of the physical condition and adaptive potential of women of the middle age.

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FUNCTIONAL TRAINING IN THE FRESH AIR
WITH THE USE OF TRX IN THE SYSTEM OF HEALTH AND RECREATION CLASSES OF THE MIDDLE AGED PEOPLE

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The purpose of the article. Theoretically substantiate the necessity of health and recreational activities for women of the middle age (36-55 years) in the fresh air; to reveal the content and methodological features of the method of functional training of TRX in the fresh air for a given contingent of persons, which is combined with the recreational jogging.

Research methods. Analysis and generalization of data of scientific-methodical literature, questionnaires, pedagogical observation, pedagogical experiment, estimation of the adaptive potential of the blood circulation system to the factors of the external environment (by the method of R.M. Baevsky), estimation of physical condition.

Research results. To construct a method of functional training with the use of TRX in the fresh air it is necessary to consider the theoretical basis for the construction of health and recreational activities. The construction of health and recreational activities should take into account a number of factors: age and sexual characteristics of the population; their interests, material and technical capabilities, state of health and level of physical preparedness, etc. The main unified components (factors) taken into account when developing the algorithm for training and conducting recreation and recreation classes are: 1) assessment of the factors influencing the coverage of a particular group of people (students, students, employees of enterprises and institutions, people of retirement age) with health and recreation classes; 2) assessment of the conditions for the organization of health and recreational activities (according to the passport of the institution or recreational area); 3) estimation of the initial level of the psychophysical state of recreational activity subjects; 4) development of a program of health and recreation classes; 5) health and recreation activities; 6) determination of the effectiveness of health and recreational activities.

When developing a method of functional training with the use of TRX in the fresh air it is necessary to take into account that such training has certain differences from sports lessons. If sport training involves the use of physical activity in the form of simple and repeated motor actions of certain time and intensity in order to achieve normalizing and corrective effects, then functional training is aimed at improving the functional and adaptational capabilities of the organism, development of motor abilities, and functional strength. This training involves the use of physical activity in the form of complex and combined motor actions, aimed at improving the functional and adaptational capabilities of the organism, the development of motor abilities, functional strength, and the development of a variety of motor skills.
order to achieve maximum results in the chosen sport, the health and recreational one aims to increase or maintain the level of physical capacity, somatic and psychological health of a person.

The content of health and recreation classes forms physical exercises. In order to achieve a clear health effect, physical exercise should be accompanied by significant energy consumption and a long and uniform physical activity on the respiratory system and blood circulation. This ensures the supply of oxygen to tissues, therefore, indicates the marked aerobic direction of exercise [1].

The effectiveness of physical exercise regenerative orientation is determined by the frequency and duration of classes, the intensity and nature of the means used, alternating working and rest regimes. In order to ensure the recreational orientation of recreational activities, it is necessary to follow the methodical principles.

**The principle of gradual increase in intensity and duration of loads:** provided the low initial level and duration of loads, the methodical principles.

The duration of classes, the intensity and nature of the means used, alternating working and rest regimes. The principle of gradual increase in intensity and duration of loads should be 3-5% per day in relation to the achieved level, and after reaching high rates should be less. Gradually increasing the load, it is necessary to avoid over-stressing the body and create favorable conditions for the deployment of long-term adaptation mechanisms, which will ensure the gradual growth of opportunities to overcome longer and more difficult loads. An increase in the loading impact of trainings can be provided in the following ways: • increase in the number of health and recreational activities per week; • increase in the duration of classes; • increase in the density of trainings, that is, the time spent directly on motor activity (exercise of physical exercises). In the first lessons, the motor density is approximately 45-50%. At adaptation of an organism to physical load motor density of employment can reach 70-75% of total time of classes; • increase in the intensity of trainings due to the increase in the pace of exercise; • continuous expansion of the tools used in training, in order to ensure the impact on different muscle groups, joints and internal organs; • increase the complexity and amplitude of movements [2].

**Structure and construction of classes.** Each class must have a clearly defined structure: preparatory, main and final parts. The distribution of means and the application of methods in different parts of the classroom should correspond to the direction of each of its parts. Depending on the state of health, the weather, the level of preparedness of the subjects of recreational activities, you can increase or decrease the workout, the main and final part of the class.

**Variety of means.** For qualitative variety of physical activity 7-12 exercises of different orientation are enough. Effective means of various training, which includes a large number of muscles, is jogging, skiing, swimming, rhythmic gymnastics, and etc. Exercise for endurance (running at slow and medium speeds), exercises for large muscle groups (squatting, lifting the legs in the hill on the crossbar or gymnastic wall, moving from lying position to the sitting one, etc.) should be used in health and recreational training, exercises for the joints of the spine, arms and legs, as well as exercises with a change in body position [2].

**Systematicness of trainings.** Systematic exercises have a positive effect on all organs and systems of the organism; normalize the mental state of recreational activities. For health purposes, the next weekly volume of motor activity is recommended for people of all ages: students — 10-14 hours; employees — 6-10 hours; people of retirement age — 10-12 hours.

**Individualization of the maintenance of health and recreational activities.** The purpose of individualized programs of health and recreational activities is to promote the physical and mental health of recreational activities. To achieve this goal, general and special tasks need to be solved.

In order to solve the set problems, it is recommended to use the following health and recreational facilities: general training (in motion, on site), general development (aimed at the development of flexibility, coordination, and attention), restorative (breathing exercises, elements of isometric gymnastics) and recreational means (relays, active and psychological games, elements of sports games).

The program of health and recreation classes should be implemented in three stages: initial, basic and final, each of which solves specific tasks in accordance with the basic methodological principles of construction of health and recreational activities.

**The content of the methodology.** We have developed a method of functional training TRX in the fresh air for women of middle age, which is implemented in the conditions of the fitness club and the adjoining park area. TRX’s functional training is combined with a healthy jogging.

The purpose of the experimental method of functional training in the fresh air with the use of TRX for women of middle age was determined by enhancement of the functional capabilities of their organism, the prevention of diseases typical of individuals in this age group associated with a sedentary lifestyle, the normalization of their mental state, the formation of a need in a healthy and active way of life.

A comprehensive, systematic approach to the implementation of the methodology allowed to isolate and solve the following tasks: 1) the formation of a stable positive motivation to participate in functional training in the fresh air; 2) improvement of the psycho-emotional state of recreational activity subjects; 3) ensuring effective influence on the main mechanisms of development of compensatory-adaptive reactions of the organism in the process of aging, normalization of its functional capabilities; 4) prevention of the development of age-related diseases; 5) expansion of their sphere of activity and involvement in conducting an active, healthy lifestyle, improving its quality.

**Organization of the research.** For the study, a research group of 17 women of middle age (37-43 years old) was formed and the homogeneity of its composition according to age and functional criteria was determined, which allowed further
The soothing effect of the run is enhanced by the action of the pituitary hormones (endorphins), which are released into the blood during endurance work. With intensive training, their blood content increases by 5 times compared with the state of rest and is kept in elevated concentrations. Thus, jogging is the best natural tranquilizer that reduces nervous tension, improves sleep and well-being, as a result of exercises, improving jogging reduces the risk of myocardial infarction as a result of excessive adrenal hormones – adrenaline and norepinephrine. Improving jogging (in optimal dosage) allows for diversification of training sessions, and thus, an effective development of muscle strength (core) is achieved due to the axial load on the spine, as well as the strength of other large and small muscle groups, flexion of the joints, coordination, in particular, balance, endurance.

Traditionally, TRX is used in gyms in Ukraine. However, in order to strengthen the health effects of such activities, from May 2018, we started experimentally using exercise complexes in the city park, in the territory of which sports clubs “Spartak” and “Spartak-GUM” (Poltava) are located. Taking into account the aforementioned aspects, we have been able to predict that functional training at TRX will increase the ability of people of middle age to gradually increase the level of functional preparedness needed in everyday life, allow for diversification of training sessions, and increase motivation for attending health training.

**Discussion of results.** Age periodization of human life is a conditional division of a whole life cycle into the age periods measured in years. Under the age period it is necessary to understand the segment of the individual’s life, which reaches a degree of development and has characteristic and relatively stable qualitative features. Within each of the periods of the individual’s development, quantitative and qualitative changes in physical development, physical fitness, psyche, and intellectual development take place, which makes it possible to identify certain stages that consistently change each other. Human development has a periodic and staged nature. Determination of periods, stages, phases of mental, physical and personal development of a person is necessary for revealing the leading (dominant) type of activity, its character and orientation for creating the optimal system of health and recreational measures, the application of which will ensure restoration of the psychophysical state, obtaining maximum pleasure from active leisure.

For planning the maintenance of recreational activities with functional training at TRX for women of the middle age, the understanding of...
the relationship between periods and stages of development becomes important, since the acquired knowledge and skills at the previous stage are passed to the next and used in the new ones, more complex interpersonal relationships with the public environment.

In the middle age (from 36 to 55 years), women undergo processes that are associated with a gradual decrease in the functional capacity of the human body due to aging. The main criteria that have been taken into account during the development of the content of the method of using the TRX loops are as follows: taking into account the peculiarities of the age; taking into account the specifics of the leading activity; studying the motivation of women for health and recreation activities; estimation of the initial level of physical condition of women of the middle age as subjects of recreational activity.

Assessing the motivation of women, we focused on: 1) consideration of motivational priorities (classes according to women, should be directed to interesting, meaningful, active pastime, interesting communication, correction of body weight, improvement of posture, improvement of health); 2) interest in certain types of motor activity, which increase the emotional background of occupations; 3) harmonious balance of different types of motor activity, which guarantees a broad "motor base" for modeling health and recreational programs.

In order to evaluate the effectiveness of the TRX functional training method that we introduced, we used indicators of the physical condition and adaptive potential of women.

**Introduction** of the method of functional training TRX allowed to achieve statistically significant positive changes in the indicators of the physical condition of women: the physical condition of 2 women reached the middle level (11.76%); 14 women achieved a high level of physical fitness (82.35%); in one woman (5.88%), a low physical condition was recorded. The comparative analysis of the data of the recording and forming stages of the experiment fully confirmed the effectiveness of the applied experimental effects ($\chi^2_{emp} = 9.556$; $\chi^2_{cr,0.05} = 1.53$; for degrees of freedom $n-1=1$; $\chi^2_{emp} > \chi^2_{cr,0.05} - \text{different summations}$).

According to the indicators of adaptive potential of the system of blood circulation (functional class) of women who engaged in functional training, also confirmed the effectiveness of the experimental method. The following results were shown to the experiment: sufficient level of adaptation of the circulatory system was recorded in 7 women ($41.17\%$ of people ($1.95+015$ points); the high level ($2.68+0.26$ points) was recorded in 8 women ($47.05\%$); the indicator of the stress of adaptation mechanisms ($3.38+0.19$ points) was shown by 2 women ($11.76\%$).

At the end of the introduction of an experimental technique based on cyclic aerobic exercises and functional training at TRX, positive changes were observed in the indicators of adaptive potential of all women: the high level of adaptation of the circulatory system (1.73+0.19 points) reached 13 women ($76.47\%$); the average rate ($2.31+0.17$ points) was recorded in 4 women ($23.52\%$); cases of stress of adaptation mechanisms were not recorded ($\chi^2_{emp} = 10.031$; $\chi^2_{kr,0.05} = 1.53$; for degrees of freedom $n-1 = 1$; $\chi^2_{emp} > \chi^2_{kr,0.05} - \text{different summations}$).

**Conclusions.** 1. Positive reliable dynamics of indicators of the physical condition and adaptive potential of women of the second mature age confirms the effectiveness of the proposed method of functional training in the fresh air with the use of TRX for persons of the middle age.

2. Functional TRX loops can be used in working with persons of the middle age within the framework of functional training and rehabilitation programs in the open air. Exercises with TRX have the advantage — it is work with weighting our own weight. Such exercises also allow removing the vertical load of the spine. Exercise can include various joints and 90% of all muscles in the work.

**References:**


ФУНКЦІОНАЛЬНЕ ТРЕНУВАННЯ НА СВІЖОМУ ПОВІТРІ
З ВИКОРИСТАННЯМ TRX В СИСТЕМІ ОЗДОРОВЧО-
РЕКРЕАЦІЙНИХ ЗАНЯТЬ ОСІБ ДРУГОГО ЗРІЛОГО ВІКУ

Анотація
Розкрито особливості побудови оздоровчо-рекреаційних занять, доведена їх важливість для осіб працездатного віку. Представлено результати дослідження застосування функціонального тренування на свіжому повітрі з використанням TRX в системі оздоровчо-рекреаційних занять з жінками другого зрілого віку. Доведено, що розроблена методика функціонального тренування з використанням TRX на свіжому повітрі, яка поєднується з оздоровчим бігом, є безпечною та ефективною, забезпечує позитивну динаміку показників фізичного стану та адаптаційного потенціалу жінок другого зрілого віку.

Ключові слова: оздоровчо-рекреаційні заняття, функціональне тренування, TRX, оздоровчий біг.

ФУНКЦІОНАЛЬНАЯ ТРЕНИРОВКА НА СВЕЖЕМ ВОЗДУХЕ
С ИСПОЛЬЗОВАНИЕМ TRX В СИСТЕМЕ ОЗДОРОВИТЕЛЬНО-
РЕКРЕАЦИОННЫХ ЗАНЯТИЙ ЛИЦ ВТОРОГО ЗРЕЛОГО ВОЗРАСТА

Аннотация
Раскрыты особенности построения оздоровительно-рекреационных занятий, доказана их важность для лиц трудоспособного возраста. Представлены результаты исследования применения функциональной тренировки на свежем воздухе с использованием TRX в системе оздоровительно-рекреационных занятий с женщинами второго зрелого возраста. Доказано, что разработанная методика функциональной тренировки с использованием TRX на свежем воздухе, сочетающаяся с оздоровительным бегом, является безопасной и эффективной, обеспечивает положительную динамику показателей физического состояния и адаптационного потенциала женщин второго зрелого возраста.

Ключевые слова: оздоровительно-рекреационные занятия, функциональная тренировка, TRX, оздоровительный бег.