



ORIGINAL ARTICLES. PHYSICAL EDUCATION

Fitness-technology for 30-35 year old women

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Abstract

Purpose: to develop fitness-technology for 30-35 year old women to increase physical fitness and body sculpt improvement.

Material and methods. The study was performed from at the premises of lyceum "Perspektyva", Zaporizhzhia. It was attended by 83 women aged 30-35, who were divided into experimental and control groups. All women were classified in the main medical group. The fitness-technology is combination of theoretical and practical blocks. The fitness-technology was developed for 8 months and consisted of 3 stages: preparatory (duration – 8 weeks, intensity – 40-50% maximal oxygen consumption (MOC), main (duration – 16 weeks, intensity in the range from 50% to 75% MOC) and adaptation (duration 8 weeks, intensity – 75-85% MOC). At the beginning and at the end of the research, all women followed the control tests, which allowed to determine the level of physical fitness and to determine the indicators of their body structure.

Results. The highest increase in indicators was in the tests: "Floor dip" control group (CG) increased by 14,29% and experimental group (EG) increased by 24,57%; "Static strength endurance of the shoulder strength" CG increased by 8,00% and EG increased by 21,00%; "Static strength endurance of the back muscles" CG increased by 10,53% and EG increased by 20,05%. "Angled position" CG increased by 25,00% and in the EG increased by 38,33%; "Middle split" CG increased by 18,52% and EG increased by 29,85%. After the introduction of fitness-technology, the indicators "Body Mass Index" decreased in both groups and were able to return to "normal": 24,73 - control group and 22,05 - experimental group. The indicators of the experimental group were better due to the using a block system, which allowed to adjust the fitness technology for each woman on every of the three stages in the fitness-technology.

Conclusion. The highest absolute increment of physical fitness indicators in experimental and control groups was found in such motor abilities as flexibility ($p < 0,01$) and strength ($p < 0,01$, $p < 0,05$). The obtained percentage increase in anthropometric measures shows, that for the selected age group we have developed the right fitness-technology for the body sculpt.

Key words: sports equipment, women of the first period of mature age, motor abilities, anthropometric measures



Анотація

Людмила Шуба, Вікторія Шуба, Вікторія Бицюк. Фітнес-технологія для жінок 30-35 років

Мета: розробити методику використання фітнес-технологій для корекції статури та підвищення рівня фізичної підготовленості жінок 30-35 років.

Матеріали та методи. Дослідження проводилося з вересня 2018 року до червня 2019 на базі ліцею «Перспектива» м. Запоріжжя. У ньому взяло участь 83 жінки 30-35 років, які були поділені на експериментальну і контрольну групи. Всі жінки за станом здоров'я були віднесені до основної медичної групи. Розроблена фітнес-технологія є поєднанням теоретичного та практичного блоків. Фітнес-технологія розроблена на 8 місяців та складалась із 3 етапів: підготовчий (тривалість – 8 тижнів, інтенсивність – 40-50% МСК), основний (тривалість – 16 тижнів, інтенсивність в межах від 50% до 75% МСК) та підтримувальний (тривалість – 8 тижнів, інтенсивність – 75-85% МСК). На початку й по закінченню дослідження всі жінки виконували контрольні нормативи, які дали змогу визначити рівень фізичної підготовленості, та визначалися показники їх тілобудови.

Результати. Найбільший приріст показників був в тестах: "Згинання та розгинання рук в упорі лежачі" контрольна група (КГ) мала приріст 14,29% та експериментальна група (ЕГ) - 24,57%; "Статична силова витривалість м'язів плечового поясу" КГ показники покращились на 8,00% та ЕГ - 21,00%; "Статична силова витривалість м'язів спини" КГ мала приріст 10,53% та ЕГ - 20,05%; "Нахил тулуба" КГ показники збільшились на 25,00% та ЕГ - 38,33%; "Поперечний шпагат" КГ мала приріст на 18,52% та ЕГ - 29,85%. Після впровадження фітнес технології показники індексу маси тіла зменшились в обох групах і змогли увійти в "норму": 24,73 – контрольна група та 22,05 – експериментальна група. Показники експериментальної групи були кращими за рахунок використання блочної системи, яка дала змогу корегувати фітнес-технологію під кожну жінку на кожному з трьох етапів фітнес технології.

Висновки. Найбільший абсолютний приріст показників фізичної підготовленості в експериментальній та контрольній групах виявлено у таких рухових здібностях, як гнучкість ($p < 0,01$) та сила ($p < 0,01$, $p < 0,05$). Отриманий відсотковий приріст антропометричних показників свідчить, що для обраної вікової категорії ми розробили вірну фітнес-технологію для корекції статури жінок 30-35 років.

Ключові слова: спортивне обладнання, жінки першого зрілого віку, рухові здібності, антропометричні показники

Аннотация

Людмила Шуба, Виктория Шуба, Виктория Бицюк. Фитнес-технология для женщин 30-35 лет

Цель: разработать методику использования фитнес-технологий для коррекции телосложения и повышения уровня физической подготовленности женщин 30-35 лет.

Материалы та методи. Исследование проводилось на базе лицея «Перспектива», г. Запорожье. В нем приняли участие 83 женщины 30-35 лет, которые были поделены на экспериментальную и контрольную группы. Все женщины по состоянию здоровья были отнесены к основной медицинской группе. Разработанная фитнес-технология представляет собой сочетание теоретического и практического блоков. Фитнес-технология разработана на 8 месяцев и состояла из 3 этапов: подготовительный (продолжительность – 8 недель, интенсивность – 40-50% МПК), основной (продолжительность – 16 недель, интенсивность в пределах от 50% до 75% МПК) и поддерживающий (продолжительность – 8 недель, интенсивность – 75-85% МПК). В начале и по окончании исследования все женщины выполняли контрольные нормативы, позволяющие определить уровень физической подготовленности, и определялись показатели их телосложения.

Результаты. Наибольший прирост показателей был в тестах: "Сгибание и разгибание рук в упоре лежа" контрольная группа (КГ) улучшение показателей на 14,29% и экспериментальная группа (ЭГ) - 24,57%; "Статическая силовая выносливость мышц плечевого пояса" КГ показатели увеличились на 8,00% и ЭГ - 21,00%; "Статическая силовая выносливость мышц спины" КГ улучшение показателей на 10,53% и ЭГ - 20,05%; "Наклон туловища" КГ показатели увеличились на 25,00% и ЭГ - 38,33%; "Поперечный шпагат" КГ имела прирост на 18,52% и ЭГ – 29,85%. После внедрения фитнес-технологии показатели индекса массы тела уменьшились в обеих группах и смогли войти в "норму": 24,73 – контрольная группа и 22,05 – экспериментальная группа. Показатели экспериментальной группы были лучшими за счет использования блочной системы, позволяющей корректировать фитнес-технологию под каждую женщину на каждом из трех этапов.

Выводы. Наибольший абсолютный прирост показателей физической подготовленности в экспериментальной и контрольной группах обнаружен в таких двигательных способностях, как гибкость ($p < 0,01$) и сила ($p < 0,01$, $p < 0,05$). Полученный процентный прирост антропометрических показателей свидетельствует, что для выбранной возрастной категории мы разработали правильную фитнес-технологию для коррекции телосложения женщин 30-35 лет.

Ключевые слова: спортивное оборудование, женщины первого зрелого возраста, двигательные способности, антропометрические показатели



Introduction

In recent years, experts in various fields have been concerned about women of childbearing age and health deterioration rate, which has a significant impact on the future of our nation. Therefore, health fitness is gaining popularity, aimed at achieving and maintaining optimal physical condition and reducing the risk of development cardiorespiratory, immune, endocrine and other systems [1-3].

It is known that under the influence of regular physical activity there is a number of positive changes in the body: metabolism improvement, activity of the cardiovascular and respiratory systems, increases the level of physical fitness, vitality and efficiency [4-7]. Regular exercise slows down the aging process of muscle tissue, helps maintain strength, flexibility and beauty of the body, improves body posture and locomotion, stabilizes blood pressure, heart rate, prevent the deposition of salts in the joints, help the body cope with overexertion and stress, as well as significantly improves general level of fitness [7-8].

Modern trends in the field of health physical culture lead to the introduction of new, more modern terms and concepts. One of such concept is "fitness" [10]. Fitness is becoming increasingly popular in recent years, becoming more popular among various forms of health improvement [11, 12]. In this case, this concept has diverse interpretation and application, which causes terminological and methodological differences in the views of different specialists. Despite the fact that today in almost all fitness clubs in our country and abroad are performed strength training with the use of Pilates and athletic exercises with objects and conducted a large number of scientific studies: M. Yel'tsova & N. Pyastolova – physical culture and sport in the life of modern women [2, 6]; W. Kraemer, M. Keuning, N. Ratamess, J. Volek, O. Martyniuk, I. Masliak, I. Bodrenkova et al. – revealed the types of aerobics and its influence on the development of motor abilities [14-16]; S. Trofimova, E. Onchukova – influence of occupations fitness yoga on a physical condition of women 30-35

summer age [17]; A. Rohloff – using strength exercises and building the process of physical education [18]; V. Miroshnichenko, O. Brezdeniuk, S. Salnykova, I. Hruzevych et al. – specifics aspects using aquafitness for women of the the first period of mature age [19, 20], etc. But so far in the scientific and methodological literature is extremely insufficient data on the specific effect of using strength fitness for development of the physical fitness level and body sculpt improvement for women of the first period of mature age.

Therefore, in connection with the above, we note that our research topic is relevant and timely.

Purpose: to develop fitness technology for 30-35 year old women to increase physical fitness and body sculpt improvement.

Material and Method

Participants

The study was performed at the premises of lyceum "Perspektyva", Zaporozhye. It was attended by 83 women aged 30-35, who were divided into experimental and control groups. All women were classified in the main medical group.

Materials

Developed fitness-technology for increasing the level of physical fitness for 30-35 year old women is a combination of theoretical and practical blocks, which involves the process of harmonious development of physical abilities, the use of health physical culture, control and self-control during exercise.

The fitness-technology was developed for 8 months and consisted of 3 stages: preparatory, aimed at increasing the level of physical fitness and adaptation of the body for 30-35 year old women to physical activity (table 1).

Developed theoretical block of the fitness-technology provided women with assimilation of values from physical culture, formation of desire for a healthy lifestyle, obtaining the necessary knowledge for independent physical education training.

Table 1

Scheme of the fitness-technology in the experimental group

Stages	Months	Breathing exercises were used	Methods	The theoretical part was
Testing before the introduction of the fitness-technology	September		Repeated	
The preparatory stage is aimed at identifying the level of physical fitness and introduction to fitness technology	October November			



(duration – 8 weeks, intensity – 40-50% <u>maximal oxygen consumption</u> (MOC)		throughout the <u>research</u>		present at all stages <u>research</u>
The main stage – aimed at strengthening the muscular corset, increasing the level of physical fitness (duration – 16 weeks, intensity in the range from 50% to 75% MOC)	December		Repeated, <u>interval</u>	
	January			
	February		Proportional, <u>interval</u>	
	March			
The adaptation stage – built to maintain the achieved level of physical fitness for women of the first mature age (duration 8 weeks, intensity – 75-85% MOC)	April		<u>Variable, interval, proportional</u>	
	May			
Testing after the introduction of the fitness-technology	June			

The practical unit of our fitness-technology (Fig. 1) was implemented through training, which consisted of three common parts: preparatory, basic and final.

Each of the parts included several components: the preparatory part included an informational and

warm-up components, the basic part was aimed at the aerobic and variable components, the final part was aimed at restoring the body. This structuring of training has made it possible comprehensively use various types of fitness in the process of physical education and health classes.

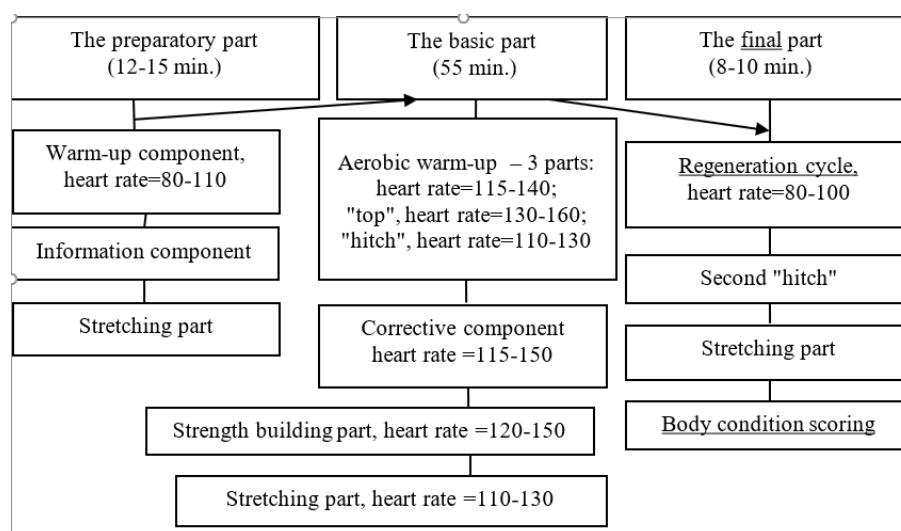


Fig. 1. The scheme of construction of fitness training for women of the first mature age

All classes began with a warm-up and ended with stretching. The use of stretching is due to the fact that it has a positive effect on muscle flexibility and increases mobility in the joints.

The most interesting part of our fitness technology is the basic part. For the entire period of the study, we developed 11 blocks of exercises:

- the first five blocks of exercises – aimed at correcting the thighs (with elastic band, expander, fitball);
- 6-7th for correction of large and medium gluteal muscles (with bodybar, expander, fitball);
- 8th – for waist correction (with dumbbells);
- 9th – for correction and strengthening of the rectus abdominis (do sit-ups with dumbbells and fitballs);
- 10th – for correction of the waist or rectus abdominis at option (with dumbbell, bodybar);

- 11th – for the correction of the muscles of the upper back, or arms, or legs at option (with elastic band, expander, dumbbells, body bar).

Also, an individual program of training on simulators and with objects was made for each woman, which provided the achievement of certain results in accordance with the wishes and problems of each participants. The programs were adjusted every 8 weeks, leaving the load on the target muscles, changing exercises by using different objects.

Procedure

At the beginning and at the end of the research, all women followed the control tests, which allowed to determine the level of physical fitness and to determine the indicators of their body structure.

The following tests were used in the research [21-23]:



1. Floor dip (quantity of repetition) – strength testing.

The test result is the number of error-free flexion and extension of the arms in one attempt.

2. Do sit-ups for 1 minute (quantity of repetition) – strength testing.

The test result is the number of lifts from the supine position to the sitting position for 1 minute.

3. Static strength endurance test for different muscle groups:

- shoulder strength – the woman stands in the main rack, in each hand an object weighing 1 kg. After the command "Start" the woman moves to the position of the hand to the side and tries for a long time to hold the load on the outstretched arms (fig. 2 a). The test result is the maximum retention time of the static posture.

- abdominal muscles – after the command "Start" the woman from an emphasis sitting behind moves to position of raising of legs to a sitting position at an angle and tries to keep this position for a long time (fig. 2 b). The test result is the maximum retention time of the static posture.

- leg muscles – the woman stands in the main rack. After the command "Start" the woman goes to the rack on his toes in a semi-squat position, the torso is held vertically, the angle between the thigh and shin is 90° (fig. 2 c). The test result is the maximum retention time of the static posture.

- back muscles – starting position of the woman lying on his back, legs bent at the knees at an angle of 90°, torso at an angle of 40° relative to the floor, arms behind his head. The partner holds the feet of the woman (fig. 2 d). The test result is the maximum retention time of the static posture.

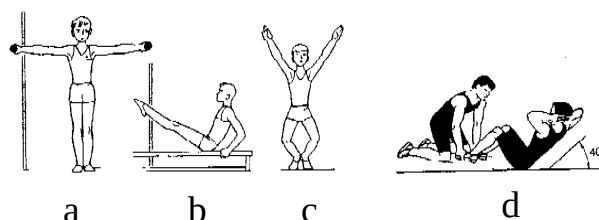


Fig. 2. Strength endurance testing

a) shoulder strength; b) abdominal muscles; c) leg muscles; d) back muscles

4. Angled position (cm) – flexibility testing.

The test result is a mark on the perpendicular marking in centimeters, to which the participant reached with his fingertips in the best of two attempts.

5. Middle split (cm) – flexibility testing.

The result of the test is the level of mobility, which in this case is estimated by the distance from the floor to the pelvis with a tape measure in centimeters: the smaller the distance, the higher the level of flexibility and vice versa.

6. Jumps during 5 seconds (quantity of repetition) – testing of speed abilities.

The test result is the maximum number of error-free jumps in 5 s.

7. Turning leap (degrees) – testing of coordination abilities.

When evaluating the result, the angle in degrees to which it returned is calculated (the best of the three attempts is recorded).

8. 12-minutes walk's test (m) – testing of endurance training status.

Determine the distance covered and evaluating is according to table 2.

Table 2

Determination of the level of endurance

Level	Low	Average	High
Distance (km)	Less than 1,6	From 1,6 to 2,4	More 2,4

To determine changes in body structure used general anthropometric measures: body mass (kg), height (m), thoracic cage circumference (cm), dynamometry of the right hand (kg), dynamometry of the left hand (kg), hip circumference (cm), waist circumference (cm) [23]. The method of

anthropometric index was also used, Body Mass Index (BMI), which was calculated by the formula: $BMI = kg/m^2$

The obtained results were compared with generic default data for women of the selected age.



Statistical analysis: data was performed using the program SPSS.

Results

One of the most promising areas for optimizing physical education is the rational use of effective sports equipment, methods and

technologies to improve motor abilities in order to increase physical development, physical fitness, strengthening health and body sculpt improvement.

Analyzed the results of the motor abilities before and after the research (Table 3) in 30-35 year old women, both control and experimental groups, it was noted that the indicators increased, but more in the experimental group.

Table 3

Statistical indicators of the motor abilities development before and after the research

Tests	Before research		p	After research		p
	CG (n=42)	EG (n=41)		CG (n=42)	EG (n=41)	
	$\bar{X} \pm m$			$\bar{X} \pm m$		
<u>Do sit-ups</u> for 1 <u>minute</u> , quantity of repetition	37±0,52	38±0,53	>0,05	40±0,42	51±0,39	<0,01
<u>Jumps</u> during 5 seconds, quantity of repetition	4,28±0,08	4,30±0,08	>0,05	4,50±0,06	6,90±0,07	<0,05
<u>Turning leap</u> , <u>degree</u>	190±1,36	190±1,37	>0,05	220±1,60	360±1,62	<0,05
<u>Angled position</u> , <u>cm</u>	12,3±0,37	12,2±0,39	>0,05	14,1±0,26	20,1±0,23	<0,01
<u>Floor dip</u> , quantity of repetition	14±0,28	14±0,28	>0,05	17±0,34	25±0,38	<0,01
<u>12-minutes</u> walk's test, m	965,1±4,15	971,1±4,21	>0,05	1015,5±4,64	1290±4,18	<0,05
<u>Middle split</u> , <u>cm</u>	5,41±0,17	4,44±0,94	>0,05	4,69±0,15	1,84±0,37	<0,01
Static strength endurance of the <u>shoulder strength</u> , seconds	25±0,5	25±0,5	>0,05	29±0,84	41±0,52	<0,05
Static strength endurance of the abdominal muscles, seconds	19,3±0,39	19,4±0,42	>0,05	23±10,43	31±0,38	<0,05
Static strength endurance of leg muscles, seconds	21,3±0,44	21,5±0,42	>0,05	24±0,72	38±0,55	<0,01
Static strength endurance of the back muscles, seconds	18±0,61	18±0,59	>0,05	22±0,34	32±0,42	<0,01

It was analyzed the percentage increase in the development of physical abilities.

The smallest increase in indicators was in the tests: "12-minutes walk's test" in the control group increased by 7,14%, experimental group increased by 16,48%, but taking into account the specifics of the test, the results are very good.

The average increase in indicators was in the tests: "Static strength endurance of leg muscles" in the control group increased by 9,52% and in the experimental group increased by 19,43%; "Jumps during 5 seconds" in the control group increased by 10,24% and in the experimental group increased by 19,01%, "Do sit-ups for 1 minute" in the control group increased by 8,11% and in the experimental group increased by 18,53%, "Turning leap" in the control group increased by 9,73% and in the experimental group increased by 17,90%; "Static strength endurance of the abdominal muscles" in the control group increased by 11,11% and in the experimental group increased by 19,21%. This is due to the fact that thanks to the theoretical block, women clearly understood how

to perform the exercises as effectively as possible and what self-control is.

The highest increase in indicators was in the tests: "Floor dip" in the control group increased by 14,29% and in the experimental group increased by 24,57%; "Static strength endurance of the shoulder strength" in the control group increased by 8,00% and in the experimental group increased by 21,00%; "Static strength endurance of the back muscles" in the control group increased by 10,53% and in the experimental group increased by 20,05%. This is due to the using a lot of modern sports equipment during training process. "Angled position" in the control group increased by 25,00% and in the experimental group increased by 38,33%; "Middle split" in the control group increased by 18,52% and in the experimental group increased by 29,85% - this is due to the fact that women have elastic muscles and with the right selection of sports equipment and methods they are trained very well.

The obtained data of anthropometric measures before and after the research (Table 4)



allowed to analyze the percentage increase in both groups.

Therefore the highest increase in indicators was in the tests: "Dynamometry of the right hand" in the control group increased by 9,71% and in the

experimental group increased by 16,39%; "Body mass" in the control group improved on 6,00% and in the experimental group improved on 10,08%.

Table 4

Anthropometric measures of the 30-35 year old women before and after the research

Tests	Before research		p	After research		p
	CG (n=42)	EG (n=41)		CG (n=42)	EG (n=41)	
	$\bar{X} \pm m$			$\bar{X} \pm m$		
Body mass, kg	65,80±0,95	65,98±0,86	>0,05	62,86±0,94	54,70±0,85	<0,01
Thoracic cage circumference, cm	87,00±0,71	86,60±0,76	>0,05	86,04±1,25	85,10±1,19	<0,05
Dynamometry of the right hand, kg	21,55±1,30	21,60±1,46	>0,05	23,65±0,42	32,09±0,37	<0,01
Dynamometry of the left hand, kg	15,74±1,49	15,81±1,32	>0,05	19,23±1,55	24,81±1,09	<0,05
Hip circumference, cm	103,80±1,20	104,20±1,54	>0,05	99,50±1,12	93,63±1,22	<0,05
Waist circumference, cm	73,80±0,51	74,11±0,45	>0,05	71,30±1,39	66,40±1,47	<0,01

The average increase in indicators was in the tests: "Waist circumference" in the control group improved on 4,15% and in the experimental group improve on 9,04%; "Thoracic cage circumference" in the control group improved on 5,82% and in the experimental group improved on 9,33%; "Dynamometry of the left hand" in the control group increased by 5,39% and in the experimental group increased by 9,59%; "Hip circumference" in the control group improved on 5,16% and in the experimental group improved on 9,72 %.

In order to evaluate detail the relationship between body mass and height of the women, we calculated the Body Mass Index, which helps to determine the degree of deviation of the observed body mass from the "master standard" before and after the research.

According to the World Health Organisation physiological norm of the Body Mass Index ranges from 18,5 to 24,9, it was noted that the average Body Mass Index before the research was: 26,10 – control group and 26,13 – experimental group. The indicators are slightly deviated from the "normal" body weight. After the introduction of fitness technology, the indicators decreased in both groups and were able to return to normal: 24,73 – control group and 22,05 – experimental group.

The indicators of the experimental group were better due to the using a block system, which allowed to adjust the fitness-technology for each woman on every of the three stages in the fitness technology.

Analyzed the results, it was concluded that the using experimental fitness technology has

contributed to a more intensive increase in the level of physical fitness and body sculpt for 30-35 year old women.

Discussion

First of all fitness technologies are technologies that provide effectiveness in fitness training. That is a set of scientific methods, means of training, procedures, using organizational forms for training, modern sports equipment – formed into a certain response protocol, which is aimed at improving the efficiency of health and training process [2, 6, 10].

Analyzed fitness technology, it should be noted that on the one side it is a process using various means of physical education for health purposes, and on the other – a scientific discipline that develops and improves the basic methods for building recreational activities [15, 17-19].

Analysis of the scientific literature [4, 5, 8, 20] confirmed that today a wide variety of health technologies encourages the invention of optimal fitness-technologies depending on age and individual characteristics, which was confirmed by our research.

We took into account a number of factors in building our fitness-technology: physique features; level of physical fitness; variation in technique, scientific methods, means of training, techniques etc. All these factors formed into a certain algorithm of action. Depending on these factors, the components of the load were planned according to such indicators as: physical exercises by type and character; volume, intensity, size of



training load; training frequency; rest intervals; number and variability of exercises, etc.

Fitball was used in a number of blocks in the developed fitness-technology.

While constructing our methodology, we used such methods as: variable, interval, proportional, repeated.

Scientists recommend different approaches to the body condition scoring women of the first period of mature age. However, the most important for the construction of fitness training are indicators of the level of physical fitness and functional status of the main body systems [1, 9, 22, 24].

The highest increase in indicators was in the tests: "Floor dip" in the control group $17 \pm 0,34$ quantity of repetition and experimental group $25 \pm 0,38$ quantity of repetition ($<0,01$); "Static strength endurance of the shoulder strength" in the control group $29 \pm 0,84$ s and experimental group $41 \pm 0,52$ s ($<0,05$); "Static strength endurance of the back muscles" in the control group $22 \pm 0,34$ s and experimental group $32 \pm 0,42$ s ($<0,01$), "Angled position" in the control group $14,1 \pm 0,26$ cm and experimental group $20,1 \pm 0,23$ cm ($<0,01$), "Middle split" in the control group $4,69 \pm 0,15$ cm and experimental group $1,84 \pm 0,37$ cm ($<0,01$). In my opinion, the improvement of these indicators is due to two factors that combined and gave such a great result. On the one side, carefully developed fitness technology that takes into account all aspects to the smallest detail, and on the other side, the peculiarity of the female body is genetic memory.

The best indicators in the "Dynamometry of the right hand" test, in the control group $23,65 \pm 0,42$ kg and experimental group $32,09 \pm 0,37$ kg ($<0,01$), is due to the fact that the women in the experimental group did each training with equipment, which allowed each training to deal with the hands. In the "Body mass" test in the control group $62,86 \pm 0,94$ kg and experimental group $54,70 \pm 0,85$ kg ($<0,01$) the improvement was due to the desire of women to lose extra kilograms first of all, and then to adjust their own shapes.

A lot of women want to maintain and correct their figure above all, even ignoring their own health, but experts must take into account the

functional changes that were in progress during weight loss and body sculpt in the woman's body.

That is why the improvement of known and the creation of new effective techniques that contribute to the body sculpt and at the same time increase the backup of the female body is quite important.

Conclusion

In recent years, fitness is becoming more popular among various types of health and wellness programs. The main goal of fitness is to achieve inner harmony and external attractiveness of a person, and this is the main motive for people who want to look and feel well.

The main task of conditioning training is to increase the physical condition due to the reduction of the risk factor for the development of cardiovascular disease: weight, loss blood pressure; normalization of lipid metabolism; resistance of the body to adverse environmental factors, increasing the level of physical fitness and body sculpt.

That is why, the developed fitness-technology consisted of three stages (preparatory, aimed and adaptation), therefore taking into account all important aspects for women of the first period of mature age.

The highest absolute increment of physical fitness indicators in experimental and control groups was found in such motor abilities as flexibility ($p < 0,01$) and strength ($p < 0,01$, $p < 0,05$). The obtained percentage increase in anthropometric measures shows, that for the selected age group we have developed the right fitness technology for the body sculpt.

Summing up the above material, it was noted that the developed fitness technology for body sculpt and increase the level of physical fitness for 30-35 year old women has a positive effect and can be used by fitness trainers.

Conflict of interest

The authors declare that there is no conflict of interest.

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