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## Research Article

# MASS PARTICIPATION IN SPORTS IS AN EFFECTIVE WAY TO IMPROVE WOMEN'S HEALTH

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## ABSTRACT

The article presents information about morphofunctional changes in the body of a group of women aged 39-45 who regularly engage in gymnastics in fitness centers. The results obtained showed positive changes in anthropometric and functional indicators compared to the initial results.

## KEYWORDS

Women, body, morphofunctional changes, anthropometric, functional indicators.

## INTRODUCTION

Sport strengthens a person's health and willpower. Therefore, a huge scale of work is being carried out in our country to develop women's and children's sports, to attract them to mass participation in sports.

An analysis of scientific sources shows that enough attention is paid to the issues of changes in the body that occur due to professional participation in women's sports and certain sports[1]. But it turned out that there are not enough works that provide a physiological



interpretation of health-improving gymnastics, which is a mass sport, and its impact on the female body.

The relevance of research. Strengthening the health of women in the active working period through physical culture and thereby increasing the health indicators of the population.

Purpose of the study. Recognition of the fact that mass participation in sports is an effective means for strengthening the health of women of the second age of maturity (35-45) and combating debilitating changes in the body (aging of the body). Checking changes in morphological and physiological indicators of women using recreational gymnastics.

Organization of the study: The research work was carried out in collaboration with an instructor in “Therapeutic physical education” of a 26-family clinic in the city of Tashkent. Women aged 39-45 years were selected for work. They were assigned

classes for 3 months, twice weekly for 60 minutes. The sequence of classes was carried out according to the recommendation of the instructor.

To determine the effect of physical activity on the body, measure anthropometric indicators of the body, determine changes in the indicators of the cardiovascular system of the body, the heart rate (pulse) was measured per minute, and the Stange and Genche methods were used to determine the functional state of the respiratory system.

Research results.

In order to study changes in morphological indicators in the body of female participants in the health group aged 39-45 years, before (3 months in advance) and after classes in the health group, total and partial indicators were measured. We can safely say that such activities had a positive effect on metabolism and energy exchange in their body. The results obtained are shown in tables No. 1 and No. 2.

Table 1.

Total body indicators of female participants in health groups (n= 20)

Women	Height $M \pm m$ (sm)	Body mass $M \pm m$ (kg)	Окружность грудной клетки $M \pm m$ (sm)
Before class	165,0 $\pm$ 3,50	76,2 $\pm$ 3,58	100,8 $\pm$ 5,30
After class	165,0 $\pm$ 3,50	71,5 $\pm$ 4,10	97,6 $\pm$ 4,24

Table 2.



### Partial body indicators of female participants in health groups aged 39-45 years (n= 20)

Indicators	Before class (M±m)	After class (M±m)
Neck circumference (sm)	33,5±2,14	33,2±1,94
Shoulder circumference (sm)	29,4±1,67	29,2±1,36
Forearm circumference	25,6±2,35	25,4±2,30
Waist circumference (sm)	72,9±5,69	70,1±4,64
Pelvic circumference (sm)	103,7±6,78	101,5±5,63
Hip circumference (sm)	59,8±4,53	58,4±3,32
Shin circumference (sm)	37,8±2,38	37,7±2,35
Chest during inhalation (sm)	100,8±5,30	98,7±5,63
Chest at rest (sm)	101,6±4,74	103,8±4,73
Chest during exhalation (sm)	99,4±3,36	99,2±3,35

In addition, the second table shows the excursion of the chest, that is, the difference in indicators between inhalation and exhalation before and after exercise was measured, and the results also showed that there are positive changes. Measurements showed that if the excursion of the

chest of women showed an average of 2.2 cm, then after exercise this figure on average reached 4.6 cm, that is, it increased by 2.6 cm. This means that ventilation of the lungs and vital volume increased.



In a conversation about the reasons for joining health groups with women 39-45 years old, we learned that one of the reasons for joining these groups was the desire to lose weight. Therefore,

we decided to measure the subcutaneous layer of fat before and after exercise. For women, these indicators were taken at 6 points of the body (Table-3).

**Table -3.**

**Indicators of the thickness of the subcutaneous fat layer of female participants in health groups aged 39-45 years (n= 20)**

Indicators	Before class (M±m)	After class (M±m)
Point under the blade (mm)	17,4±3,2	14,8±2,7
Point in front of the blade (mm)	4,2±1,6	2,8±1,4
Point behind shoulder (mm)	10,2±2,8	8,3±2,9
Forearm point (mm)	2,5±0,2	2,4±0,5
Belly point (mm)	33,5±4,9	28,7±4,6
Waist Point(mm)	29,1±2,3	25,4±4,8

According to the results of the analysis, it can be seen that in women the fat layer of the point under the shoulder blade decreased by 15%, in front of the shoulder blade by 34%, behind the shoulder by 19%, on the stomach by 15%, and on the waist by 13%. In accordance with this, it is

observed that body weight decreased by an average of 6.8%.

The circle of influence of health-improving physical education is observed in increasing the functional capabilities of the cardiovascular system. This condition is explained by an increase



in the reserve capacity of the vascular system during physical activity. An increase in heart rate during physical activity is expressed by an increase in the body's need for oxygen. In some cases, even in a calm state, monetary changes in the body show a rapid heartbeat. This condition, that is, an increase in heart rate by 15, can cause coronary heart disease by 70% (Solodkov M.N., Sologub N.S. 2005). It turns out that health-improving physical education, by providing a calming effect on the sympathetic nervous system, increases the body's resistance to mental environmental factors.

Based on the results of functional changes in the cardiovascular system of women participants in health groups aged 39-45 years, it can be seen that the minute number of heartbeats in the initial state before physical activity decreased by 6%, and after exercise this figure increased to 9%. At the same time, changes were observed in the restoration of cardiac activity and it can be seen that the recovery period decreased by 35% (Table 4).

Table -4.

**Functional state of the cardiovascular system of women participants in health groups aged 39-45 years and its changes (n= 20)**

Functional state of the cardiovascular system	Before class (M±m)	After class (M±m)
Before loads (average number of heartbeats)	76,34±2,67	72,46±3,12
After exercise (average number of heartbeats)	140,38±5,36	128,34±4,53
Recovery time (minutes)	8,37±1,42	5,51±1,21

Among the debilitating changes in the body can be attributed a decrease in the functional capabilities of the respiratory system. As is known from scientific sources, after 39 years, the

vital volume of the lungs decreases by 7.5% relative to 1 m2 of body level. Such changes can cause a decrease in a person's aerobic capacity and have a negative impact on life expectancy.



Physical exercise for women in health groups for 3 months led to an improvement in the results of the Stange and Genche methods. In the first

method we can see that the indicators increased by 42%, and in the second method by 56% (Table-5).

**Table-5.**

**Functional state of the respiratory system of women participants in health groups aged 39-45 years and its changes (n= 20)**

Functional state of the respiratory system	Before class (M±m)	After class (M±m)
Stange method (sec)	32,44±2,82	46,37±1,12
Genche method (sec)	14,62±1,31	26,34±2,93

Physical education for women in the health group led to a significant improvement in their results using the Stange and Genche methods, as well as an increase in the vital volume of the lungs.

The above data showed that mass health-improving physical culture has an effective positive effect on the body.

## CONCLUSIONS

Significant changes occurred in the partial and total indicators of female participants in health groups aged 39-45 years as a result of gymnastics. The decrease in subcutaneous fat layer led to a decrease in their body weight.

It was revealed that as part of the impact of physical education, body weight decreased and the functionality of the cardiovascular and respiratory systems increased.

The organization of small gymnastics halls for women of the second period of maturity in mahallas and their involvement in order to create ample opportunities for health-improving gymnastics for women of the second period of maturity will be a contribution to the promotion of a "Healthy lifestyle".

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