

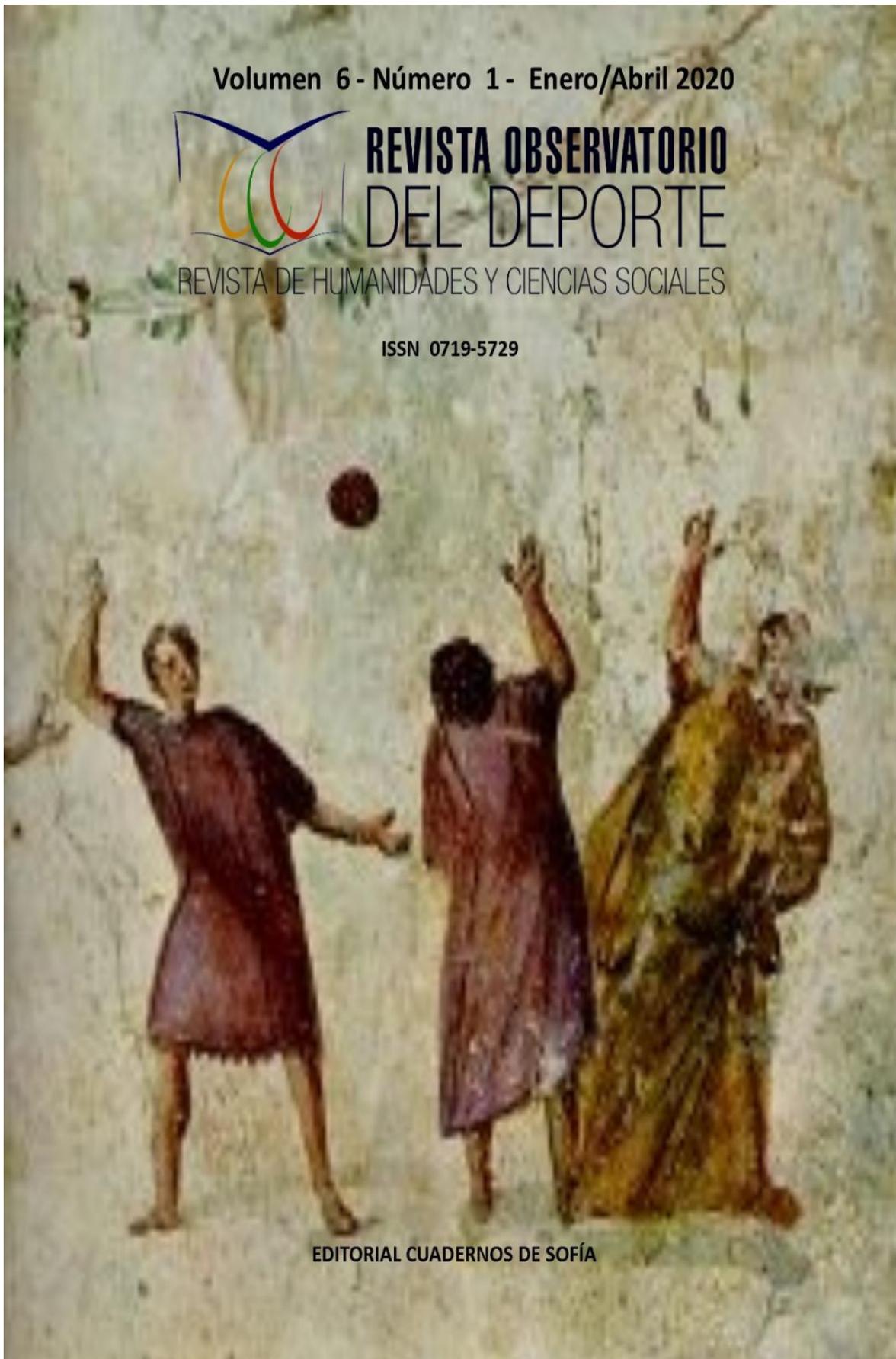
Volumen 6 - Número 1 - Enero/Abril 2020



# REVISTA OBSERVATORIO DEL DEPORTE

REVISTA DE HUMANIDADES Y CIENCIAS SOCIALES

ISSN 0719-5729



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**BODY TRANSFORMATION FOR 5 WEEKS USING A FITNESS-BOXING METHOD**

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**Fecha de Recepción:** 11 de octubre de 2019 – **Fecha Revisión:** 01 de noviembre de 2019

**Fecha de Aceptación:** 27 de diciembre de 2019 – **Fecha de Publicación:** 01 de febrero de 2020

**Abstract**

In today's lifestyle, in the context of globalization, industrialization and urbanization, the physical activity of the population (globally) has decreased significantly. This reality creates serious preconditions for the deterioration of a person's health status. As a result of reduced physical activity, unhealthy eating, stress, etc., one of the most common metabolic disorders, which poses serious health risks - obesity has increased significantly. The current research focuses on the impact of a self-developed fitness boxing technique (5 weeks) for body transformation in 18-32 year old women. The results of an empirical study conducted in the period from 2012 to 2019 are presented, which objectify the effectiveness of the applied fitness-boxing methodology, as a means of burning unnecessary body fat and shaping a beautiful and aesthetic body.

**Keywords**

Fitness-boxing – Obesity – Weight los – Health – Training – Prevention of weight regain

**Para Citar este Artículo:**

Kalpachki, Blagoy. Body transformation for 5 weeks using a fitness-boxing method. Revista Observatorio del Deporte Vol: 6 num 1 (2020): 68-73.

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## Introduction

One of the most significant and pressing problems in today's global society is the increasing dynamics of obese and overweight people. This problem is extremely important and topical, which is why it is the subject of study of many scientists, doctors, pedagogues, psychologists and others.

Due to the importance of the problem of overweight and body fat regulation, we set out to develop an affordable and effective system for modeling the body.

## Development

Training process in this methodology successfully solves the problem of maintaining a good muscle tone. Systemic activities lead to significant energy expenditure, thus reducing body weight and burning unnecessary fat in the human body.

The aim of the study is to create and empirically prove effective fitness-boxing methodology as a modeling tool for body transformation.

To accomplish the goal, the following tasks need to be fulfilled:

1. To analyze the specificities of boxing and fitness as special types of motor activity, focused at burning unnecessary body fat and shaping a beautiful and aesthetic body;
2. Create fitness-boxing methodology;
3. Empirically prove its effectiveness in modeling body composition among 18-32 year old women for 5 weeks training program;
4. Analyze the results obtained.

The subject of the study is the anthropometric changes in 18-32 year old women, following the fitness-boxing method for body transformation.

Study contingent is 470 women aged 18-32, who underwent a modified fitness boxing procedure during the period 2012-2019. The duration of the training was 5 weeks, with the contingent training 5 times, every week.

The survey was conducted during the referenced period in the fitness club Central - Blagoevgrad.

The training program is tailored to the density, intensity and complexity of the training exercise with the individual characteristics and abilities of the training women.

Its time is on average 70-80 min. The training itself is divided into three parts: preparatory, basic and final.

The purpose of the preparatory part is to prepare the body psycho-physically for the main part of the training. Mostly it is aerobic, various cardio equipment and more such facilities can be included (jump rope, tepping exercises, cycling boxing movements accompanied by music, etc.). Here we must not forget the importance of not only preparing the body physically (warm up the muscles, dynamic stretching, etc.), but also preparing the body psycho-emotionally for the next, most important part of the workout.

Most of the goals and tasks of the specific sports training are realized during the main part. The exercises we will select, their density and intensity, are extremely important. In the current fitness boxing technique we have chosen mainly the circular training method, typically alternating boxing with conditioning (very joint) fitness exercises, through a station (alternating boxing exercise, very joint fitness exercise, etc.). Depending on the individual capabilities and characteristics of the training people (since obesity and overweight are in many cases due to a disease or a negative health condition and the workouts must be tailored to that).

In the main part, we use a combination of mostly anaerobic movement actions through boxing and specific boxing exercises (ropes, dumbbells, elastics, etc.) and basic (very joint) exercises with free weights (levers, swabs, dumbbells, etc.) or with instruments in fitness room. This selection of exercises, in our view, allows for high-intensity exercise of all muscle groups in the body with high energy expenditure, as a result of which the effect of these exercises is significant in terms of positive changes in the physique of 18-32 year-old women.

In the final part we use 10-12 min cyclic cardio devices (walking on a slope, cross-trainer, jumping rope at low or moderate tempo, various dynamic stretching exercises at low tempo, etc.). The goal is for the body to recover from the high-intensity nature of the main part and to relax the muscles.

### **Fitness-Boxing method**

Recently, in sport halls popular are complex methods such as tae-bo, body attack, body pumping, cross fit, etc.

Combined Fitness- Boxing method aims at developing the whole body and focusing on problem areas.

The combination of predominantly anaerobic motions through boxing (35-40 minutes) and exercise in the gym (20-25min.) allow high-intensity loading of all muscle groups in the body with high energy expenditure.

As we have already pointed out, fitness-boxing is an extremely dynamic methodology aimed at intensive training for the whole body. The high intensity of the workout, along with short breaks (between series), prevents the blood lactate form dropping, just when it is in its peak.

Boxing is characterized by complex, mostly a cyclical motor activities, which are performed under the conditions of a dynamically changing environment of continuous transition from phase attack to phase protection.<sup>1</sup> This feature is extremely effective in reducing body fat. Boxing moves are multi-faceted and relatively easy to implement in a training environment, allowing overweight people to successfully practice this sport without health risk.

By its nature and specificity it belongs to acyclic sports, i.e. to those that are characterized by constant regulation and continuous movement under extremely dynamic

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<sup>1</sup> B. Kalpachki, "Diagnostic and evaluation system for selection of 13-15 year boxers", Revista Europa del Este Unida num 6 (2018): 08-23.

conditions. This requires rapid coordinated changes in the central nervous system. The arsenal of trainee has automated motoring action in the form of individual skills and formed driving habits performed in the form of complex co-ordination. These occur in response to the boxing exercises and the individual movements of the opponent during the training.<sup>2</sup>

Boxing exercise is characterized by short duration, high intense activity, which requires significant muscle work, energy expenditure and thus reduces body weight and burns unnecessary fat in the human body.

Boxing is predominantly anaerobic, acyclic and extremely dynamic sport, where the complex driving actions of competitors alternate at relatively short intervals (with exceptionally high or lower intensity) under the conditions of a dynamically changing environment of continuous transition from phase attack to phase protection (and vice versa).<sup>3</sup>

This type of action pattern and short breaks between the rounds require well-developed anaerobic endurance to meet the energy requirements of this activity in an appropriate manner.

Fitness as a term has been widely disseminated in recent years. In the present method we have borrowed basic - multistage fitness exercises with free weights or fitness equipment. The exercises were adapted to the individual trainer's specificities in order to prevent injuries and maximize the effect.

## Result Analysis

The study focuses on revealing the impact and effectiveness of fitness-box methodology as a tool for modeling the body.

To find the effectiveness of the fitness boxing modeling technique, we applied it to 470 women aged 18-32. The study was conducted in "Fitness Central" - Blagoevgrad in 2012-2019.

In it, we traced some anthropometric and quantitative changes in the body of the targeted contingent, as a result of active gymnastics activities, dosed according to individual characteristics 5 times a week.

The indicators we explored were: 1. Body circumferences (calf, thigh, hips, waist and shoulder (strong hand)); 2. Skin folds (measurement of Abdominal, Biceps, Triceps and Lower back); 3. Quantitative and qualitative indicators (BMI and weight). The combination of predominantly anaerobic motions through boxing and specific boxing exercises (ropes, dumbbells, elastics, etc.) (35-40 minutes), and basic (multistage) exercises with free weights (levers, swabs, dumbbells, etc.). Gadgets in the gym (20-25 min) allow for high-intensity loading of all muscle groups in the body with high energy expenditure and as a consequence the effect of these activities is significant in terms of positive changes in the composition of the 18-32 year old women.

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<sup>2</sup> B. Kalpachki, Sistema za diagnostika i otsenyavane pri podbor na 13-15 godishni boksyori. (Disertatsiya), Yugozapaden universitet "Neofit Rilski", Blagoevgrad. 2018.

<sup>3</sup> B. Kalpachki, "Discoverig the sports talento in amateur boxing: from vision to reality", Rev. ODEP Vol: 3 num 1 (2017): 96-105.

The statistical processing of the data obtained from the conducted empirical study was carried out using the specialized software IBM SPSS Statistics Version 20. Statistical Package for Social Science (SPSS) is a computer program running in the Windows operating system environment specialized for the systematization, processing and analysis of statistical information.

The output data from the measurements made it possible to carry out the statistical processing with a variety of methodologies which prove the objectivity and credibility of the conclusions drawn in the present study.

The first stage of the statistical processing of the results is the performance of the variance analysis, which describes key statistical variables that allow the subsequent analyzes to be carried out in connection with the more in-depth revelation of the integrative relations and the dependencies between the phenomena explored.

The statistical values described, as an average value and a standard deviation reflecting the measure of the central trends in the measurements; allow subsequent analyzes to be carried out.

Indicator	Period	Calf circumference cm.	Thigh circumference cm	Hip cm.	Waist cm.	Armpits circumference Cm.	IBM kg/m <sup>2</sup>	Abdominal MM.	Biceps MM.	Triceps MM.	Lower back MM.	Weight kg
Mean	Period before start	39,69	66,14	108,5	98,22	32,20	29,32	23,35	18,25	23,84	29,99	77,63
Mean	Period after 5 weeks of fitness-boxing method	36,38	61,54	100,31	92,63	24,36	24,32	20,34	14,33	20,46	25,76	70,86

Table 1  
Comparison of the average values of the indicators before and after the implementation of the fitness-boxing method as a modeling tool

The average values of the indicators show a significant decrease after the implementation of the methodology. Particular impression is made of reduced body weight and reduced subcutaneous fat. The relationship in reduced circumference values (thigh, waist, hips) in combination with significantly reduced skin folds (Abdominal mm, Triceps mm and Lower back mm), as well as quantifiable indicators (BMI and body weight) the level of subcutaneous and visceral fat has been reduced with priority.

In practice, the successful reduction of body mass is aimed at reducing body circumference, combined with a reduction in body fat and body weight, which is evidence of successful fat burning rather than muscle mass. When body circumference decreases, body weight also decreases, but skin folds increase, indicating that the body loses water and breaks muscle tissue, and these processes are undesirable when going through body modeling and excess fat burning.

## Conclusion

In the recent years at world level there is an alarming trend in the dynamic development of the processes of globalization, industrialization and urbanization. The physical activity of the population is significantly reduced, which in turn leads to one of the most common metabolic disorders - obesity.

As a solution and prevention of this chronic metabolic disorder we have created and empirically demonstrated the effectiveness of the modified fitness-boxing method as a means of burning unnecessary body fat and shaping aesthetic body.

Developing a modern, effective and science-based modeling system grounded on the latest conceptual paradigms is a key problem in seeking adequate strategies and constructing a modern vision to maintain the health status of the population.

That is why fitness-boxing methodology will satisfy these requirements for the physical and psychological health of the population. In the present scientific research, we have proven its efficiency and recommended it as an effective tool for modeling the body.

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