

# The effect of various aerobic exercises on the endurance and some physiological variables among fitness training practitioners of at (30-35) years old

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## Abstract

*The research sample consisted of (16) trainees, who were randomly selected. The researchers used the experimental method. The proposed exercises for the two experimental groups were applied. The study aimed to prepare various aerobic exercises such as treadmill, bicycle, stairs and ( elliptical) And a comparison between a group practice different exercises to develop endurance and a second train using an exercise on the mobile traffic device, and knowledge of the effect of Walt Mrbnat on endurance and the maximum consumption prisoner and pure energy, and after the application of exercise , the researchers reached the most important conclusions of the emergence rate differences in research variables have The first experimental group in the research variables, which indicates the effectiveness of various aerobic exercises.*

**Keywords:** aerobic, exercise, endurance, physiologic variables, fitness training.

## Introduction

The health and for the fitness of means that depends upon all the work , whether mentally or physically, as the fitness has become a t need because human contemporary my paid tribute to inactive as a result of the life of the lack of movement and increase the psychological pressure, because of the technology of which covered various aspects of life which It led to limiting his movement, and then threatening his general health in many aspects, which in turn led to his exposure to heart disease, joint pain, lower back, weak immunity, disease resistance, skin sagging and weight gain, as well as various therapeutic methods, including drugs and surgeries, to preserve and reduce the results of lack of movement, and there is no doubt. In it, an increase in fats and cardiovascular disease in the body is undesirable due to its definite link to lack of movement and physical activity. Therefore, specialists in physical education must reveal how to follow scientific methods to treat such problems. It was noticed recently that interest in physical fitness and how to find the best ways to develop it until it has now become at the fore in terms of innovating various and different methods, as diversity in training is one of the most important training methods and that the development in sports and reaching the higher levels and achieving the best achievements was the result of development winning in sports science and follow the methods and modern methods of.

## Literature review

Male (**Kraemer, 2005**) Endurance One essential component of fitness, most athletes have to possess a certain degree of muscular endurance and respiratory heart not sports activities disease. He mentioned (**Robert, 2000**) Endurance exercises that work under the third energy production system, which is aerobic glycogenolysis. Hence, the physiological effects of physical effort related to the type of training, the method used for training, the level of training doses, and the changes it causes to the body's functional organs should be known (**Chryssanthopoulos, 2002**) Because each activity given physical special physical changes that happen by any diversity training will create a variety of effects on the different functional devices intensity, size, type and Firecracker followed. As for (**Aggaard, 2003**) Said "the ability to perform work for a long period in

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which groups share many of the muscular high requirements for devices heart, circulation and breathing. He said (*McCarthy, 2002*) And since the regular exercise of sports activity leads to functional changes in the respiratory system, including saving in breathing movements due to the increase in vital capacity, which leads to an increase in the maximum oxygen consumption.

**Methodology**

*Method and tools:* The researchers used the experimental method with design groups experimental Tin so as to suitability to the nature of the problem and to ensure the effectiveness of the exercises used, as it was chosen at random from the practitioners of fitness training fitness which is not sample under the age of training for three years, totaling 16 trainees To two experimental groups with (8) trainees for each group. The tests were chosen according to the physical and physiological variables, and the 1000-meter running test was to measure elongation and a test Maximum oxygen consumption (SPLT) to measure (Vo2max)And energy expenditure . The researchers conducted the pre-test on Sunday 10/13/2019 at three in the afternoon, and the main experiment lasted for eight weeks, and then carried out the telemetry in the soul conditions of the pre-tests on Friday 17/1/2020.

*Exercises used in the research :* the researchers used exercises cardio aerobic and divided the first experimental group take exercises cardio diverse on traffic moving and bike aerobic and optical for 45 minutes also by five days a week, but the second group take training cardio on a walk moving for 45 minutes by five Days a week.

**Results**

**Table (1) statistical treatment for the two groups in the post test**

Variables	Alone Measurement	Experimental group First		Experimental group the second		Values (t) Calculated	Error level	Indication of differences
		s	P	s	P			
Backgammon ran (1000) meters	Accurate	6.340	0.137	6.360	0.105	0.326	0.749	random
Maximum oxygen consumption	Milliliter / kg / minute	27.155	1.403	27.471	1.351	0.459	0.653	random
Energy drainage	Kilo calorie	384.375	14.500	373.750	19.955	1.218	0.243	Random

**Table (2) the statistical treatment of the first experimental group between pre and post test**

Variables	measuring unit	The pretest		Post test		The arithmetic mean of differences	Standard deviation of differences	Values (t) Calculated	Error level	The significant differences
		s	±P	s	±P					
Backgammon ran (1000) meters	Accurate	6.340	0.137	4.218	0.092	2.121	0.180	33.194	0.00	moral
Limit maximum consumption of oxygen	Milliliter / kg / minute	27.155	1.403	32.575	0.485	5.420	1.437	10.668	0.00	moral
Energy drainage	Kilo calorie	384.375	14.500	573.750	15.979	189.375	19.719	27.163	0.00	moral

**Table (3) the statistical treatment of the second experimental group between the pretest and the post test**

Variables	measuri	The pretest	Post test	The	Standar	Values (	Err	a n
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	ng unit	s	$\pm P$	s	$\pm P$	arithme tic mean of differ ences	d deviatio n of differ ences	t) Calculat ed	or level	
<b>Backgam mon ran (1000) meters</b>	Accurat e	6.360	0.10 5	5.367	0.09 6	0.992	0.122	22.948	0.00	mor al
<b>Maximum oxygen consumpti on</b>	Millilite r / kg / minute	27.47 1	1.35 1	29.31 0	0.81 3	1.839	1.073	4.846	0.00 2	mor al
<b>Energy drainage</b>	Kilo cal orie	373.7 50	19.9 55	461.2 50	22.3 20	87.500	27.645	8.952	0.00	mor al

Table (4) statistical treatment between the two groups in the post test

Variables	Alone Measurement	Experimental group First		Experimental group the second		Values (t) Calculated	Error level	n of differenc e
		s	P	s	P			
<b>Backgammon ran (1000) meters</b>	Accurate	4.218	0.092	5.367	0.096	24,330	0.000	mor al
<b>Maximum oxygen consumption</b>	Milliliter / kg / minute	32,575	0.485	29.310	0.813	9.748	0.000	mor al
<b>Energy drainage</b>	Kilo calorie	573.750	15.979	461.250	22.320	11.591	0.000	mor al

### Conclusions

Through the foregoing tables (2) (3) (4) shows us there are differences between the pre - test and post for the pilot of the two groups Tin as the biggest differences appeared in the first experimental group that comprise the path of cardio Manifold attribute the researcher so that the exercises used were working on The development of prolongation and the maximum oxygen consumption and energy expenditure, but the diversification of the exercises was more effective in developing the research variables than continuing on one type of prolonged exercises despite the gradual increase in intensity and volume of the two experimental groups, and this is confirmed by (*Kraemer, 2005*) As aerobic exercises for a period of 30 minutes or more target stretches in general and spend energy. The researcher attributes the reason for this to the nature of the exercises used in the research, as well as to the components of the training load in terms of (size, intensity, and comfort) as these exercises worked to increase the body's ability to resist fatigue, by placing training loads on the body that lead to the occurrence of adaptation The burden imposed on the athlete's body during training if it is imposed in a scientific manner through a standardized athletic training. As for the trait of prolongation, it is mentioned (*Osama, 1998*) that the continuous running exercise for a distance of 1-2 kilometers worked to develop the trait of prolongation. These are the stresses used in the training curriculum. He mentioned (*Okano, 1998*) , One of the major concerns for endurance athletes is matching energy consumption with energy , where spending requires the exercise of aerobic exercises for long periods of time to burn a large number of calories and this researcher Wen when designing exercises where she was up to (45 minutes) . And that training for a long period leads to a significant improvement in the maximum oxygen consumption, which is a basic indicator of fitness and efficiency in the circulatory and respiratory systems and what is associated with them, such as the muscular system, and that improvement of one leads to improvement of the other , and this is confirmed by (*Jaber, 1997*) who indicated that "The rate of the maximum oxygen consumption increases with the increase in the level of physical fitness, and it may sometimes reach a level (30%) above its average after performing the oxygen training . "And that the training load components that the work of the researcher Wen it when preparing the exercise and maintain a mounting intensity will lead the result to greater consumption of nutrients and these burning materials are larger and this needs greater amounts of oxygen as the continuing physical exertion for a long time and relatively strongly average keeps burning High for energy materials that require a greater supply of oxygen until the maximum level is reached, and this is confirmed by (*Gordon, 2005*) "When running continuously, the body's need for oxygen increases and it achieves the largest value for it at the highest speed, because the

real oxygen consumed when it reaches the above-maximum values, no other effort can stimulate it due to the limitations of the circulatory and respiratory systems. As mentioned (*Abu Al-Ela , 2003* ), it is possible to develop The maximum consumption of oxygen in weekly training for a period of not less than 20 minutes each time at a level of 50-60 % of the maximum intensity, and the process of diversification in cardio exercises increases the burden on the parts of the body as each cardio exercise occupies a group of large muscles in a different way Another exercise, this adds a burden on the muscles and then on the respiratory circulatory system to supply the muscles with energy and oxygen to continue performing physical activity, which works to develop stretching, oxygen capacity and energy expenditure .

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