The Effect of Exercises According to Lactic Load on Some Anaerobic and Functional Indicators of Handball Players Juniors for the Thi Qar Breeding Team

ISRAA HASAN ABDULRIDHA
College of Physical Education and Sport Science, University of Thi-Qar, Thi-Qar, 64001, Iraq, Asraa.almakasosy92@gmail.com

Dr. Sadeq Yousif Mohammed
College of Physical Education and Sport Science, University of Thi-Qar, Thi-Qar, 64001, Iraq, Sadek.sport111@gmail.com

Abstract

The importance of the research lies in the development of some anaerobic and functional indicators of handball players through the development of exercises according to the lactic load in the development of these variables and for the results of the research results, which helps in recommending the preparation of players according to the scientific method. As for the research problem, some cases of weakness were observed in some anaerobic indicators and functional variables that work on the emergence of early fatigue as a result of the high percentage of lactic acid, which is reflected in the decline in the performance level of the junior handball players. Therefore, the researcher decided to develop exercises according to lactic load and to show the extent of its impact on some anaerobic and functional indicators of handball players and juniors. As for the objectives of the research, preparing exercises according to the lactic endurance on the anaerobic and functional indicators of the junior handball players of the Dhi Qar education team in the two research groups. As for the hypotheses of the research, there are statistically significant differences in the pre and post tests of some anaerobic and functional indicators of the junior handball players of the Dhi Qar education team for the two research groups. As for the community and the research sample of young handball players (15-17) years, 20 players. (14) players were selected from among them representing the research sample, and the sample was divided into two groups, one experimental and the other a control, by simple random method (lottery), and each group contains (7) players, in order to achieve homogeneity among the members of the research sample and to avoid the influence of factors that may affect the results of the experiment In terms of individual differences in the sample. The conclusions were that the effect of exercise according to the lactic load had an effective role in developing some anaerobic and functional indicators in the control and experimental groups.

Keywords: *exercise - load-bearing - anaerobic indicators.*

1- INTRODUCTION

1-1 Introduction to the research and its importance

The progress and development that the world is witnessing at the present time is still one of the main reasons for the progress in all perceptions in all areas of life, including the sports field. In the recent past, it was far-fetched. The development we are witnessing today is nothing but the result of the creations of human minds, including trainers, experts, scientists, and professors. The development also included the use of many modern

scientific devices, means, and tools that help improve motor performance, and thus contribute to determining the success of the training process. An indication of what the athlete has reached. And that physiological studies in the field of physiology or physiology of sports are among the main topics for workers in physical education and sports training, through which it was possible to identify the body of the effect of physical training methods on the vital organs of the athlete's body as a result of participation in or training. Therefore, physiology is concerned with studying the function of each individual and each part Among the parts of the athlete, as well as the adaptations that occur to the internal organs of the body as a result of the exercises placed on the shoulders of the individual athlete, as well as the use of means and tools that raise the level of the athlete and thus helps to develop and develop physiological and physical indicators The handball game is one of the games in which the non-oxygen (lactic) energy system dominates, in which the largest part is the process of the emergence of lactic acid. It is subject to continuous development that occurs as a result of the creativity of coaches and players, as well as changes that occur in the law of the game and depends on its performance to release the necessary energy according to The "lactic" anaerobic system. Hence the importance of research in developing anaerobic and functional indicators of handball players through developing exercises according to the lactic load in developing these variables and for the results of the research results, which helps in recommending the preparation of players according to the scientific method.

1-2 Research problem:

Handball is one of the collective games that consists of basic skills. Whenever the player masters it, he can reach a good level of performance, which is a basic goal that every coach calls for to achieve the best results. Hence the research problem came through the researcher's briefing and continuous follow-up of the junior teams. Some weaknesses were noted. In some anaerobic indicators and functional variables that cause early fatigue as a result of the high percentage of lactic acid, which is reflected in the low level of performance of the junior handball players. Therefore, the researcher decided to develop exercises according to lactic load and to show the extent of its impact on some anaerobic and functional indicators of handball players and juniors.

1-3 Research objectives:

1- Preparing exercises according to the lactic load on some anaerobic and functional indicators for the junior handball players of the national team. Dhi Qar Education.

2- Identifying the effect of exercises according to the lactic load on some anaerobic and functional indicators of the junior handball players of the Dhi Qar education team in the two research groups. To identify the significant differences between the control

3- and experimental groups in the post tests of some anaerobic and functional indicators of the junior handball players of the national team. Dhi Qar Education

1-4 Research hypotheses

1- There are statistically significant differences in the pre and post tests of some anaerobic and functional indicators among the junior handball players of the Dhi Qar education team for two groups. search. There are statistically significant differences between the two groups

2- the control and the experimental groups in the post-choices of some anaerobic indicators and the function of the handball players of the Dhi Qar education team and in favor of the experimental group

1-5 Research areas

1-5-1 The human field: the players of the Specialized School in handball juniors for the Dhi Qar education team for the season 2022/2023

1-5-2 The temporal field: from 10/5/2023 to 3/28 2023/

1-5-3 Spatial field: Sumer Sports Forum Hall in Nasiriyah District, Dhi Qar Governorate.

2- Research methodology and field procedures.

2-1 Research methodology.

The researcher used the experimental approach by designing the two equal groups, the control and the experimental, to solve the problem.

2-2 The research community and sample

The selection of the research sample is closely related to the goals that it set, so the goals that the researcher sets for her research and the procedures that she uses will determine the nature of the sample that she will choose. (14) players were chosen from them, representing the research sample by (70%), and the sample was divided into two groups, one experimental and the other a control, by simple random method (lottery), and each group contains (7) players, in order to achieve homogeneity among the members of the research sample and to avoid the influence of factors Which may be affected in the results of the experiment in terms of individual differences found in the sample within the group. The researcher conducted the process of homogenization of the sample in some specifications that may have an impact on the experimental variable (length, mass, chronological age, training age) and used the law of the coefficient of difference as the value of the coefficient of difference If it is less than (30%), which indicates the homogeneity of the sample and table (1)

2-2-1 The homogeneity of the research sample

Table (1) shows the arithmetic means, standard deviations, and coefficient of variation values for the research sample

(x) standard deviation	Arithmetic mean	Measurement units	variants	T
1,65%	**0,02**	**175**	**Height CM**	**1**
2,60%	**1,54**	**70,45**	**the age month**	**2**
2,75%	**6,75**	**197,06**	**training age month**	**3**
10,70%	**3,21**	**35,80**	**Bloc Kg**	**4**

2-2-2The equivalence of the research sample

The researcher conducted the equivalence between the control and experimental groups in the research variables throughTable (2)

Table (2) shows the arithmetic means and standard deviations of the control group in all search variables

Statistical Significance	Tabular r-value	Significance level sig	Calculated t* value		Experimental group		Control group	Processors	Skills
			p	S	p	S			
Not significant	1,70	0,084	3,94	177,07	3,26	177,7	CM	Height	1
Not significant		0,213	2,63	70,45	2,66	70,45	month	the age	2

Not significant		0,147	8,88	35,80	6,09	35,80	month	training age	3
Not significant		0,389	4,22	197,06	4,04	197,06	Kg	Bloc	4
Not significant		1,135	1,290	13,02	1,254	12	once	Phosphagenic ability	5
Not significant		0,280	3,20	34,01	3,02	33	once	lactic ability	6
Not significant		0,190	2,02	81,2	2,33	81,1	b.p.m	heart rate before exertion	7
Not significant		0,390	3,34	175,90	4,92	176,63	b.p.m	heart rate after exertion	8
Not significant		0,667	3,33	98,04	3,32	98,08	mm.hg	higher pressure before effort	9
Not significant		0,62	3,34	134,01	3,81	134,09	mm.hg	higher pressure after affort	10
Not significant		0,87	1,76	67,03	1,91	67,09	mm.hg	Low pressure before voltage	11
Not significant		0,40	2,02	80,09	2,75	80,04	mm.hg	Low pressure affort voltage	12

Significance level (0.05) with a degree of freedom (18)

2-3 Data collection methods, devices and tools used in the search

2-3-1 Data collection methods. Arabic and foreign references and sources –

Tests and measurements - Note - interview - Questionnaire - International Information Network (Internet)

2-3-2 Equipment and tools used in the research: - Type Calculator (HP). Korean origin (Pentium 4) computer type - Stopwatch number (4) - mast (40 cm high) - Trend Mill Treadmill - German-made height and weight measuring device - tape measure - medical scale - Medicine Balls - Resistance Bands - - 2 x 5cm width adhesive tapes. medical Cotten –

2-4 Field research procedures

2-4-1 Defining search variables

1- Phosphogenes anaerobic functional ability index test

first test step test for 10 seconds)

This test is used to measure phosphaginous anaerobic capacity without lactic acid, and this test is a modified version of the Ho Dickens and Scott 1963 anaerobic capacity test developed by Mann Han Gutten 1971 as a test of anaerobic capacity and this test can be classified as a laboratory test. It can also be classified as one of the tests of phosphagenic and lactic anaerobic functional ability because it can be performed for 10 seconds and 30 seconds).

The tester stands facing the side of the platform (or a box with a height of 40 cm), as he puts one of his legs on the platform (leg) that he prefers, while the other leg is free on the ground, as he notes that the weight of the body is on the free leg before the test begins, while it becomes loaded on the leg placed on the platform When the body is lifted to the top, and in all cases, the free leg is stretched and straight with the back, and it is used to push when the foot is on the ground. It is also used to maintain the balance of the body, provided that it is not used to push upward by swinging, and the performance is represented in two counts. They are (one two) one up - two down

2- lactic anaerobic functional capacity index test (30-second step test)

The researcher tested the lactic anaerobic capacity by relying on the step test of the

lactic anaerobic capacity, and it requires performance for 30 seconds), where the performance depends on the anaerobic lactic acid system in the first place as a source of energy production and on the phosphagine system in the second place. The steps for this test are the same as for the 10-second step test)

2-5 Exploratory experience

The researcher conducted her exploratory experiment with the help of the work team on a sample of (5) junior handball players for the Dhi Qar education team. The experiment took place on 01/05/2023, on Thursday, at exactly three o'clock in the evening.

2-6 Pre-tests:

Pre-exams were conducted on 01/14/2023, on Saturday, anaerobic and functional tests were conducted (phosphogenetic ability, lactic ability, pulse before and after effort, high and low pressure before and after effort, and all conditions related to the tests were taken into account in terms of time and place And the tools and method of implementation as much as possible in the post-tests.

2-7 The main experience is

The researcher used special exercises aimed at developing anaerobic, functional and chemical indicators at the ages of (15-17) years (for juniors). These exercises were distinguished in that they contribute to achieving the goals of the special preparation stage for the junior players of the Dhi Qar breeding team, as well as the consistency of the contents of the exercises with the anaerobic and functional indicators of the players as The exercises were applied by extracting the average intensity of all the exercises used. And to take into account what are the effective means and capabilities when implementing the diversity in exercises and flexibility in implementation, which makes it clear when implementing.

2-7-1 The exercises used

1- The researcher used the interval training method (high interval Intensity - low intensity and repetitive. Anaerobic and functional indicators included phosphogene

2- capacity, lactic capacity, pulse pressure and higher), as well as the chemical variables, enzyme and lactic acid. The researcher used the periodic and repetitive training method on

3- 36 training units at a rate of (3) training units per week (Sunday, Tuesday, Thursday). The work of the group that uses the used training method is

4- for each player to stand in a numbered exercise according to the training unit. Upon completion, the player takes a rest period, then starts the next exercise, and so on until the end of the first group of exercises.

2-8 Post-tests:

After the implementation of the exercises, the researcher re-applied the tests on the anaerobic and functional indicators of the research sample on Monday corresponding to 03/22/2023 after the expiry of the exercise period and with the same pre-test method. .

3- Statistical means

The statistical bag (SPSS) was used to analyze the research data

3-1 Presentation and analysis of the results of the pre and post measurements of the anaerobic and functional indicators of the control group

Schedule (3)

It shows the arithmetic means and standard deviations of the pre and post tests of the anaerobic and functional indicators, the computed and tabular value, and the level of significance for the control group (T).

Statistical Significance			Post-tests		Pre-tests		**measruing unit**	processors	**t**
	Tabular r-value	Significance level sig	**p**	**s**	**p**	s			
Significant	**2,45**	**13,06**	**2,11**	**77,7**	**2,31**	**80,2**	b.p.m	heart rate before exertion	**1**
Significant		**3,92**	**4,21**	**172,2**	**4,813**	**175,6**	b.p.m	heart rate after exertion	**2**
Significant		**4,51**	**2,91**	**115,1**	**3,51**	**117,2**	mm.hg	higher pressure before effort	**3**
Significant		**12,6**	**2,91**	**140,2**	**4,21**	**142,3**	mm.hg	higher pressure after affort	**4**
Significant		**4,91**	**2,01**	**70,4**	**2,12**	**71,2**	mm.hg	Low pressure before voltage	**5**
Significant		**2,75**	**2,13**	**78,3**	**2,71**	**80,3**	mm.hg	Low pressure affort voltage	**6**
Significant		**7,92**	**1,09**	**17**	**2,01**	**12**	once	Phosphagenic ability	**7**
Significant		**5,1**	**2,71**	**39**	**2,81**	**33**	once	lactic ability	**8**

Significance level (0.05) with a degree of freedom (6)

Table (3) shows that the arithmetic mean, standard deviations, and (T) value calculated between the pre and post test for the control group to test physiological measurements (pulse before and after effort, low pressure before and after effort, high pressure before and after effort, phosphogene capacity, lactic ability) The value of the arithmetic mean (for the pulse before voltage) for the pre-test was (80.02) with a standard deviation of (2.31), while the arithmetic mean value for the post-test was (77.07) with a standard deviation of (2.11). The value of (T) calculated between the pre and post tests (13,06)

As for the pulse test after (voltage) for the control group, the arithmetic mean value for the pre-test was (175.06) with a standard deviation of (4.813), while the arithmetic mean value for the post-test was (172.02) with a standard deviation of (4.21). (T) calculated between the pre and post tests (3.92).

As for the high stress test before exertion for the control group, the arithmetic mean value for the pre-test was (117.0) with a standard deviation of (3.51), while the arithmetic mean value for the post-test was (115.01) with a standard deviation of (2.91). The T value calculated between the pre and post tests (4.51).

As for the test (high pressure after exertion) for the control group, the arithmetic mean value for the pre-test was (142.03) with a standard deviation of (4.21), while the arithmetic mean value for the post-test was (140.02) with a standard deviation of (2.91).) The value of (T) calculated between the pre and post tests was (12.06). As for the low pressure test before exertion for the control group, the arithmetic mean value for the pre-test was (71.02) with a standard deviation of 2.12), while the arithmetic mean value for the post-test was (70.04) with a standard deviation of (201). The value of (T) calculated between the pre and post tests. (4,91)

As for the test (low pressure after effort) for the control group, the arithmetic mean value for the pre-test was (80.03) with a standard deviation of (2.71), while the arithmetic mean value for the post-test was (78.03) with a standard deviation of (2.13).) The value of (T) calculated between the pre and post tests was (2.75).

As for the test (the phosphagenic ability of the control group, the arithmetic mean value of the pre-test was (12) with a standard deviation of (2.01), while the arithmetic mean value of the post-test was (17) with a standard deviation of (1.09). The value of (T) calculated between the pre and post tests (7,92). As for the test (lactic ability) for the control group, the value of the arithmetic mean for the pre-test was (33) with a standard deviation of (2.81), while the arithmetic mean for the post-test was (39) with a standard deviation of (2.71). The value of (T) calculated between the pre and post tests (5.01). Noting that the value of t) calculated for all variables in Table (3) is greater than the tabular value (2.45) at a degree of freedom (6) and a level of significance (0, 05) This indicates significant differences between all tests and post-test interest

3-2 Presentation and analysis of the results of the pre and post measurements of the anaerobic and functional indicators of the experimental group

Schedule (4)

It shows the arithmetic means and standard deviations of the pre and post tests of the anaerobic and functional indicators, the calculated (T) value and the significance level of the experimental group

Statistical Significance			Post-tests		Pre-tests		measruing unit	processors	ت
	Tabular r-value	Significance level sig	p	s	p	s			
Significant	2,45	12,91	2,01	76,1	2,21	81,02	b.p.m	heart rate before exertion	1
Significant		3,71	4,2	172,1	4,51	175,2	b.p.m	heart rate after exertion	2
Significant		4,61	3,12	114,7	3,32	116,9	mm.hg	higher pressure before effort	3
Significant		12,2	3,91	139,2	4,11	141,9	mm.hg	higher pressure after affort	4
Significant		3,92	2	68,7	2,01	70,9	mm.hg	Low pressure before voltage	5
Significant		2,87	2,11	77,7	2,21	80,1	mm.hg	Low pressure affort voltage	6
Significant		8,01	2,1	20	1,92	12	once	Phosphagenic ability	7
Significant		4,82	3,02	43	2,78	32	once	lactic ability	8

Significance level (0.05) with a degree of freedom (6)

Table (4) shows that the arithmetic means, standard deviations, and the value of (T) calculated between the pre and post test of the experimental group to test physiological measurements (pulse before and after effort, low pressure before and after effort, high pressure before and after effort, phosphagine capacity, lactic ability) reached The arithmetic mean value of the experimental group (for pulse before voltage) for the pre-test was (81.02) with a standard deviation of (2.21), while the value of the arithmetic mean for the post-test was (76.01) with a standard deviation of (2.01). The value of (T) calculated between the pre and post tests (12,91)

As for the test (pulse after effort) for the experimental group, the arithmetic mean value for the pre-test was (175.02) with a standard deviation of (4.51), while the arithmetic mean value for the post-test was (172.01) with a standard deviation of (4.01). The calculated

(T) value between the pre and post tests was (3.71).

As for the test (high pressure before exertion) for the experimental group, the arithmetic mean value for the pre-test was (116.09) with a standard deviation of (3.32), while the arithmetic mean value for the post-test was (114.7) with a standard deviation of (3.00). 12) The value of (T) calculated between the pre and post tests was (4.61).

As for the test (high pressure after exertion) for the experimental group, the arithmetic mean value for the pre-test was (141.09) with a standard deviation of (4.11), while the arithmetic mean value for the post-test was (139.2) with a standard deviation of (3.91).) The value of (T) calculated between the pre and post tests was (12.02).

As for the test (low pressure before exertion) for the experimental group, the arithmetic mean value for the pre-test was (70.09) with a standard deviation of (2.01), while the arithmetic mean value for the post-test was (68.07) with a standard deviation of (2). The (T) value calculated between the pre and post tests (3.92).

As for the test (low pressure after effort) for the experimental group, the arithmetic mean value for the pre-test was (80.01) with a standard deviation of (2.21), while the arithmetic mean value for the post-test was (77.07) with a standard deviation of (2.11).) The value of (T) calculated between the two pre-tests and Al-Baadi (2.87). As for the test (phosphogenetic ability) for the experimental group, the value of the arithmetic mean of the pre-test was (12) with a standard deviation of (1.92), while the value of the arithmetic mean of the post-test was (20) with a standard deviation of (2.01). T) calculated between the pre and post tests (8.01

As for the test (lactic ability) for the experimental group, the value of the arithmetic mean for the pre-test was (32) with a standard deviation of (2.78), while the arithmetic mean for the post-test was (43) with a standard deviation of (3.02). The value of (T) calculated between the pre and post tests (4,82).

Calculated for all variables in Table No. (4) ((t), noting that the tabular value (2.45) at a degree of freedom (6) (is greater than the value and level of significance (0.05). This indicates the significant differences between all tests. And interest post-test

3-3 Presenting and analyzing the results of posttests for anaerobic and functional indicators for the control and experimental groups.

Table (5) It shows the arithmetic means and standard deviations of the anaerobic and functional indicators of the dimension of the control and experimental research groups.

Statistical Significance			Calculated t* value		Experimental group		measruing unit	processors	t
	Tabular r-value	Significance level sig	p	S	p	s			
Significant	2,18	3,21	2,01	76,01	2,11	77,07	b.p.m	heart rate before exertion	1
Significant		7,01	4,02	172,01	4,21	172,02	b.p.m	heart rate after exertion	2
Significant		9,02	3,12	114,07	2,91	115,01	mm.hg	higher pressure before effort	3

Significant		8,02	3,91	139,02	2,91	140,02	mm.hg	higher pressure after affort	4
Significant		3,08	2	68,07	2,01	70,04	mm.hg	Low pressure before voltage	5
Significant		3,02	2,11	77,07	2,13	78,03	mm.hg	Low pressure affort voltage	6
Significant		4,25	2,01	20	1,09	17	once	Phosphagenic ability	7
Significant		8,23	3,02	43	2,71	39	once	lactic ability	8

Significance level (0.05) with a degree of freedom (12)

Table (5) shows that the arithmetic means, standard deviations, and (T) value calculated for the dimensional choices of the control and experimental groups to test physiological measurements (pulse before and after effort, low pressure before and after effort, high pressure before and after effort, phosphagenic ability, lactic ability) measured The arithmetic mean of the control group (for the pulse before the effort) for the post test was (77.07) with a standard deviation of (2.11), while the arithmetic mean for the post test for the experimental group was (76.01) with a standard deviation of (2.01). (T) calculated between the two tests (3,21).

As for the measurement of (pulse after effort) for the control and experimental groups, the value of the arithmetic mean for the post test for the control group was (172.02) with a standard deviation of (4.21), while the value of the arithmetic mean for the post test for the experimental group was (172.01) with a standard deviation of (172.01). 4.02) and the calculated value of (T) for post-tests was (7.01).

As for the measurement of (high pressure before exertion) for the control group, the arithmetic mean value of the post-test was (115.01) with a standard deviation of (2.91), while the arithmetic mean value of the post-test for the experimental group was (114.07) with a standard deviation of (3.07). 12) The value of (T) calculated for the post-tests (9.02)

As for the measurement of high pressure after (effort) for the control group, the value of the arithmetic mean for the post test was (140.02) with a standard deviation of (2.91), while the arithmetic mean value for the post test for the experimental group was (139.02) with a deviation A standard score of (391), and the calculated (T) value for the post-tests was (8.02).

As for the measurement of (the low pressure before exertion for the control group, the arithmetic mean value of the post-test was (70.04) with a standard deviation of (2.01), while the arithmetic mean value of the post-test for the experimental group was (68.07) with a standard deviation of (2). The value of (T) calculated for the post-tests was (3.08).

As for the measurement of (low pressure) after (voltage) for the control group, the arithmetic mean value of the post-test was (78.03) with a standard deviation of (213), while the arithmetic mean value of the post-test for the experimental group was (77.7) with a standard deviation of (2.00). 11) The value of (T) calculated for the post-tests was ((3.02)

As for the test (phosphagenic ability of the control and experimental groups, the

arithmetic mean value of the post-test for the control group was (17) with a standard deviation of (1.09), while the arithmetic mean value of the post-test for the experimental group was (20) with a standard deviation of (2.01, and the calculated (T) value for post-tests was (4.25).

As for the test (the lactic ability of the control and experimental groups, it was The value of the arithmetic mean of the post-test for the control group was (39) with a standard deviation of (2.71), while the value of the arithmetic mean of the post-test for the experimental group was (43) with a standard deviation of (3.02). The value of (T) calculated for the post-tests was Note that all

variables in table (14) are greater than their tabular value (2.18) at a degree of freedom (12) and a level of significance (0.05), and this indicates significant differences in favor of the experimental group.

3-3-1 Discussing the results of the posttests for the anaerobic and functional indicators of the control and experimental research groups

From Table (5), it is clear that there are significant differences in the post-test of all functional measurements involved in the study between the two research groups, the control and the experimental, in favor of The experimental group The researcher attributes this development among the players of the experimental group to the improvement in the work of the circulatory and respiratory systems, which resulted from the proper scientific use of the proposed exercises and according to the energy production systems, which take time as an indicator to guide the load, and the handball game, and through observation and follow-up it was found that adaptation occurs An improvement in the functions of the heart and blood circulation, as well as the efficiency of muscle work, but some coaches start their training late, and this does not allow them to create an appropriate adaptation for the players. This is due to planning randomly, which leads to counterproductive results. And since the exercises have built their vocabulary according to energy production systems based on time, and they included repetitions and periods of rest, through which the player can rebuild energy and get rid of waste so that acids do not precipitate in the muscles involved in the exercises, as interval and repetition training is characterized by increasing the body's resistance to the factors that lead to For fatigue to delay its manifestations, by exploiting and using energy sources during sports performance through the mutual work between strength and relaxation 0, between fatigue and recovery of activity, and between storing and depleting high energy sources, and these phenomena are the essence of the training method Al-Fatri, as for the physiological variables of the pulse before the effort between the experimental and control groups and after training, there are significant differences, as any organized training works to reduce the pulse rate to a level commensurate with the type of activity and the energy system followed, and it comes by following the lactic training of the sample of the experimental group that confirms (Raisan Kharibet 1991 AD) One of the most important physiological changes that occur as a result of sports training is the decrease in the number of heart beats.

As for the pulse after the effort, the differences were significant in favor of the experimental group that uses lactic training, as the correct training works to raise the level of achievement and then increase the amount of blood paid with an increase in heart rate compared to athletes who follow training that does not serve the type of effectiveness and then the pulse rate increases because The effort they exert is more because of the speed with which they are distinguished with their superiority in achieving effectiveness with the speed of returning the pulse rate to the normal level compared to other exercises, as (Bahaa

El-Din Salama 2000 AD confirms that "the rate of heart work increases with the increase in the intensity of training until the individual reaches the maximum rate The heart and athletes in general remain mobile from one extreme to another with the continuation of proper training due to the positive training on the heart, which helps them to increase the maximum heart rate" (1). While the differences were significant for the percentage of oxygen in the blood between the two groups before and after the effort and in favor of the experimental group that follows lactic training, since sports training has a significant effect in raising the activity of blood circulation in nerve and muscle cells and the speed of oxygen transfer "(2), as well as increasing respiratory efficiency as "Training causes an increase in respiratory efficiency, and this means that the amount of oxygen consumed is less for athletes compared to non-athletes", and this led to an increase in the percentage of oxygen in the blood, while the differences were significant for the concentration of lactic in the blood between The two groups before and after the effort and in favor of the experimental group that follows the lactic training, and here the researcher believes that the reason for the increase in the accumulation of the lactic acid variable is due to the adaptation of the working muscles and the internal organs of the player's body to bear the accumulation of large amounts of lactic acid during the physical effort, and this physiological adaptation comes As a result of the lactic exercises that the players were exposed to for a longer time, as these exercises gained the muscle tissue the ability to get rid of lactic acid quickly, in addition to the ability of the regulating solutions inside and outside the muscle cells to maintain the alkaline-acid medium in a manner close to normal to ensure the functioning of enzymes anaerobes in an appropriate manner within an ideal pH, (Muhammad al-Kat, 2002) believes that the vital regulators are one of the ways in which the body can increase its tolerance to the accumulation of lactic acid, making it a weak acid to the extent that the PH balance in the muscle tissue does not tend to decline rapidly, and the increase in the rate of glycolysis is Is the appropriate way to continue the processes of energy release. On the other hand, the exercises that the player works with accumulate Very large quantities of lactic acid gave them a high will to face the pain resulting from the large accumulation of lactic acid and to continue working in the presence of the acid, as when lactic acid increases to a large degree in the muscles and blood, acidity occurs that causes pain to athletes, and when motivation and willpower are available in these Athletes to bear this pain despite the continued production of more lactic acid, and therefore these athletes rely on anaerobic glycolysis for as long as possible in their performance.

4- Conclusions and recommendations

4-1 Conclusions

1- The exercises according to the lactic load have an effective role in developing some anaerobic and functional indicators in the experimental group.

2- The exercises prepared by the trainer have a positive role in developing Some anaerobic and functional indicators of the control group clearly outperformed the experimental group that applied

3- the interval training method in all research variables over the control group

4-2 recommendations

1- Coaches should pay attention to anaerobic and functional indicators - 1. And developing them through the use of the successful method in training,

2- emphasizing the use of exercises according to the lactic load during training

units for its effective role in developing anaerobic and functional indicators

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