



## The Effect of Muscular Endurance Exercises According to Superset Theory in some Physiological Abilities and Completion of Running 800 Meters Advanced

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### Abstract

This study aimed to identify the effect of muscular endurance in the development of some physiological abilities to achieve an 800-meter run. The researchers hypothesized that there was a positive effect of the Super Set muscular endurance exercises in advanced race runners. The researchers used the experimental approach to suitability and the nature of the research. The study sample consisted of (10) players divided equally into experimental and control groups. The experimental group used muscle training exercises in Superset to develop physiological variables such as anaerobic and aerobic abilities and the concentration of lactic acid in blood. The control group In addition to the physiological variables such as the measurement of the levels of lactic acid in the blood (before and after) the brown effort, the experiment lasted (10) weeks and (3) units The results of the study showed that there were significant differences in some variables, such as the arithmetic mean, the standard deviation, the torsion coefficient, and the t-test of the interrelated samples. Physiology and the concentration of lactic acid in blood between the experimental and control groups. The results of the study showed the existence of random differences between the two groups in the post-test of the concentration of lactic acid before the effort.

**Keywords:** *Athletics, Running 800 meters, Superset exercises, Anaerobic and aerobic abilities and lactic acid concentration.*

### Introduction

Physiology is a science that is linked to the science of sports training and shows the relationship between what happens in the body and the external load on the athlete's shoulders causing structural and functional changes in the athlete, and these changes occur immediately after the physical effort rate of heart rate or the number of breathing or blood functions or after a period of training such as that occurs in the nervous system of the muscle or circulatory system or the heart, and that the study of these changes as indicators of physiological or bio-chemical are important factors in the success of the training curriculum and then improve the achievement of it gives evidence of the compatibility of components the training load with the ability of the functional athlete during the performance of groups of physical exercises, as well as detect any defect in the state of health and then treated before it worsens the athlete, which leads to the lack of participation in training or competition and even to lose the athlete [1].

The training method of super set is one of the most important training methods that changes the physical and functional of the practitioners by combining two different exercises in one without a break between them whether the goal to develop the same muscle group or different muscle groups, causing an increase in the functional capacity of the muscle as the blood towards the muscles working faster to converge muscle groups from each other, which speeds up the transfer of lunch and oxygen to the working muscle, and this method leads to increased lactic acid, which helps raise the levels of some hormones in the body as growth hormone [2].

It is known that the increase in the rise of lactic acid in the blood is one of the main reasons for the disruption of muscle work and the emergence of fatigue, continuing Super exercises will lead to improve the threshold of lactate and thus improve the athlete's athletic fatigue.

Due to the physiological abilities of the player running medium distances, especially the enemy running 800 meters, we see that achieving high results is the enemy of this distance depends on the high level of the functional potential of all body systems. Anaerobic capacity is an important factor that cannot be neglected when developing training programs as well as aerobic ability So that the athlete can withstand the muscle and try to continue efficiently and effectively until the end of the race [3].

The diversity of methods and methods of training and the different effects make the players need more to prepare physical and functional with the appropriate to their abilities and abilities according to the effectiveness and basic requirements of physical qualities.

The muscular endurance is an important feature that plays an active role in running 800 meters. Due to the need for hostility in this competition, it is necessary to develop lactic endurance and anaerobic and aerobic power production systems, as they require an increase in intensity, especially in the last few meters of the race [4].

Through the field experience of researchers in the field of teaching athletics and the opinions of experts in sports training, they noticed that many of the enemies running intermediate distances lose muscle endurance at the end of the race, as well as a significant decline in the ability of players to carry the performance of the same level and the result is the weakness of the potential, The ultimate importance of the non-tactile endurance and performance component is the current research into the preparation of the super-high muscle endurance exercises for an 800-meter race, which is of great importance in the development of physiological and physical abilities such as strength and endurance muscular [5].

Therefore, the importance of this study was the development of muscle training exercises in Superset in a correct and appropriate manner according to the pulse index during the repetition of training loads for the development of functional and biochemical functions as physiological indicators for endurance players and improving achievement in running 800 meters advanced.

## Research Objectives

- Recognition of the effect of Superset muscular endurance exercises in the development of some physiological abilities (anaerobic, aerobic and lactic acid concentration in the blood) for race players running 800 meters advanced.
- Identification of the results of the differences of the tests of the post groups of research (experimental and control) in some physiological variables and achievement of the race running 800 meters advanced.

## Research Hypotheses

- There is a positive effect of Superset muscle training exercises in the development of some physiological abilities and achievement of running 800 meters advanced.
- There are statistically significant differences in the results of the post tests of the two research groups (experimental and control) in the development of some physiological abilities and achievement of running 800 meters advanced and for the benefit of the experimental group.

## Research Methodology and Field Procedures

### Research Methodology

The researchers used the experimental method in a comparative way to suit its suitability and the nature of the research.

### Community and Sample Search

Formed the research sample group of players race ran 800 meters applicants and the number (10) players, representing two groups of research (experimental and control) for the sports season (2016/2017) and by (5) players in each group, they are clubs from the province of Kirkuk (Althorah, Kirkuk, one June, Baba Karkar, Sulaf, Kiwan, Altalik, Hawija).

### Homogeneity and Equivalence of the Two Research Groups

#### Homogeneity of the Sample

For the purpose of homogeneity between the two research groups, some of the following variables were used. The following table shows the following:

**Table 1: The homogeneity of the sample in variables (age, height, weight)**

Variables	Measuring unit	Mean	STD.EV.	Median	Skewness
Height	Cm	174.4	5.10	174.5	0.06
Weight	Kg	61.9	4.90	62.5	0.37
Age	Year	24.2	49.1	24	0.400
Training age	Year	4.7	1.38	4	1.52

The values of the splicing factor are confined to the line of preparation between ( $\pm 3$ ) and this represents the homogeneity of the sample.

## Equal Search Groups

**Table 2: Showing the mean and standard deviations, the calculated value (t), the level of error and the significance of differences between the two groups of research in the pretest test**

Variables	Measuring unit	Experimental group		Control group		(t) value	Error level	Significance
		Mean	STD.EV.	Mean	STD.EV.			
LA- Before the effort	Mall / L	2.1	0.667	1.826	0.256	0.856	0.416	Non sig.
LA- After the effort	Mall / L	15.754	0.767	15.75	0.742	0.008	0.994	Non sig.
Kosmin first effort	Meter	425	3.535	424	8.944	0.232	0.822	Non sig.
Kosminsecond effort	Meter	401	8.251	400	9.354	0.170	0.862	Non sig.
Kosmin according to equation	Meter	119.025	1.363	119.144	1.743	0.121	0.907	Non sig.
Completion of 800 meters	A second	122.970	0.707	122.544	0.821	0.879	0.405	Non sig.

\* The degree of freedom ( $5 + 5 - 2 = 8$ ).

\* Morality at error level (0.05) if the error level is less than (0.05).

From the table above, the differences in the results of the t-test between the experimental and control groups in all the tests under study are randomized, indicating random differences between the experimental and control groups at the error level (0.05) and the degree of freedom (8) Indicates the equivalence of the two search groups in the tests under consideration.

## Means of Gathering Information

- Arab and foreign sources and references.
- Interviews of experts and specialists.
- Super set training questionnaire.

## Instruments and Tools used in Research

- Computer (Laptop) type (Dell).
- Video type video camera (Sony).
- Lactate Pro2 (Japanese Lactate Pro2).
- Pulse Oximeter.
- Crivitz watch with Bluetooth.
- Electronic stopwatch number (2).
- Rasta Meter to measure height and weight.
- Registration form for the tests used.
- Measurement condition.

- Athletics court, rubber ropes, speedometer, weights, stadium, medical cotton sterilizer, different weight calibrators (500 g) and (1) kg.
- Cuttings to determine the level of concentration of lactic acid in the blood.

## Physiological Capacity Tests

### Kosmin Test [6]

The Kosmin test is a field test to predict the completion time of the intermediate runners (800m, 1500m), which was developed in the former USSR to measure anaerobic capacity and endurance.

**Test Name:** Kosmin Test

### Objective of the Test

Anaerobic energy and endurance.

### Devices and Tools

400 meters running track, electronic stopwatch, marking tape and assistants (team).

Performance description: Requires the athlete to:

- Warm up for at least (10) minutes.

- Ready to run from the high start position (stand).
- The first effort is to run for 60 seconds.
- Give rest for 3 minutes.
- The second voltage, which is running for 60 seconds, is carried out and starts from the end point of the first voltage.
- The total distance recorded during the two efforts is recorded.

### Analysis of the Results

The results are analyzed by comparing them with the results of the previous tests. It is expected that with the appropriate training, the results of the analysis will be improved and the running time (800, 1500) meters can be predicted by using the total distance divided by the equation below.  $800 \text{ (m)} / 217.77778 = (\text{total distance} \times 0.119556)$ .

### Measurement of Heart Rate (Pulse) Oximeter Pulse

Pulse or heart rate per minute is an important indicator of body response and physiological changes associated with physical exertion. "Pulse is one of the most important measures on which training intensity and volume of training are based"[7].

It gives the trainer positive and quick information for the reactions of the functional organs in the stadium and in terms of directing the pregnancy training and identify the appropriate heart rate and to determine the intensity required during training.

- Test Name: Heart rate measurement (pulse).
- Tools: Pulse and oxygen ratio of the finger.
- Test Objective: Measure pulse rate and blood oxygen ratio before and after physical exertion.
- Test description: A small, reversible device on the wrist of a size similar to the size of the normal wristwatch with very light weight.
- To measure blood oxygen through the tip of the finger and pulse rate by drawing a pulse of the heartbeat, high accuracy and high load capacity, automatic shutdown in case of non-use alerts when the battery level is low.

- Suitable for high-altitude sports such as mountaineering, skiing, aerobics and aerobics.
- Suitable for respiratory patients.
- Two frequencies are used in red and infrared light to determine the percentage and hemoglobin in the blood which is saturated with oxygen, and pulse rate displays at the same time the pacemaker.

### How the Device Works

- The device is usually placed around one of the fingers from one side.
- The device shows red and infrared light, on the other side is a light receiver.
- The device measures the amount of red and infrared light and analyzes the amount of oxygen in the blood and pulse rate.
- The researcher used the Oximeter Pulse to measure the heart rate.

### Crivitz Sports Watch

- Pulse measuring watch with rubber band and Crivitz Sports.
- Measure the heart rate (pulse) continuously during exercise.

### Device Components

#### The Locker, it Consists of Two Parts

- Belt is placed on the chest from the front of the heart, the body of the ECG and then calculates the heartbeat.
- Send pulse data over the air to the pulse clock.
- Stands the gasket by a rubber belt around the chest.
- A wristwatch calculates the pulse with three main characteristics:
- Pulse speed or rate per minute.
- Regularity of pulse.
- The power of the pulse.

### Measuring the Concentration of Lactic Acid in the Blood Lactate Pero

Lactate Per2 was measured in the blood by using a tape in which a chemical detector sends an electrical signal as a result of the interaction of the blood sample with it.

**Test Name**

Measure the proportion of lactic acid in the blood [8].

**Test Objective**

Know the concentration of lactic acid in the blood after physical exertion.

**Tools**

Lactate Pro 2 Lactic Acid Probe Concentration Meter, Abdominal Drill, Test Tape, Medical Cotton, Sterile Materials, and Registration Form.

**Test Steps**

After the laboratory has finished running the 800-meter running test, the level of lactic acid concentration in the blood is measured after the effort, after the test is performed with 5 minutes. This period is appropriate to ensure the transfer of lactic acid from the muscles to the blood.

- Before starting measurement, the measuring tape enters the slot at the top of the device and is firmly fixed towards the device.
- The device starts flashing with a drop of blood on the screen of the device to indicate that it is ready to transfer blood drop.
- Clean the finger from which the blood sample will be taken from the sterilizer, and then use a prick on the side of one finger to penetrate the surface of the skin and then show a sample of blood is cleared, and the second drop is to be taken to avoid taking a blood drop is completely clean.
- The amount between (2 - 3) shall be inserted at the end of the measuring tape installed on the blood drop device until the appropriate space of the blood sample is filled, avoiding contact with the end of the strip of the skin.
- The device emits a warning sound to indicate the operation was successful.
- After approximately 15 seconds, the device shows the result of the scan on the screen.
- Reading is recorded in the registration form prepared for this purpose, which is measured in mile mole unit.
- The measurement of the proportion of lactic acid in the blood before physical effort by the same steps of the procedure. 5  $\mu$ L

**The Pilot Study**

This pilot study was held on Sunday and Monday, 11-12/7/2017 at the Athletics Stadium of Al-Thawra Sports Club in Kirkuk Governorate, and at 5:00 pm in order to identify the negatives and positives that may accompany the main experiment procedures of the current study:

- Conduct tests and physiological research after determining the most appropriate.
- Identify the time required for testing.
- The extent to which the research sample understands the tests used.
- Know the validity of the tools used in the research.
- Ensure the appropriate place to carry out pretest and post tests.
- Help team knowledge how to perform tests.
- Identify the obstacles or difficulties that may face the researcher when conducting tests Pretest and post and when the implementation of the main experiment.

**Conduct the Field Experiment****Pretests**

Pre tests were conducted on the experimental and control groups of (10) players over the course of (2) days 16-18 / 7/2017 (Sunday and Tuesday) at 5:00 pm at the stadium of Al Thawra Sports Club in Kirkuk governorate.

The researchers set the conditions for tests in terms of space, time, test method and team to achieve the same conditions when conducting the tests of the dimension of the research sample, and the following are the days of the tests:

16/7/2017 Sunday: Tests were conducted on physiological abilities

Kosmin test ran the maximum distance for 1 minute (rest) + rest (3 minutes) + ran for maximum distance for 1 minute.

18/7/2018 corresponding to Tuesday: Test of completion of running (800) meters and measures the proportion of lactic acid in blood.

**Application of the Experimental Curriculum**

The researchers used the Super Sit muscular endurance exercises, regular exercises and resistance in the main part of the training unit during the special preparation period,

and no later than 30-40 minutes of the total training time (90) minutes in training doses (6 times) per week.

- The proposed exercises were based on scientific sources (Arab and foreign) in the field of sports training, athletics, personal interviews and the international information network. These exercises were presented to a group of experts in athletics, physiotherapy and sports training to be applied correctly.
- Use of muscle endurance training in Super Set in the exercises linking between jogging and normal exercises and resistance and the use of some weights, such as light jumps, jumps and hurdles and resistance barriers and rubber ropes and speed and terraces and no more than (30-50%) of the strength of the player.
- The main experiment was applied on the research sample from 23/7/2017 to 28/9/2018 over 10 weeks and 3 training units per week and 2: 1 traffic.
- Super Set muscular endurance exercises were used to combine jogging, jumping, hockey, rubber ropes and speed control exercises by no more than 30-50% of the maximum strength of the player.
- The use of high frequency and repetitive training methods throughout the trial period.

- The extraction of the maximum pulse according to equation  $(220 - \text{age})$  to determine the maximum heart rate.
- Training intensity was used (75-95%) of the maximum intensity of each player.
- Interstitial intervals between pulse frequency (130 - 140) pulse / min were determined between groups (110 - 120) pulse / min.
- Adopted the principle of gradation in the difficulty of exercise and the principle of repetition and repetition exercises superset.

### Post-test

The tests were carried out on 1 - 4/10/2017 and the same procedures were used to measure the pretests at 5:00 pm and at Al - Thawra Sports Club Stadium in Kirkuk governorate. The researchers were keen to provide the conditions in which pre tests were conducted in terms of time.

### View, Analyze and Discuss the Results

#### Presentation, Analysis and Discussion of the Results of the Physiological Variables in the Two Tests (Measurement of the Ratio of Lactic Acid in the Blood and the Test of Kosmin)

**Table 3: Shows the difference in the mean, the standard deviations, the calculated value of t and the significance of the differences between the results of the pretest and post-test tests in the physical tests of the experimental group**

Variables	Measuring unit	Mean diff.	STD.diff.	(t) value	Error level	Significance of differences
Bawaznk (30) seconds.	Second	42.200	12.418	7.599	0.002	Sig.
Bawaznk (60) seconds.	Second	79.000	16.733	10.557	0.000	Sig.
Completion (200) meters	Second	0.630	0.296	4.754	0.009	Sig.
Completion (600) meters	Second	2.504	0.365	15.346	0.000	Sig.
Completion (800) meters	Second	2.714	0.255	23.835	0.000	Sig.
Completion (900) meters	Second	2.312	0.647	7.986	0.001	Sig.

\* The degree of freedom  $(5 - 1 = 4)$ .

\* Significant at the error level (0.05) if the error level is less than (0.05).

**Table 4: Between the mean, the standard deviations, the calculated value (t), the error level and the significance of the differences between the two groups of research in the post-test**

Variables	Measuring unit	Experimental group		Control group		(t) value	Error level	Significance of differences
		Mean	STD.EV.	Mean	STD.EV.			
Bawaznk (30) seconds.	Second	192.000	8.367	164.000	9.618	4.912	0.001	Sig.
Bawaznk (60) seconds.	Second	375.000	15.811	310.000	6.124	8.572	0.000	Sig.
Completion (200) meters	Second	24.722	0.752	25.138	0.677	0.920	0.385	Non Sig.
Completion	Second	100.020	1.518	102.640	1.581	2.671	0.028	Sig.

(600) meters								
Completion (800) meters	Second	120.256	0.645	121.694	0.793	3.736	0.006	Sig.
Completion (900) meters	Second	138.652	1.505	140.006	1.549	1.402	0.1999	Non Sig.

\* The degree of freedom ( $5 + 5 - 2 = 8$ ).

\* Significant at the error level (0.05) if the error level is less than (0.05).

**Table 5: Shows the computational and standard deviations, the calculated value of t and the significance of the differences in the results of the pre and posttests of the experimental group to measure the ratio of lactic acid in the blood**

Variables	Measuring unit	Pretest		Posttest		(t) value	Error level	Significance	Evolution rate
		Mean	STD.EV.	Mean	STD.EV.				
LA- Before the effort	Mall / L	2.100	0.667	1.610	0.423	1.212	0.292	Non sig.	23.333
LA- After the effort	Mall / L	15.754	0.767	19.960	1.254	8.985	0.000	Sig.	26.697
Kosmin's first effort	Meter	425.000	3.535	442.000	10.368	3.157	0.034	Sig.	4
Kosmin's second effort	Meter	401.000	8.215	417.000	5.700	3.138	0.035	Sig.	3.99
Kosmin according to equation	Meter	119.025	1.363	115.318	1.722	3.124	0.035	Sig.	3.114
Completion of 800 meters	Second	122.970	0.707	120.256	0.645	23.835	0.000	Sig.	2.207

\* The degree of freedom ( $5 - 1 = 4$ ).

\*\* Significant at the error level (0.05) if the error level is less than (0.05).

**Table 6: The results of the posttests between the experimental and control groups in the tests show the ratio of lactic acid in the blood and the group of Kosmin and the achievement of running 800 meters advanced**

Variables	Measuring unit	Experimental group		Control group		(t) value	Error level	Significance
		Mean	STD.EV.	Mean	STD.EV.			
LA- Before the effort	Mall / L	1.610	0.423	1.976	0.115	1.866	0.099	Non sig.
LA- After the effort	Mall / L	19.960	1.254	16.174	1.013	5.251	0.001	Sig.
Kosmin first effort	Meter	442.000	10.368	417.000	5.801	4.725	0.001	Sig.
Kosmin second effort	Meter	417.000	5.700	406.000	4.183	3.479	0.008	Sig.
Kosmin according to equation	Meter	115.318	1.722	119.383	1.165	4.371	0.002	Sig.
Completion of 800 meters	Second	120.256	0.645	121.694	0.793	3.376	0.006	Sig.

We note that there are random differences in the measurement of the proportion of lactic acid in blood before the effort between the pre-test and post-experimental group and between the two groups in the post-test, because the normal rate of blood in resting time does not exceed (2) The concentration increases to reach the maximum possible during the maximum effort, and the rate of decline and height, whether before the effort or after the effort varies from effectiveness to another "The normal rate of lactic acid in the blood ranges between (1-2) mill approximately during rest, either In time of high voltage, (22 - 22 mill / L), while its concentration is at the time of rest (1)[9].

Hazza Al-Hazza states that "muscle produces lactic acid until rest, but its resting rate equals its consumption. Its concentration in rest in both muscles and blood is almost stable, not more than (1) mill / L, a human makes a violent effort, the production of lactic acid rises and uses it increases"[10]. We also see that the concentration of lactic acid in the blood after the effort was higher and greater than before the effort, which indicates that the player has made a high effort. Since the increase in the production of lactic acid in the blood depends on the type of muscle work and intensity, so the endurance exercises speed, which was developed within the training exercises endurance of high-intensity superset high

served greatly to the system of anaerobic lactic to run (800) meters "The impact of high-intensity endurance exercises is not for sports Endurance only because it is supported by aerobic energy production and development systems is based on metabolism, but also for sports activities lasting more than 30 seconds.

There is a strong correlation between high intensity training exercises and the physiological characteristics of endurance athletes The training of non-tactical endurance is one of the necessities of the intermediate distance training process, because it is related to the ability of the player to bear the burden of the length of the race and to carry the mother due to the high percentage of lactate in the blood due to the accumulation of lactic acid. The medium needs a kind of speed bearing and depends on the development of development of lactic acid with the system of anaerobic phosphate".[11] The response of the experimental group members to the Superset training has played a positive role in the development of lactic endurance, which requires players to produce anaerobic energy.

This method of training enabled the players to adapt to these double exercises, which was a little time but tired at the same time. High strength training in oxygen depletion increases the activity of energy production processes during performance, and the specificity of this training method was consistent with the requirements of high level of lactic acid in the blood, because the high proportion of lactate in the blood does not appear in the Ah normal only after the high-voltage "that the level of concentration of lactic acid blood shows up when oxygen consumption is about (85-95%) of the maximum consumption of oxygen level (50 - 60%) when non-trainers [12].

"The concentration of lactic acid increases in the blood with increased pregnancy intensity, as the good trainee has a high proportion of lactic acid during the voltage he is replacing, and the ability to tolerate the high level of lactic acid shows the difference between the winner and the loser" [13]. According to the equation, there are significant differences for the experimental and post-test tests for the experimental group and for the post-test.

Since this test measures the anaerobic (phosphate and lactic) energy and endurance,

the muscular endurance training of Super Set has helped the players to stimulate the number of muscle fibers And therefore on the adaptation of muscles in training and this test depends on the fatigue factor, which appears as a result of accumulation of lactate ratio in the muscles and blood and thus inhibits the muscle to continue to perform the same specifications, which affects the speed of performance and even in the endurance exercises are not only for short and short circuits but also for endurance sports because they need maximum speed and speed as in the 800m race, and work in high intensity aerobic exercises helps in the development of anaerobic action based on fatty acids Calcium and helps with the accumulation of lactic acid and hydrogen ions [14].

Therefore, the anaerobic and aerobic energy consumption rates are due to metabolism and metabolism and the rates of their development. The improvement of anaerobic capacity, including the low lactic acid concentration, is due to the improvement of the functional state of the player in the high intensity training because the compatibility between physical and functional abilities increases through exercises "Most athletes use high-intensity training to develop endurance for competitive performance and sports for 30 to 60 seconds.

Anaerobic threshold measurement of lactate blood concentration analysis during this period of physical effort [15]. There are activities based on a specific system of energy production, while other activities contribute more than energy production systems depending on the intensity and duration of the exercise. Therefore, the Kosmin test involves different energy production systems but the anaerobic system is dominant and according to the intensity of the jogging and its duration to resist fatigue to perform the test requirements , And here comes the role of high heart rate and the rate of decline during rest for (3) minutes to return to a state of semi-normal, and this is a guide to athletes who exercise endurance games and speed, and to be the impact of the training method is effective and of high quality, In the light of the performance requirements in terms of energy production systems and their sources, Abu Al-Ola asserts, "In the medium distances, the mixing of all energy production systems should be used.



When the lactic and oxygen system interacts in running 800 meters, the recovery period should not be less than two minutes"[16].

Because anaerobic and aerobic abilities are important physiological requirements for 800-meter running athletes, the repeated use of phosphatonic and lactic endurance exercises as speed-bearing and rapid-force exercises has played an active role in developing these abilities and thus in economic performance, Louis Simmons notes. [17]. Thus, the runner running intermediate distances needs to endure the power and anaerobic and aerobic energy, and (Coyle, 1975) states that "the ratio of the athlete to the athlete, The aerobic energy to the anaerobic energy reaches (20-80%) for the energy of the aerobic, this ratio reaches 50% (anaerobic / aerobic) in the case of the distance between (800 - 1200) meters [18].

In order to identify the rates of development between the two groups, the rates of development between the pre-test and post-experimental tests were measured to measure the lactic ratio in the blood and the Kosmin test. There is a significant evolution rate of the physiological variables for measuring the lactic ratio in blood after the physical effort and Kosmin test.

This indicates the positive role of the super- , Since this test depends on the player's ability in anaerobic and aerobic abilities and the integration of these capabilities shows in the player's ability to use the oxygen absorption ratio, as well as the player's ability to withstand the anaerobic and increase the ability to increase the tolerance of the proportion of lactate in the blood, the repetition of muscle work during the physical effort and what the player needs to bear speed or bear the force and performance is the source of energy production is the chemical or glucose to produce (ATP), this leads to the accumulation of lactic acid in the muscle and blood "Increased physical exertion increases the activity of the enzyme (LDH) of lactic acid and increases its concentration in blood and muscle and that its low concentration with the ability to continue to do the same level of physical

effort or muscle work refers to the development of muscular endurance with the economy of energy expenditure" [19]. Since aerobic and aerobic capabilities are important physiological requirements for 800-meter athletes, the repeated use of phosphatonic and lactic endurance exercises as speed-bearing and rapid-force exercises has played an active role in developing these capabilities and thus in economic performance.

That the muscle capacity needed by each athlete to some degree until the marathon runner needed at the end of the race, and is a crucial factor in the success of sports performance,[20] and therefore the runner running mid-distance needs to endure power and aerobic and aerobic energy, , 1975) " The ratio of aerobic energy to non-aerobic energy reaches (20-80%) for aerobic energy, this ratio reaches 50% (aerobic / anaerobic). The distance between 800 and 1200 meters).

## Conclusions

Based on the findings of the present study, the researchers reached the following conclusions:

- Super sit training has been characterized by the overall delivery of training objectives, as the exercises endurance muscular.
- Super-muscular endurance training has a positive and effective effect in the development of rapid force tolerance.
- The aerobic endurance exercises carried out by the experimental group caused a major development in the lactic endurance and the completion of running 800 meters.
- The results of the tests showed a difference in the concentration of lactic acid by measuring the proportion of lactate in the blood (before and after the effort) as well as the absence of significant differences in the time of rest between the two groups and the significance of the differences between the pre-test and the experimental group.
- The Kosmin group test had a positive role in predicting the results of the players to measure the air and aerobic capabilities.

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