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Effect of Using Some Methods of Hospitalization on The Speed of Return to Normal and Some Physiological Variables for Volleyball Players.

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Abstract

Introduction: Sports training is witnessing tremendous development these days, especially in its relationship with other sciences, Competition exercises are considered a training form aimed at improving the level of the match performance, as it is similar to the match, but it differs from it in some performance characteristics as the main goal of its performance is training.

Aim: The research aims to identify the effect of using recovery methods during the competition period on some physiological variables among volleyball players.

Results: The results indicate that there are statistically significant differences between the measurements and the post parameters of the first experimental group, the pulse rate percentage of improvement reached (68.04%), glucose percentage improvement reached (9.53%), lactic acid percentage of improvement reached (90.56%), systolic blood pressure percentage improvement reached (8.66%) and diastolic blood pressure percentage improvement was (10.65%). The results also showed the positive effect of using the cold bath on the second experimental group, lactic acid percentage of improvement reached (89.47%), systolic blood pressure percentage improvement (18.9%), and diastolic blood pressure percentage improvement of (16.29%).

Conclusions: Using the sauna as a healing method leads to positive physiological changes in the pulse rate, glucose, and lactic - systolic and diastolic blood pressure in volleyball players. The use of sauna as a healing method leads to positive physiological changes in the pulse rate, glucose, and lactic - systolic and diastolic blood pressure in volleyball players. The effect of using a cold bath is better than using a sauna in improving the pulse rate, glucose, and lactic - the systolic and diastolic blood pressure of volleyball players.

Keywords: volleyball players - fatigue, recovery methods, competition period.

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INTRODUCTION

Sports training is witnessing tremendous development these days, especially in its relationship with other sciences, and among these sciences is physiological science so that they merged to form what is called the science of sports physiology, this science studies various physiological aspects related to sports training and the most important of these areas is the process of sports recovery this aspect that may Many coaches are ignorant of him and some of them do not give him any importance when developing their training programs for the different games, whether individual or group. [1–3]

Competition exercises are considered a training form aimed at improving the level of the match performance,

as it is similar to the match, but it differs from it in some performance characteristics as the main goal of its performance is training, it is known that its performance aims to train in the style of performance of the match and train the athlete to face all the physiological and psychological requirements And planning and when performing competition exercises, clear all aspects of the training state of the athlete. [4–7].

"HASSAN" [8] stresses that competition exercises are one of the most important exercises that raise the level of competence of the integrated performance of the player and bring him to a high state so that they are performed under various circumstances [9–14].

And competition exercises as a form of sports training in which the player performs physical loads of different intensity and these loads result in what is called fatigue, and fatigue is the main reason for limiting the player's continuity in performance, as many scientists have interpreted the phenomenon of fatigue as a physiological phenomenon that leads to a decrease in an athlete's competence can be recognized through several internal and external aspects. [15–18].

The occurrence of fatigue is considered one of the natural physiological phenomena that are important in the sports field. Although some athletes stop exerting effort when feeling tired, this represents the safety valve that protects the player and maintains the integrity of his vital organs. [19–22].

"El Sayed Ahmed [23] mentions that fatigue is a complex physiological phenomenon, and one of the main causes of it is the progressive obstruction of the activity of the central nervous system, especially when performing the activity of maximum intensity as the neurons cannot work in an acidic medium of blood for more than 3-5 minutes with normal intensity With continued physical exertion, this leads to a decrease in the excitement and flexibility of the nerve cells and the growth of the processes of disability to the axis of the dominant nerve signals, thus disturbing the neuromuscular compatibility as well as the activity of the motor, respiratory and circulatory system and all other organs [24–26].

And that the fatigue that follows endurance exercises does not occur due to the accumulation of lactic acid, so fatigue, in this case, is local fatigue in addition to general fatigue of the whole body and muscle fatigue in the working muscles indicating that the lack of glycogen stored in the fast muscle fibers together has been indicated by many types of research that the fast fibers the contraction becomes tired before the slow fibers. This is due to the weakening of the aerobic action in the fast fibers, and therefore the accumulation of lactic acid in them is a cause of fatigue. [19,20,27,28].

The phenomenon of fatigue is one of the physiological processes associated mainly with hospitalization processes, and if fatigue, as scientists know it, is a temporary decrease in the ability to continue performing work, then hospitalization is the reverse process of returning the body's organs to the state they were in before performance, and to another state that exceeds the state before Performance sometimes, and therefore fatigue is considered a positive physiological phenomenon that occurs to an athlete when performing different training loads, and it appears in the form of a temporary decrease in the ability to continue performing the work. [29,30,36].

"Riyad, Osama" [31] agrees with "Nader Shalaby M" [5,37,38,39] that the causes of fatigue are multiple, the most important of which is low blood glucose levels, lack of liver glycogen, dehydration and lack of body water, lack of mineral salts, and an increase in body temperature, in addition to some Other psychological factors, such as boredom and boredom. [18,21,22,32,41].

Nader Shalaby M [24] mentions that the phenomenon of fatigue from the physiological processes associated mainly with the healing processes is two interrelated processes, so without the occurrence of fatigue does not occur associated with hospitalization, and if fatigue, as scientists know it, is a temporary decrease in the ability to continue performing the work, then hospitalization is The reverse process of returning the body's systems to the state they were in before performance sometimes. [5,9,10,40].

Hospitalization processes that occur after the completion of training or competition are of special importance, as is the hospitalization that interferes with the training disease itself, as incomplete hospitalization between training periods or between matches the player leads to a decrease in the ability to achieve. [11,13,15,16,33].

In practice, incomplete recovery appears in the form of muscle pain, joint pain, and tendonitis, with mild general and continuous pain and difficulty sleeping, and we can avoid this whenever we approach the healing processes. [12,19,20,24,25,34].

"Riyad, Osama"[31] is mentioned about " Duffield, Rob " [13]. That the process of recovering physical competence after performing the training and competitive loads is considered one of the causatives and complementary factors for the effectiveness of the training process in high-level sport. [26,27,35,37].

Therefore, the relationship between training units and hospitalization is considered a fundamental relationship, as this relationship affects the player's ability to perform, as the recovery processes lead to the player's vitality and increase his ability to perform a function where the kinematic symmetry improves as well as the morphological reorganization occurs when the burden on the player's shoulders increases. [28–30,39].

Hospitalization methods are among the important matters in building training programs that have been emphasized by many experts and specialists in the field of training and from the researcher's practice of playing and training, and her continuous knowledge of many training units for volleyball coaches and their views on their use of healing methods during training units and matches. I note that most of them do not use any method of hospitalization or they are limited to one method for this, which prompted the researcher to conduct this study to identify the effect of using means of recovery for recovery during the competition period on some physiological variables of volleyball players.[21,22,32,36,38]

Research objective:

The research aims to identify the effect of using recovery methods during the competition period on some physiological variables among volleyball players.

Research hypotheses

- There are statistically significant differences between the averages of the previous and post measurements in the level of some physiological variables among the volleyball players of the first experimental research group.
- There are statistically significant differences between the means of the tribal and post measurements in the

standard
- Some physiological variables for volleyball players, the second experimental research group.
- There are statistically significant differences between the two-post averages of the two research groups
- The first and second experiments at the level of some physiological variables in favor of the first experimental group.

Some of the terms used in the search:

Recovery

It is a physiological condition represented in the return of the body's organs to their normal rates or as close as possible
Have so. [18].

Sauna

It is a specific place where the air temperature and humidity can be controlled to achieve positive physiological changes in the human body [12,34].

Cold bathtub

It is a deep place (basin) filled with water and is higher than the ground level to which it ascends or below the level to which it descends. [13,33].

Fatigue

It is my time decline in the ability to continue performing work, which can be measured by its manifestations
Externality through the lack of mechanical work performed. [17,18].

Research plan and procedures

Research Methodology

The researcher used the experimental approach of the two experimental groups using pre-post measurement for its suitability to achieve the research objectives and hypotheses.

The research samples

The research sample was deliberately chosen from the (20) volleyball players registered with the Egyptian Volleyball Federation in the Alexandria region, in addition to (8) players, how many outside the basic research sample were to conduct the exploratory experiment for the research.

Table 1. The arithmetic mean, mean, standard deviation, torsion coefficient for age, training age, height, weight, sugar, systolic and diastolic blood pressure, pulse, and physiological variables under investigation

	Variables	Unit	First experimental (Sauna) (n = 10)			Second experimental (Cold bathtub) (n = 10)		
			Mean	SD	Skewness	Mean	SD	Skewness
Variables before performing the match	age	year	18.5	3.8	0.26	18.1	1.9	0.32
	Training age	year	6.5	0.9	0.18	6.3	0.6	0.16
	Height	Cm	183.2	3.4	0.29	181	2.1	0.22
	Weight	Kg	67.5	1.2	0.68	72	1.6	0.26
	Sugar level	mmol	118.2	1.9	0.33	116	1.7	0.61
	Syst. press	m/Hg	122.6	1.7	0.33	121	1.2	0.26
	diast. press	m/Hg	76.2	0.9	0.44	75.6	0.6	0.36
	Pulse/rest time	BPM	76.16	1.7	0.26	75.3	0.4	0.11
Variables after performing	pulse	BPM	162.7	1.6	0.22	161	1.4	0.27
	glucose	mmol	85.16	0.8	0.3	83.2	1.6	0.16
	Lactic	mmol	3.61	0.7	0.42	3.2	0.7	0.54
	Syst. press	m/Hg	145.1	1.2	0.16	143	1.7	0.4
	diast. press	m/Hg	92.16	0.7	0.3	92.5	1.3	0.11

Table 2. The significance of the differences between the first and second groups in light of age, training age, height, weight, and some physiological changes. N = 20

	Variables	Unit of measurement	The first group (Sauna)		The first group (Cold bathtub)		T value	P. Value
			Mean	SD	Mean	SD		
Variables before performing the match	age	Year	18.6	3.1	18.3	1.71	0.8	0.6588
	Training age	Year	6.12	0.9	6.2	0.73	0.2	0.6279
	Height	Cm	182.3	3.2	183	2.54	0.2	0.7331
	Weight	Kg	68.8	1.2	70.11	1.73	0.4	0.1625
	Sugar level	mmol	115.1	1.7	114.5	1.28	0.9	0.247
	Syst. press	m/Hg	124.6	1.5	123.2	1.41	0.4	0.6395
	diast. press	m/Hg	72.3	1	73.6	0.45	0.4	0.3317
	Pulse/rest time	BPM	78.2	1.6	80.6	0.52	0.1	0.1644
after performing	pulse	BPM	163.1	1.5	164.3	1.6	1	0.7359
	glucose	mmol	83.2	1	84.3	1.58	1	0.8827
	Lactic	mmol	3.8	0.6	3.4	0.84	0.5	0.6241
	Syst. press	m/Hg	142.3	1.2	141.6	1.82	0.7	0.6621
	diast. press	m/Hg	91.2	0.7	92.5	1.22	0.5	0.5233

The tabular (t) value at (0.05) = 1.96

It is evident from Table (1) that the coefficients for torsion are limited to age, training age, height, weight, sugar, systolic and diastolic blood pressure, pulse, and physiological variables between (-3, +3), indicating that they fall within the equilibrium curve, and thus the sample is moderately distributed.

It is evident from Table (2) that the tabular value of (t) was limited between (0.11 to 0.98), which is less than its tabular value at the level of significance (0.05) in the growth rates and physiological variables of the two

experimental research groups, indicating their equivalence in those variables.

Data collection tools and means:

First: devices and tools used in the research:

1- Blood pressure monitor
2- A stethoscope to measure the pulse rate
3- (ACCU-CHEK) device for measuring glucose level
4- ACCUTREND PLUS device to measure the LACTIC ratio.
5- Sauna
6- A cold water bath

Second: Forms and personal interviews:

1- A questionnaire for experts 'opinions on determining the physiological tests under investigation.
2- Players' data registration form.

Research steps:

a) the exploratory study:

The researcher conducted an exploratory study on a sample from the study population and outside the basic sample consisting of (8) players under the same basic research experience conditions to identify the extent of its suitability for application to the study sample and the exploratory study aimed to determine the following:

- Knowing the validity and suitability of the tools and devices used in the experiment.
- Identify the difficulties that the researcher may face when experimenting.
- Selection of assistants and their training in the use of devices and tools.
- Training of assistants to register in the forms for previous and post measurements.
- Identify the suitability of the arranged arrangement to conduct research measurements.

b) Basic Experience: -

The researcher carried out the basic experiment for the research, after training on the performance of the training units for the periods of competition and the performance of a match. The research sample was (26) players, and the sample was divided into two experimental groups.

* The first experimental group, which uses the sauna as a healing method, consists of (10) players.
* The second experimental group uses a cold bath as a means of hospitalization and consists of (10) players without switching players throughout the match and taking physiological measurements immediately after the end of the match.

1- Pre- measurement:

The researcher performed pre-physiological measurements for each experimental group before using the recovery methods as follows:

- Pulse rate measurement.
- Blood glucose measurement.
- Measurement of lactic blood.

2- Using the means of hospitalization under consideration:

After performing the pre-measurements on the two research groups, the researcher inserted the first experimental group, which uses the sauna as a healing method, to the sauna room for 15 minutes, then inserted the second group, which used the cold bath as a healing method, to the cold bath for 5 minutes, based on the opinions of the experts in The field of sports health sciences and volleyball training, whose names are shown in Attachment (1), to determine the length of time that the means of hospitalization are under investigation that leads to the occurrence of the physiological response of the players.

3- post measurement:

After the end of the specified time and the exit from the means of hospitalization, the researcher made the post-measurement measurements on the members of the research sample (the two experimental groups), consisting of (20) players, as follows:

- Pulse rate measurement.
- Blood glucose measurement.
- Measurement of lactic blood.

Statistical treatments used:

- SMA.
- Mediator.
- -standard deviation.
- coefficient of torsion.
- tests.
- Percentage improvement.

First: Presentation of results:

Table 3. The significance of the differences between the averages of the previous and post standards of the first experimental group (sauna) in the physiological variables under investigation

Variables	Unit of measurement	Pre measurement		Post measurement		The differences between the two averages	Improvement value	T value	P. Value
		Mean	SD	Mean	SD				
pulse	BPM	163	1.62	97	1.11	66.08	%68.04	2.25	0.0216
glucose	mmol	86	0.94	94	1.62	8.2	%9.53	2.73	0.0436
Lactic	mmol	3.43	0.68	1.8	0.25	1.63	%90.56	2.44	0.001
Syst. press	m/Hg	139	1.19	128	1.87	11.09	%8.66	2.75	0.0224
diast. press	m/Hg	93.2	0.7	84	0.91	8.97	%10.65	2.36	0.0341

he tabular (t) value at (0.05) = 1.96

It is clear from Table (3) that there are statistically significant differences between the previous and post measurements of the first experimental group (sauna) in the physiological variables under investigation and favor of the post measurement.

Table 4. The significance of the differences between the mean of the previous and post standards of the second experimental group (cold dip) in the physiological variables under investigation.

Variables	Unit of measuremen	Pre measurement	Post measurement	The differences between the two	Improvement value	T value	P. Value

	t	Mean	SD	Mean	SD	averages			
pulse	BPM	163	1.4	91	0.98	72	%78.95	2.95	0.044
glucose	ml/mol	82.2	1.5	100	0.22	17.83	%21.70	2.96	0.0325
Lactic	mmol	3.6	0.67	1.9	0.15	1.7	%89.47	2.77	0.0493
Syst. press	m/Hg	142	1.78	120	1.67	22.6	%18.90	2.86	0.0113
diast. press	m/Hg	92.1	1.29	79	0.43	12.9	%16.29	2.71	0.001

The tabular (t) value at (0.05) = 1.96

It is clear from Table (4) that there are statistically significant differences between the previous and post measurements of the second experimental group (cold water bath) in the physiological variables under investigation and favor of the post measurement.

Table 5. The significance of the differences between the two post averages of the first experimental groups (sauna) and the second (cold bath) in the physiological variables under investigation

Variables	Unit of measurement	The first group (Sauna)		The first group (Cold bathtub)		T value	P. Value
		Mean	SD	Mean	SD		
pulse	BPM	99.2	1.35	92	0.93	3.22	0.0003
glucose	ml/mol	94.2	1.5	100	0.22	3.21	0.0004
Lactic	mmol	2.1	0.25	1.6	0.12	3.14.	0.0019
Syst. press	m/Hg	128	1.85	119	1.73	3.9	0.0001
diast. press	m/Hg	82.2	0.91	79	0.44	3.16	0.0013

The tabular (t) value at (0.05) = 1.96

It is evident from Table (4) that there are statistically significant differences between the previous and post measures of the second experimental group (cold water bath) in the physiological variables under investigation and favor of the post measurement.

The results of Table (3) indicate that there are statistically significant differences between the measurements and the post parameters of the first experimental group, which underwent the use of (sauna) in some physiological variables (pulse - lactic - glucose - systolic blood pressure - diastolic blood pressure) understudy and favor of the post-measurement at the level of Significant (0.05), as the calculated value of (t) reached (2.25 to 2.75), which is greater than the tabular value of (t).

The results of Table (3) also showed the positive effect of sauna use on the sample of the first experimental group on physiological variables, as the results indicate that the average pulse rate in the pre-measurement after the match and before entering the sauna reached (163.2 n / s), while it decreased in the post-measurement after exiting from the sauna to (97.1 N / s), this indicates an improvement in the level of pulse, as the percentage of improvement reached (68.04%).

While the average glucose in the pre-measurement after the performance of the match and before entering the sauna was (86), while it increased in the post-measurement after leaving the sauna to (94.2). This indicates an improvement in the blood glucose index, where the percentage improvement reached (9.53%).

The results indicate that the average of lactic acid in the pre-measurement after the match and before entering the sauna was (3.43 mmol), while it decreased in the post-measurement after leaving the sauna to (1.80 mmol). This indicates an improvement in the lactic index in the blood, where the percentage of improvement reached (90.56%) and the results indicate that the average systolic blood pressure in the pre-measurement after the match and before entering the sauna reached (139.2) for the average systolic blood pressure, while it decreased in the post-measurement after leaving the sauna to (128). This indicates an improvement in your blood pressure index. Systolic is the percentage improvement reached (8.66%), and the results indicated that the average diastolic blood pressure in the pre-measurement after the match and before entering the sauna reached (93.2) for the average diastolic blood pressure, while it decreased in the post-measurement after leaving the sauna to (84.2) This indicates an improvement in the diastolic blood pressure index, where the percentage improvement was (10.65%), in post measurement.

The researcher believes that an improvement in the level of some physiological variables (rate - lactic acid - glucose) is due to the use of the sauna although the sauna increases the temperature of the body and the pulse rate increases, but that the player in the sauna is in a state of complete relaxation, calmness, and tranquility, and this leads to A decrease and improvement in all physiological characteristics than those arising after performing.

This is consistent with what was indicated by Stone, Michael H [36] that the use of the sauna improves the process of absorption and metabolism and the sauna also helps to expand the blood vessels, reduces the rates of pulse and pressure, and improves the speed of the healing process for practitioners.

HASSAN [8] notes that hypoglycemia is the main danger that must be avoided, especially during sporting activities, by consuming the athlete with glucose or other carbohydrate-containing drinks and the risk of glucose deficiency is due to its effect on the brain's needs for sugar, which causes Central roll fatigue [25: 2]. The results of this study are in agreement with what was indicated by the study of Riyad, Osama [31], Mohammed Nader [19] Bergman, Bryan C [1] that no means of restoring healing are used (saunas) in question. Positively affects the improvement of the level of physiological characteristics of those who practice sports activities.

Thus, the first hypothesis is fulfilled, which states that there are statistically significant differences between the pre-and post-standards of the first experimental group (sauna) in the physiological variables of volleyball players in the research sample.

The second hypothesis states that there are statistically significant differences between the pre-and post-measurements of the second experimental group (cold water bath) in the physiological variables of the volleyball players in the research sample.

The results of Table (4) indicate that there are

statistically significant differences between the pre and post measurements of the second experimental group, which were subjected to the use of (a cold water bath) in the physiological variables (pulse - lactic - glucose - systolic blood pressure - diastolic blood pressure) understudy and favor of the post-measurement when Significant level (0.05), where the calculated value of (t) reached (2.71 to 2.96), which is greater than the tabular value of (t).

He also explained the results of Table No. (4) the positive effect of using the cold bath on the sample of the second experimental group on the pulse rate per minute, as the results indicate that the average pulse rate in the pre-measurement after the performance of the match and before the use of the cold bath reached (163.2 n / s) while it decreased In the post-measurement, after coming out of the cold bath, it was boiled (91.2 N / s), and this indicates an improvement in the pulse, as the percentage improvement was (78.95%). Panama shows from Table (4) that the average glucose in the post-measurement after leaving the bath reached (82.15), while it increased in the post-measurement after leaving the dive to (100). This indicates an improvement in the blood glucose index, where the percentage improvement in the level of glucose reached in the blood (21.7%).

The results of Table (4) also showed the positive effect of using the cold bath on the second experimental group sample on the percentage of lactic acid in the blood, as the results indicate that the average of lactic acid in the pre-test after the performance of the match and before the use of the cold bath reached (3.6), while it decreased in the pre-test after Exit from the bath to (1.90). This indicates an improvement in the lactic index in the blood, as the percentage of improvement reached (89.47%).

The results indicate that the average systolic blood pressure in the pre-measurement after the match and before entering the cold bath reached (142.2) for the average systolic blood pressure, while it decreased in the post-measurement after leaving the cold bath to (120). This indicates an improvement in the systolic blood pressure index, as it reached (22.6) The percentage improvement (18.9%), and the results indicate that the average diastolic blood pressure in the pre-test after the match and before entering the cold bath reached (92.1) for the average diastolic blood pressure, while it decreased in the post-measurement after leaving the cold bath to (79.2). This indicates an improvement in the diastolic blood pressure index, with a percentage improvement of (16.29%), in favor of the post measurement.

The researcher believes that the presence of an improvement in the second group players (using the cold water bath) in the level of the physiological variables of the second experimental group sample is due to the use of the cold bath because the cold water positively affects the nervous system and the situation of the budding in the bath is in a completely relaxed state, which leads to a decrease He improved the physiological characteristics of the whole body than the players were after the match and before using the cold bath.

In this regard, El Sayed Ahmed [23], Seatan [33] notes that the cold bath is one of the most important methods of resuscitation due to its positive effect on the physiological variables (pulse - lactic - glucose).

The results of this study agree with what was indicated by the study of Shalaby, M [25], Riyad, Osama[31] and Seatan [33] that the use of methods of restoring the healing (cold water bath) understudy has a positive effect on improvement The level of physiological characteristics of those who practice sports activities.

Thus, the second hypothesis is fulfilled, which states that there are statistically significant differences between the pre-and post-standards of the second experimental group (cold water bath) in the physiological variables of volleyball players in the research sample.

Table (5) shows that there are statistically significant differences between the two post measures of the first experimental group, which uses (sauna) and the second that uses (cold water bath) in the level of some physiological variables (pulse rate - lactic acid - glucose - systolic blood pressure - blood pressure. Diastolic) under discussion and in favor of the second group at a significant level (0.05), where the calculated value of (t) was (3.14 to 3.9), which is greater than the tabular value of (t).

The results of Table (5) also indicate that the average post-measurement for the first experimental group, which uses the sauna, in blood glucose was (94.15), while the average post-measurement for the second experimental group, which used a cold bath, was (100) and the value (T) was (3.21). In favor of the second experimental group.

It is evident from the results of Table (5) that the average post-measurement for the first experimental group, which uses the sauna, in the proportion of systolic blood pressure was (128.1), while the average post-measurement or the second experimental group, which used a cold bath, was (119) and the table value (T) was (3.9) In favor of the second experimental group and that the average post-measurement for the first experimental group, which uses the sauna, in the ratio of diastolic blood pressure was (82.2), while the average post-measurement for the second experimental group, which used a cold bath, was (79.2) and the table value (t) was (3.16) in favor of the experimental group. the second.

The researcher attributed the superiority of the second experimental group in the level of physiological variables (pulse rate - glucose - lactic acid - systolic blood pressure - diastolic blood pressure) in the post-measurement to the cold water bath because the cold bath positively affects the nervous system and stimulates blood circulation because Placing the player in the bath is in a state of complete relaxation, which leads to a decrease and improvement in physiological functions than it was after performing, and before using the cold bath.

In this regard, Kenney, W Larry [26] Seatan [33] states that the cold bath is one of the most important means of hospitalization due to its positive effect on the physiological variables (pulse - lactic - glucose).

The results of this study agree with what was indicated by the study of Shalaby, M [25], Riyad, Osama[31] and Seatan [33] that the use of means to restore healing (a cold-water bath) understudy has a positive effect on improving the level of physiological characteristics of those who practice sports activities.

Thus, the third hypothesis has been fulfilled, which states that there are statistically significant differences between the mean scores of the two post standards for the first two experimental groups (sauna) and the second (bathing) in favor of the second group in the physiological variables of the volleyball players research sample.

CONCLUSIONS

1. Using the sauna as a healing method leads to positive physiological changes in the pulse rate, glucose, and lactic - systolic and diastolic blood pressure in volleyball players.
2. The use of sauna as a healing method leads to positive physiological changes in the pulse rate, glucose, and lactic - systolic and diastolic blood pressure in volleyball players.
3. The effect of using a cold bath is better than using a sauna in improving the pulse rate, glucose, and lactic - the systolic and diastolic blood pressure of volleyball players.

RECOMMENDATIONS

1. The necessity of using means of recovering hospitalization after training or competitions, as they have a positive effect on the speed of recovery.
2. Inference of recovery from the healing process (pulse rate, glucose, lactic).
3. More similar studies should be conducted with the use of other healing methods appropriate for the time and type of activity and rest between matches.
4. Providing sports facilities with healing devices and means, such as water baths.

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