



## Effect of Special Exercises for the Development of Some Biochemical Variables and the Level of Performance of Diagonal Spike Skill in the Volleyball

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### Abstract

Volleyball is one of the sports activities that need to apply the modern scientific methods through the development of the sport training science, which aims to improve the player's physical and functional abilities through careful planning of training courses for the development of its efficiency in the performance of all requirements for volleyball, The importance of research in the study of some chemical components of blood and the changes obtained by the training using special exercises because of its importance in developing the skill of beating overwhelming in the players the researchers used the experimental method to suit the nature of the problem on the players of the Kufa youth sports club for the season of 2018 (12) players, and was adopted a cohesive method of selection in the selection of the sample, the tests used in the research biochemical tests: measuring variables (cholesterol, sugar, And the test of the skill of beating the overwhelming country, after which the researchers carried out the tribal test, and then the exercise and then the post-test The researchers concluded that the exercises used, which were specialized exercises of the type of skill and complex exercises and exercises. The researchers recommended to emphasize the importance of speed of performance and stress on exercise. Specialization in the skill type especially in the volleyball game, the interest in training the ability to develop the strength of the chemical variables and the level of skill performance of volleyball players, and benefit from the measurement of the activity of enzymes and the proportion of sugar and cholesterol contribute to the processes energy and muscular construction in the training of volleyball players at all levels, and conducting similar research in the use of explosive force training exercises to develop muscle strength in the non-oxygen system and identify the biochemical variables of volleyball players.

**Keywords:** *Special exercises, Biochemical variables, Spike, Volleyball.*

### Introduction

Volleyball is one of the sports activities that need to apply the modern scientific methods through the development of the sport training science, which aims to improve the player's physical and functional abilities through careful planning of training courses for the development of its efficiency in the performance of all requirements for volleyball, Constructive and dynamic based on physiological, biochemical and psychological rules [1].In order for training to be ideal, it is necessary to choose the proper training method to be developed. Special exercises are one of the most important training methods used to develop a certain character and the biochemical variables (cholesterol, sugar, creatine and phosphokinase (CPK)) and then skill by raising the

player's abilities and physical parathions [2].It is not possible to define the level of training and give a future idea to the coach about the reflex effects of the chemical and functional aspects of the players, and the lack of knowledge The instructor in the biochemical manifestations resulting from the impact of glance in his players leads to the inability to codify gnancy and gradation and to stand at the appropriate limit does not exceed the increase that caused the adverse effect in the functional and health status of the player .Hence the importance of research in the study of some chemical components of blood and the changes obtained by the training using special exercises because of its importance in developing the skill of beating overwhelming volleyball players [3].

## Practical Part

### Field Research Procedures

The researchers used the experimental method to suit the nature of the problem on the players of the Kufa Youth Sports Volleyball Club for the season of 2018 (12) players, and was adopted method of cohesive inventory in the selection of the sample.

### The Tests

**First:** Biochemical tests: Measurement of the variables (cholesterol, sugar, creatine and phospho-kinase (CPK) :

Blood samples were drawn from the players (5 cc) of each player of the research sample so that the players are in a state of complete rest and without any physical effort was withdrawn by a medical staff from the vein in the region of the humus and without the use of the cosmos (Torrance) (5 minutes) is the best time for the transfer of lactic acid from muscle to blood as well as biological organizations and chemical variables of the muscles and fluids inside the cell to the blood "[4].The blood is then emptied from the injections into the blood-serving tubes

numbered from S1 to S12. The letter S refers to the withdrawal of the tribal blood, and the letters B1 to B12 draw the blood after the voltage and each number on the tube is matched by the name of the player on the registration form. After completing the blood extraction process and placing it in the terminals, it is delivered to the medical staff by the cool box for the purpose of separation and extraction of the serum by a specialized chemist using the centrifuge and 3000 cycles / minute. The serum is then withdrawn and placed in an empty tube bearing the number same for the blood-serving tube.

**Second:** Test the skill of beating the overwhelming country: [5]

- Purpose of the test: Measure the accuracy of the spike diagonal in the inner triangle of the opponent's court.
- Tools: Five plane balls split the pitch as in Figure (1), where the field is divided into two halves half of the corresponding field and then divides the inner triangle of the network to three areas of view each area (3) meters.

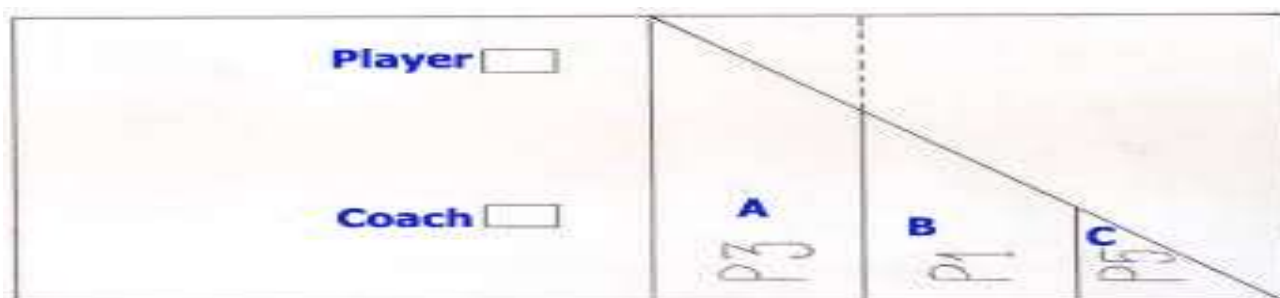


Figure 1: Shows the achievement test (accuracy) of the skill of overwhelming beating

### Main Experience

The main experiment was applied by the researchers to the members of the research sample according to the following sequence:

### Tribal Test

The researchers conducted the tribal test on Sunday, February 11, 2018, at the Kufa sports club hall by measuring the accuracy of the skill of the spike. The biochemical variables chosen were cholesterol, sugar and creatine phospho-kinase (CPK), the athlete performs the warm-up process on the moving device for 6 minutes, at a speed of 5 km /h and at a zero angle. After this, the Swedish exercises are performed for a period of (3) Minutes), then the level of performance of the

crushing skill was measured and tested Core viously.

### Exercise Application

The researchers pared the proposed exercises for the special paration stage, taking into account the available possibilities and the general level of the research sample, based on the scientific foundations of the sports training and on some scientific sources and references for the purpose of obtaining the best results in developing some basic skills for volleyball players, adopting a suggested approach in the scientific level commensurate with the arrival The study focused on the work on the development and improvement of biochemical variables as well as the overwhelming beating skill, which included the training of the proposed exercises and

different percentages of skill numbers. The aim was to develop B The training exercises were proposed on Sunday, 11/2/2018 to 11/4/2018, where the researchers used the same style or method of the trainer as the method of training the high-intensity boys because the players were Within the period of special paration, the duration of the proposed exercises was set at 8 training weeks and three training units per week. The total number of training units was (24) training units for the experimental group.

The researchers identified the intensity of the training It has the skill to fly The intensity of the exercise was determined by the exercise time and intensity to determine the performance time and access to the intensity used during the training, as well as the knowledge of the pulse and return to normal state of rest to reach the level that allows the player to repeat the exercise again and with the same efficiency or before arrival For full healing and by qualities [6].And the rest time was calculated by measuring the pulse, which ranged between (120: 110) pulse / minute and the use of a number of skill exercises of different qualities (individual, double, composite and collective), which codified these exercises or exercises depending on the difficulty of performance and the purpose of these exercises.

## Posttest

The researchers carried out the post-test on Wednesday, 14/4/2018 at the Kufa Sports Club hall by measuring the selected biochemical variables (cholesterol, sugar, and creatine phospho-kinase (CPK), which were selected as the members of the research sample were subjected to physical exertion The athlete performs the warm-up process on the moving device for 6 minutes, at a speed of 5 km / h and at a zero angle. After this, the Swedish exercises are performed for 3 minutes. After that, in the same way that a cardiac test was performed.

## Statistical Methods

The two researchers used the Statistical Bulletin of Social Sciences (SPSS).

## Results and Discussion

This axis included the sensation of the results of the statistics of the impact of physical exercises in some special biochemical variables and the performance of the overwhelming beating skill of young volleyball players of Kufa Sports Club after the treatment of statistical and in line with the goals.

**Table 1: Shows the values of the mean and the standard deviation of the biochemical variables and the performance of the volleyball batches in the - and post-test**

S	Variables	test		Posttest		(t) calculated	Sig.	Significance	
		Mean	SD	Mean	SD				
1	Biochemical	Sugar	82.1	2.09	84.2	2.8	3.5	0.000	Sig.
2		Cholesterol	161.2	2.41	161.92	1.67	2.98	0.001	Sig.
3		CPK	92	2.43	98.21	2.9	10.12	0.000	Sig.
4		Spike	14.12	1.13	16.48	1.82	5.16	0.000	Sig.

The results show significant differences between the tribal and remote tests and the benefit of the post-test in the biochemical variables (sugar, cholesterol and creatine phosphate). The researchers see the reason for these differences to the systematic training of the exercises used, as stressed (Mufti Ibrahim Hamada) "Sports training leads to changes in blood, the researchers attribute the development of the research sample to the fact that the special training provides the player with an additional percentage of blood sugar to buy. As fat as a source of energy and its degradation in the oxygen field, which reduces the dependence

on sugar and confirms the clarity "that endurance exercises lead to increased concentration of sugar in the blood and this means that the blood will be more pared because of training to processing lipids as a source of energy and thus decrease in quantity while the amount of sugar Maintaining a relatively high concentration of blood"[7]. Abu Al-Ula pointed out that" physical activities that require long-term tolerability for adoption of aerobic processes lead to excessive or higher blood sugar consumption after exercise "[8]. In terms of blood cholesterol measurement for individuals in the study sample, it was found

that the computational settings were normal in the adult population (150-250 mg), with the mean (161.2) and the standard deviation (2.41) in the tribal test , While the mean (161.82) and the standard deviation (1.67) in the post-test, while the value of (t) calculated (2.98) and the value of (SIG) (0.000) which is smaller than (0.05) This indicates the evolution of the members of the sample in the measurement of proportion Cholesterol in blood, and this development is consistent with what has been mentioned viously that training in accordance with the principles and scientific foundations have a positive impact on Trainees: Due to the regularity of the experimental group, the effect of the results in favor of the post-test. The researchers explain this natural decline in normal proportions to weight-bearing exercises that involve cholesterol as an energy source during training. In the blood with its effect on lipid metabolism as well as its effect on carbohydrates "[9].Ali Walhalla pointed out that" the exercise of sports leads to the reduction of low density cholesterol and high cholesterol, Necessary to protect the heart "[9].The researchers explain the

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evolution in the skill of beating overwhelming in the members of the research sample to the effect of special exercises in the use of weights in addition to the weight of the body, which led to increase the efficiency of muscle work of the parts that share the skill of beating overwhelming and then the development of performance and this is consistent with what he sees Ahmed and Ali " That the continuous exercise of any sports activity has an effective effect on the development of physical attributes and the development of the skillful performance of that activity "[10].

## Conclusions

The exercises used, which were specialized exercises in the type of skill and complex exercises and skilled exercises for speed of performance contributed to the development of biochemical variables (sugar, cholesterol and CPK) in the members of the research sample volleyball players of the club Kufa Sports Youth, and that the exercises used contributed to the development of the skill of beating overwhelming volleyball.