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The effect of high training stress on each of concentration (Blood - urine) on Iraqi national team weightlifters

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Abstract

The researchers assume that there is no statistically significant relationship on the albumin concentration and turnover of the Iraqi quartet. High intensity training results in a slight increase in blood albumin concentrations. High intensity training only slightly increased the concentration of the albumin. The continuous training for a period of five days in one week leads to an increase in the albumin concentration in the blood and urine. We recommend that similar research be conducted into indicators of kidney and liver function. We also recommend that you take the necessary rest between exercises and between training units to restore full recovery to working muscles. We recommend that you drink adequate quantities of water and other fluids, which must contain carbohydrates or sugars, mineral salts. Such as sodium and potassium to provide the body with energy or calories lost during training and to compensate for the sweating associated with training.

Keywords*: high training stress, albumin concentration, blood, urine, elect national team, Iraq*

Introduction

The research aims to find out the degree of blood and urine albumin concentrations of the Iraqi quartet. And to identify the effect of training with a high degree of blood and urine albumin concentrations of the Iraqi four-man squad. And fled, and Z search is that there is no statistically significant relationship to the concentration of albumin and urine of the four - team Iraq. (**Rigla, 2000**)

The researcher has adopted the experimental approach as it is appropriate to solve the research problem and to obtain accurate data and information that can be documented. The research community included the Iraqi four-team weightlifting team preparing for the 2020 West Asia Championship, which numbered (7) four quarters (YasuakiWada, 2018) were selected purposively. The research tools used by the researcher were: (Measurement kit) Kit (Albumin) of origin: German, genre Human). Glass decanters, reels, pipettes and various chemical preparations. Cooling case (Box) to save samples. Glass tubes (Tube). Medical injection. Cotton and sterile material. (**Kratz, 2002**)

Literature review

The scientific knowledge of the most important forms of knowledge, which is on the way bloom prospects modern science uses the scientific research as a means, which in turn evolved recently developed a stunning which led to the revolution in information, which is applied and the link between its vocabulary and

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employment can any country progress and excellence, as especially in the field of sports, which depends on the achievement in which a few centimes see data or fines. (**Koutedakis, 1993**)

The physiology of sports training has been concerned with identifying the various functional responses of the organs and systems of the body and the reactions of various exercises on the physiological and chemical aspects , especially that the functions of the human body organs and their responses are constantly changing throughout the day, throughout the week and month, whether in a state of rest or during physical exertion , which calls us To identify the different responses for the purpose of using them when planning physical training processes . Among these biochemical changes is the concentration of albumin in the blood and the urine levels of the quartet due to its importance being one of the proteins in the blood. (**Hughes, 1990**) Albumin is the protein that is manufactured in the liver and is responsible for maintaining fluid in the bloodstream, and it is one of the most abundant proteins in the blood, and when talking about the causes of high protein in the blood or disturbance of its values, it is necessary to mention the most prominent protein among the body proteins, which is albumin. (**Lippi, 2005**)

From there, the importance of the study appeared in knowing the albumin concentration and the turnover of lifters during high-intensity training. Despite the scientific development in the field of athletes' health and the expansion of its umbrella to include all kinds of sporting events, (**Era, 1995**) But still some questions where the answer is good for some of the events and did not explain the effectiveness as especially weightlifting, so the researcher felt going into this research to answer the question: Are the exercises high effect in the concentration of albumin blood and urine of the lifters or not? (**Moore, 2009**)

The research problem appeared to the researcher from his observation of some lifters that they complain of pain in the back in the area of the kidneys, especially when continuous training for long periods, so the researcher asked to study this problem a scientific study based on the analysis of blood and urine albums because of his interest in the work of the kidneys because its accumulation in it causes some pain. (**Maron, 1975**)

Methodology

Blood albumin measurement: green bromocresol can combine (**BCG**) with albumin at pH 4.0 ~ 4.2 to form an albumin compound. BCG is yellowish green. The depth of the yellowish green color is proportional to the concentration of the albumin. The albumin concentration in the blood can be calculated by measuring a value OD at 628 nm. (Lin, 2014)

Experimental tool: Micropipette Mixed with Vortex, in a centrifuge, a spectrophotometer (628 nm).

Serum (plasma): The collection of serum or plasma samples was done by conventional methods. Examine the sample directly.

Process steps : 1. Empty tube: add 10 µl of double distilled water to the tube EP 5Ml. Standard tube: add 10 µL of a standard 40 g / L into tube EP 5Ml. Tube of the sample: add 10 micro liters of the sample in a tube EP 5Ml. 2. J Z of P 2.5 ml of the place and for the work reagent 1 in each tube. J blending fully and have to room temperature for 10 minutes. 3. J adjust the scale of the spectrum to zero by the water of the Distilled the double measuring values OD Per tube at 628 nm with a diameter of 1 cm.

Measuring urine albumin: The dip-strip method was used (the strip Method To examine urine samples because of the speed, ease, and accuracy of this method, and it has the ability to measure several variables, and the health conditions necessary for conducting analyzes in this way, which are proven by the manufacturer, have been taken into consideration .

Tribal test: was conducted pre - test research group experimental day 10/22/2019 at five pm, in the nationalization hall, laboratory medical Razi was conducted testing by a dedicated staff, it was conducted scientific buttock to save blood even measure variables, and sought researcher Recording of all conditions during these tests in terms of time, place, method of work, the assisting team, and the method of implementing the test sequence in order to create the same or similar conditions when conducting the post-tests. The blood was drawn from the members of the research sample and before performing any effort (in the state of rest) by calling the quadruple after registering their names, the quadrant sits on the chair and extends one of his arms, and the laboratory doctor wraps a compressive ligament in the upper arm area so that the humeral venous blood is then sterilized A small area of the vein and the injection is implanted into the vein in the area of the attachment and directly by opening the belt pressing for the passage of the blood and begins to draw the blood at a rate of (5 CC) which is a sufficient amount according to the two research indicators , then the laboratory doctor withdraws the injection from the arm of the quadrant and sterilizes the area, then empties the blood from the syringe In dedicated tubes with the name of al-Rab'a written on them, blood tubes are collected for the sample members and placed in a cooling case.

The training curriculum followed by the trainer: The training curriculum for the trainer and the special for the lifters was aimed at developing and maintaining the maximum powers of the lifters to overcome the weights raised by them, so the exercises were used in the extreme and below the extreme stresses (85% - 100%) for the purpose of raising the level of the lifters as a whole To the highest possible level, these exercises were a group of exercises such as front squats and back squats (Deep Squat), Withdrawals for lifting the snatch and nitro using, as well as taking iron from special braces and performing the jerk movement to lift the jitter and other exercises, and the duration of the exercises took four weeks, five units per week, and the duration of each training unit took 60-90 minutes , and the ripple of pregnancy The training session was 1: 3, and the intensity used was from 85 % - 100%, and the rest periods were between the citrate 2-5d.

Post- test: After completing the prescribed period, which is four weeks of training for the two-fourths, the researcher conducted the post-test on 11/21/2019 at five in the afternoon, in the Tameem hall and Al-Razi Medical Laboratory, by the same specialized staff that conducted the pre-test. The scientific mechanism for preserving blood was conducted until measuring the variables, and the researcher sought to apply all conditions during these tests in terms of time, place, method of work, auxiliary work team and method of implementation, the sequence of tests in order to create the same or similar conditions in the pre-tests in order to be accurate when performing the post-tests.

Results

The researcher presented the results of the pre and dimensional measurements of the research sample, by presenting the arithmetic means and standard deviations in an illustrative table after performing the necessary statistical operations for them, for the ease of observing the results, as well as conducting a comparison between the pre and posttests by analyzing and interpreting the results of all measurements to know the reality of the differences and their implications. Statistics are according to the precise scientific perspective, in order to achieve the objectives and hypotheses of the research.

Table (1) shows the arithmetic mean, the two standard deviations, the arithmetic mean difference, its standard deviation, and the value (t Calculated and the significance of the differences between the results of the two pre and posttests in the index (blood owls and urine owls) under consideration.

variab	measuri	The pretest	Post test	Then	P. P	Values)t	Error	Indicati

le	ng unit	s	P	s	P			(Calculated	level	on of differences
Blood owls	38-51 mg	**33.7000**	**5.54557**	**40.4286**	**2.66503**	**6.72857**	**5.69992**	**3.123**	2.15437	0210
Urine owls	<30 mg	**26.7143**	**1.79947**	**29.2857**	**1.79947**	**2.57143**	**1.13389**	**6.000**	428570	.001

Significant at error level ≤ (0.05) with a degree of freedom =6

M discussion results of pre and posttests of indices (blood albumin and two albums of urine) in question: can be seen through the table (1) that there is significant between the pre and posttests in the two indicators of differences (blood albumin and two albums of urine) is under study , and this shows an increase of albumin ratios in the blood As well as in the urine as a result of the high intensity of the exercises , despite this slight increase in the percentage of albumin, which led to the appearance in a significant form statistically, but it was within the normal levels in the human body, and this indicates the effectiveness of the exercises that the lifters trained on, which targeted the muscles directly And, as the sources indicated previously, when vigorous training, there are some internal ruptures within the muscle lymphocytes, and as a result of these light tears, which are the product of training, this matter is very normal and is associated with high-intensity training , and since albumin is a protein manufactured in the liver and is responsible for keeping fluids within Blood flow , so high albumin in the blood is not considered a disease or a disease in itself, but rather a sign that can indicate another reason that led to this increase And it is possible that this sign can help us in diagnosing the main reason for this rise, and the other reason is the high body temperature of the body weight of the body during training, especially in Iraq and sometimes in the summer, when the air temperature reaches 53 ° C, which in turn causes the shortage of body fluids of the quadruple while practicing Exercises of a high intensity nature, because the lack of fluid in the body of the quadrant causes a small increase in the percentage of albumin in the blood, and this in turn leads to the appearance of small percentages of the albumin in the urine, and this is due to the great work done by the kidneys and the pressure placed on them as they filter waste from the blood, It preserves the substances that the body needs, including protein, but sometimes it allows the protein to pass through the kidney filters, causing a rise in protein in the urine, and that continuous training for a period of five days a week had a direct effect by concentrating albumin in the blood and in the urine because the body weight needs a complete rest or Almost complete, not usually hospitalization, and this is one of the reasons that lead to a temporary increase in the level of protein in the urine , but without necessarily indicating a disease in the kidney, including dehydration or lack of blood During exercise, the body temperature rises from strenuous exercise .

Conclusions

1. High intensity training results in a slight increase in blood albumin concentrations.
2. High intensity training only slightly increased the concentration of the albumin.
3. The continuous training for a period of five days in one week leads to an increase in the albumin concentration in the blood and urine.
4. Conducting similar research into indicators of kidney and liver function.
5. Take the necessary rest between workouts and between training units to restore full recovery to working muscles.
6. Drink enough water and other fluids that contain carbohydrates or sugars And mineral salts such as sodium and potassium to provide the body with energy or calories lost by the body during training and to compensate for the sweating associated with training.

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