Journal of Physical Education

Volume 36 – Issue (4) – 2024 Open Access

P-ISSN: 2073-6452, E-ISSN: 2707-5729
https://jcope.uobaghdad.edu.iq

# The use of positive rest in maintaining the level of creatine phosphokinases enzyme and the peak and average non-oxygen capacity of Iraqi Premier League football players during the transitional period

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DOI: https://doi.org/10.37359/JOPE.V36(3)2024.2056

**Article history:** Received 18/ March/2024 Accepted 25/ March/2024 Available online 28/ December/2024

## Abstract

The importance of research has emerged through training during the transitional period and maintaining a certain level of physical and functional capabilities, highlighting the correct planning, and including the transitional period in the annual coach's curriculum until football players reach advanced levels, through various exercises that are different from the main event practiced by the player, and with moderate intensity.

As for the research problem, it was focused on the fact that there is a lack of focus by the coaches on the transitional period because they believe that it is outside the training season. This is what drives the player and the coach to start from scratch at the beginning of each new football season, due to the clear decline in the level of physical and functional performance. Therefore, the researcher decided to study this problem and develop appropriate solutions to it through various training for the transitional period and its impact on maintaining the level of some physical and functional capabilities of the Iraqi Premier League players in football.

**Keywords**: maintaining, creatine, phosphokinases enzyme, football players.

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**Research Objectives:**

1-Preparing various trainings to maintain the level of some physical and functional capabilities of the Iraqi Premier League players in football.

2-Identify the impact of various exercises to maintain the physical and functional capabilities of the Iraqi Premier League players in football.

3-Identifying the percentage of change in the level of some physical and functional abilities of the Iraqi Premier League players in football.

**Research hypotheses:**

1- There are no statistically significant differences between the results of the pre- and post-tests in the research variables of the control and experimental groups.

2- There are no statistically significant differences between the control and experimental groups in the post-tests.

As for the areas of research, conducting a pilot study designed by the two groups (control and experimental) on the players of (Karkh and Borders) football clubs, for the season (2022/2023). Within the period (4/8/2023) until (17/9/2023). In (the swimming pool, playgrounds, halls of physical education and sports science at the University of Baghdad), (the courts and halls of Al-Karkh Sports Club), (Al-Zawraa Recreational Park and Gardens), (the courts and halls of the Youth Sports Club), (the people's playground for beach ball and tennis ball), and(the pool of the Mashreq Club), the researcher conducted special physical and functional tests, namely: physical tests (spine flexibility test, horizontal jump explosive ability test, transition speed test, agility test, rapid ability test for the two men, and speed tolerance test). As for the functional tests, the researcher used biochemical tests (CPK enzyme concentration test, And the test to measure the level of LACTATE enzyme in the blood before and after the effort), and the physiological tests, the researcher used a bicycle (monark) and a device (fit MEETPRO) in the test (winjate test) to obtain the variables (peak capacity, maximum oxygen consumption VO2MAX, and energy expended in chlorine), and the researcher used a device (polar) to measure the heart rate before and after the effort, and the researcher conducted a number of exploratory experiments to ensure the safety of the research work and its details, and conducted pre-tests for the period (9,6,5,4/8/2023), and the researcher applied the training curriculum to the study sample by 5 weeks in the first two weeks, the exercises were by (3) times in As for the third, fourth and fifth week, the exercise became (4) times a week, i.e. (18) training units were implemented, and the average time of these exercises was (60) minutes, then the researcher conducted post-tests for the period (15-16-17 /9/2023), and the researcher concluded a number of conclusions (that the various exercises contributed to maintaining relatively at the level of physical, biochemical and functional variables) and the interruption of training for the control group during the transition period contributed significantly to the change in the level of physical, biochemical and functional capabilities) during the transition period of the control group, and the use of training or non-activity practiced has a role in preserving the physical and functional capabilities of players as well as its role in physical and functional recovery, as the researcher recommended the need to develop a training curriculum during the transition period to maintain the

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Volume 36 – Issue (4) – 2024 Open Access

P-ISSN: 2073-6452, E-ISSN: 2707-5729
https://jcope.uobaghdad.edu.iq

relative level of physical and functional reached by players, the need not to interrupt training during the transition period, which has negative effects on football players.

## Introduction

The progress in the field of sports and in most countries of the world was not born of chance, but was the result of the use of modern scientific means in planning and training and relying on scientific foundations in solving the problems that stand in the way of the athlete and prevent him from reaching the high level.

Perhaps the challenges faced by the development of sports and football in particular prompted the experts, specialists and training workers in football to always think about finding the best methods and methods that contribute to the development and upgrading of players' physical, skill, functional and other capabilities to meet the requirements of rapid and accurate performance of play, which leads to the achievement of great sports achievements at various levels.

Therefore, the transition period is one of the important stages in the annual training course (the preparation period in its public and private sections - the competition period - the transition period), which separates between the end of a season and the beginning of a new sports season, and the aim of which is positive rest to maintain a certain level of different physical abilities through activities and games different from what the athlete practices in football, when stopping training through recreational activities.

During this period, the coach can reduce the decline in the level of physical and functional performance, provided that he plans well for the preparation of various exercises for the transitional period with great care, and uses various means in which the aspect of suspense and recreation enters together. During this period, if it is dealt with positively by both parties (the training staff - the player), its results will be fruitful and reflect positively on the position and condition of the football player, especially physical and psychological, in preparation for the preparation period for the new season, in the sense that its beginning (from a low physical level) will not be if it deals with this period negatively, through wrong practices such as (excessive meals and unhelpful drinks - changing the natural sleep pattern - abandoning the ideal weight).

Hence, the importance of the research is that the transitional period is the period between the end of the season and the beginning of the preparation period, and the aim of it is to maintain a certain level of physical and functional capabilities, and since the researcher is looking to activate an important period of the periods experienced by the football player during the training season, so the researcher decided to prepare various trainings for the transitional period in maintaining the level of physical and functional performance of the players of the Premier League in football.

The neglect of the transitional period in most of the Premier League teams in football and the lack of interest in it, which leads to the failure to maintain the level of performance reached by

the player at the end of the competition period and to enter the transitional phase and prepare for the next season with a clear decline in physical and functional capabilities.

As it has become a real problem experienced by (the player - the coach) on the part of the player, the preparation period is the disturbing period that accumulates the components of the training load on the player in a short period and this negatively affects the motivation of the player in reaching the competition period and he is in a state of boredom and physical and functional pressure, and on the part of the coach, it is a problem experienced by most coaches of the Premier League because the preparation period is insufficient to apply all physical, functional, skillful and linear aspects, and here the coach does not fully cover the training curriculum and is forced to enter the competition period and is not ready, and therefore the transitional period is the beginning of the establishment of the period following (preparation).

Through the researcher's practice of football as a player and as a coach, he noticed that at the beginning of the training season (the preparation period) players come after the transition period and have a clear decline in the level of physical fitness compared to their level at the end of the competition period. This is often due to the interruption of training and leaving players without a training curriculum at this stage, which leads to a sharp drop in the physical level as a result of the negative comfort granted to players during that period.

**Research objectives:**

1-Identifying the level of concentration of creatine phosphokines among Iraqi Premier League football players during the transitional period.

2- Identifying the level of peak and average non-oxygen capacity of Iraqi Premier League football players during the transitional period

**Research hypotheses:**

There are no statistically significant differences between the results of pre- and post-tests in the research variables of the control and experimental groups.

There are no statistically significant differences between the control and experimental groups in the post-tests.

Key Research Terminology

The transitional period: It is the bridge that connects the end of the competition period and the beginning of the new preparation period. It aims to get rid of the overload products during the previous period and qualify the body to accommodate the following training doses. It is the bridge

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Volume 36 – Issue (4) – 2024 Open Access

P-ISSN: 2073-6452, E-ISSN: 2707-5729
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that connects two stages, which is the active rest period in which recovery is restored as a prelude to the next preparation stage.

**Method:-**

The experimental method is one of the most scientific methods that clearly show the features of the scientific method. (العبادي ، 2015، صفحة 82) It looks for the cause and how it occurs. Experimental research is characterized as the exact scientific activity, and it is a procedure to control the influential factors surrounding the experiment. (الحديثي و ، احمد ، الربيعي ، 2018)The problem of research was imposed on the researcher to use the experimental method by designing the two equivalent groups (experimental and control) with pre and post-tests, to suit the nature of the problem of research study and to achieve the objectives and hypotheses of research.

It is necessary and important to choose the sample that suits the nature of the research. The research community was chosen in a deliberate way, and they are the players of the Iraqi Premier League in football and their number is (20) clubs for the season (2022-2023). The research sample is the part that represents the community of origin, and one of the two clubs was selected as a control group and the other club was selected as an experimental group through the draw, and randomly. The research sample included ( 25) players from (Al-Karkh Club and Al-Hudud Sports Club) out of the total number of Iraqi Premier League clubs participating in football, as ( 5) players were excluded because of their lack of commitment to training and their interruption from it, and the number of players of the two groups was equally established, and they were divided into two equal control and experimental groups by ( 10) players for each group in a random way. The (Al-Hud Sports Club) was selected through the draw method, as in Table ( 1) shows the arithmetic, median, pattern, standard deviation, coefficient, tors, Comencov Sammernitz, and the level of error in measurements, anthrometer, age, training, training, structure and committees, which affect the variables of the study.

Table (1)

| Variables | Unit of easurement | Arith tical mean Maths.) | median | Mode | Standard deviation (Maths.) | Modulus f torsion = ion modulus (Mech.) | Kom enkov-mirneff test | error level |
|---|---|---|---|---|---|---|---|---|
| Age | Year | 25.50 0 | 24.500 | 24.000 | 993 | 0.383 | 1460 . | 0.20 0 |
| Training Age | Year | 11.80 0 | 11.000 | 10,000 | 876 | 0.502 | 0.18 4 | .074 |
| Height | Poison | .739 | 1.720 | 1.700 | 0.062 | 0.225 | 1680 | .142 |
| Block | Kilogra m | 67.50 0 | 68 | 69 | 5.104 | 0.028 | 1390 , | 0.20 0 |

(N=20)

From the above table, it is clear that the coefficient of torsion was limited to (±1), as it turns out that the level of error in the Kormankrov-Smirnov test was more than (0.05) in all research variables, which indicates the homogeneity of the study sample in age, training age, height and mass.

Table (2) shows the arithmetic media, standard deviations, the value of (t) calculated, the level of error and the significance of the differences between the two study groups in the variables under consideration in the pre-test

| Variables | Unit asurement | Test group | | Control group | | Calculated lue | Error el | Sig |
|---|---|---|---|---|---|---|---|---|
| | | You | Letter /Ayn/ | You | Letter /Ayn/ | | | |
| Peak Power | kg | 133 | 0.409 | – 0.063 | 1.184 | 0.177 | 0.862 | Random |
| Power, n (Eng.) | kg | 271 | .308 | 6.114 | 0.901 | 0.521 | 0.608 | Random |
| CK centration | | 311 | 467 | 297.500 | .788 | 625 | .540 | Random |

* Degree of freedom (10+10-2 =18).

* Moral at the error level (0.05) if the error level is less than (0.05)

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P-ISSN: 2073-6452, E-ISSN: 2707-5729
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From the above table, it is clear that the differences in the results of the (t) test between the experimental and control group in the tests under study are random, which indicates the randomness of the differences between the control and experimental groups at the error level (0.05) and in front of the degree of freedom (18) in the results of the pre-test, which indicates the equivalence of the two research groups in the variables under study.

Means of collecting information, tools and devices used:

Means used to collect information:

The researcher used the following means to collect information:

A. Arabic Sources and References

Tests and Measurement.

Personal interviews with experts and specialists.

observation and experiment,

Information of the International Electronic Network.

Tools & Hardware

Laptop type (toshiba).

A device for measuring mass in kg (scale), and length in square centimeters

Electronic stopwatch (1) type (flott).

Sports halls for volleyball, handball, basketball, pentathlon football, ground tennis court,

beach tennis court

Swimming pool

Volleyballs, Handball, Basketball, Football, Tennis Ground Ball, Beach Tennis Ball.

Bicycles

iPad)) Type (Appl)e Number (1).

Whistle

Monark stationary bicycle.

Research Procedures:

Identification of research variables and selection of their tests:

In light of the references and scientific sources in sports training, football, sports physiology, and the opinion of the supervisors, the Seminar Committee, and the Scientific Committee, the research variables that are appropriate for the research sample were determined as follows:

Measure the concentration level of the enzyme phosphokines (ck ase.

Apex anoxia.

Power, mean (Eng.)

Research variables:

The pinnacle of power.

Power, mean (Eng.)

Test Name: 30-second Wingate Test (adnan, lsmadi, ismail, & norasrudin, 2014, pp. 483-484)

Purpose of the test: Measure anaerobic capacity by performing as much work as possible for 30 seconds.

Equipment required: Monarch bicycle and accessories, computer.

Procedures: After taking the length and weight of the laboratory, its data is entered into the test program in the computer, and the resistance is determined according to the weight of the laboratory, which is (75 g) per kilogram of the weight of the laboratory, and the bike seat is adjusted so that there is a very light bend angle at the knee joint up to (10) degrees, then the foot belt is adjusted and fixed. A resistance of(1-2 kg) is placed relative to the weight of the laboratory to perform the warm-up for a period of (3) minutes, then the test procedures are explained with an alert on the announcement of the moment of commencement, and to ensure that before the test is conducted, the laboratory performs at maximum speed for a period of (3-5) seconds and repeats this two or three times, and the rotation indicator (rpm) is turned on to follow the rotation speed of the wheel since the start of the measurement.

The load is lifted gently from the weight basket and the laboratory begins to move the wheel at the maximum possible speed (not less than 80 rpm) for a period not exceeding(3) seconds, then the weight is lowered with the distance measurement run from the keyboard to start the measurement process, and the performance continues for(30) seconds at maximum speed and without stopping and the laboratory is encouraged to maintain the rotational speed, and the calming must be performed after the completion of the test.

Registration: During this test, the maximum anaerobic capacity is calculated.

Measuring the level of creatine phosphokines cpk asc:

Objective of the test: To know the percentage of the enzyme phosphokines after physical v

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exertion.

Tools: (cotton, needle drill, area disinfectant, and small tubes for blood sample transfusion).

Procedures: A specialist (analyst) was hired not to take blood samples from the testers.

Pre-test

The pre-test was carried out on the research sample of (20) players on 5and 6/8/2023. The first included the speed tolerance test (35) m , and the second day the fatigue index test was carried out on the stationary bike device (monark)

Key Experience:

The researcher prepared various trainings with the aim of maintaining the level of performance (speed tolerance and fatigue index)for the players of the Premier League in football for the experimental group of the (Border) Sports Club. The number of these trainings is ( 18) and a training unit of (3 ) training units in the first two weeks. The remaining three weeks are (4) training units per week by (5) weeks, provided that the player's pulse rate does not exceed 75%. The method of play was used. "The training load is characterized by ripple and not at a single pace. Thus, it is considered one of the foundations of upgrading the components of the training load. The researcher ( فاخر و علي ، 2010، صفحة 60) also adopted the distribution of intensity in the light of the weeks in a ripple method. Rest was determined by relying (المدامغة، م. 2008) on scientific sources. The researcher gave these trainings systematically and strongly and specific repetitions and rest periods commensurate with the intensity. As for the control group, it is subject to the team coach's approach only.

As for the post-tests, they were carried out in the conditions of the pre-tests themselves and over the course of days 16 and 17/9/2023

Statistical methods used:

The researcher used the statistical bag (SPSS) and some statistical laws to extract statistical results. - Ha! - Ground rules...

(Arithmetic mean, mean, standard deviation, torsion coefficient, T test for non-independent samples, T test for independent samples, retention ratio law, Komnenkopf-Smirnoff law).

Present, analyze and discuss the results of the functional variables of the experimental and control groups.

Presentation, analysis and discussion of the results of the difference of the arithmetic media, standard deviations, test (C) and the percentage change between the results of the pre and post tests of the average power variable of the experimental and control groups.

Table (3) shows the arithmetic media and standard deviations of the average ability variable in the pre and post-tests of the experimental and control research groups

| Variables | Unit asurement | Pre-test | | | | Post-test | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Control group | | Test group | | Control group | | Test group | |
| | | You | □ P | You | □ P | You | □ P | You | □ P |
| Peak ver | Kg | – 0.063 | 1.184 | 133 | 0.409 | 108 | 1.395 | 618 | 0.997 |
| Power, n (Eng.) | Kg | 6.114 | 0.901 | 271 | .308 | 0.544 | 0.738 | .538 | 648 |
| CK centration | | 297.500 | .788 | 311 | 467 | 261 | .559 | .280 | 661 |

Table (4) shows the difference of the computational media, its standard deviation, the value of (t) calculated, the significance of the differences, and the percentage change between the results of the pre and post tests of the average power variable of the experimental group

| Variables | U of asure nt | F | BRB. | t- ue Calcu d | err evel | Sig cance of ances | Change |
|---|---|---|---|---|---|---|---|
| Peak Power | K | 485 | 0.943 | 1 626 | 0.1 | Ran n | -963 |
| Power, mean g.) | K | 267 | 0.493 | 711 | .12 | Ran n | 258 |
| CK centration | | 300 | −0.52 ** | 1.005 | .34 | Ran n | 038 |

* Degree of freedom (10-1=9).

* Moral at the error level (0.05) if the error level is less than (0.05)

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P-ISSN: 2073-6452, E-ISSN: 2707-5729
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Table (5) shows the difference of the arithmetic media, its standard deviation, the value of (t) calculated, the significance of the differences, and the percentage change between the results of the pre and post tests of the average power variable of the control group

| Variables | U of asure nt | F | BRB | t- ue Calc ed | err evel | Sig cance ances | Chan |
|---|---|---|---|---|---|---|---|
| Peak Power | kg | 0.955 | 1.21 | 2.49 | 0.0 | cor ate | 844 |
| Power, mean (Eng.) | kg | 0.570 | .713 | .528 | −0. | cor ate | 9.323 |
| CK concentration | | 35.70 | 769 | 1.49 | 0.1 | Ra m | 12,00 |

* Degree of freedom (10-1=9).

* Moral at the error level (0.05) if the error level is less than (0.05)

Presentation, analysis and discussion of the results of the difference of the arithmetic media, standard deviations, test (C) and the percentage change between the results of the pre and post tests of the average power variable of the experimental and control groups.

Table (6) shows the arithmetic media, standard deviations, the value of (t) calculated, the level of error and the significance of the differences between the two research groups of the average power variable under consideration in the results of the post-test

| Variables | Unit asurement | Test group | | Control group | | Calculated lue | LineA el | Sig |
|---|---|---|---|---|---|---|---|---|
| | | You | Letter /Ayn/ | You | Letter /Ayn/ | | | |
| Peak ver | Kg | 618 | 0.997 | 108 | 1.395 | 784 | 012 | corporate |
| Power, an (Eng.) | Kg | .538 | 648 | 0.544 | 0.738 | 3.201 | 0.005 | corporate |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| CK centration | | .280 | 661 | 261 | .559 | .488 | 0.632 | corporate |

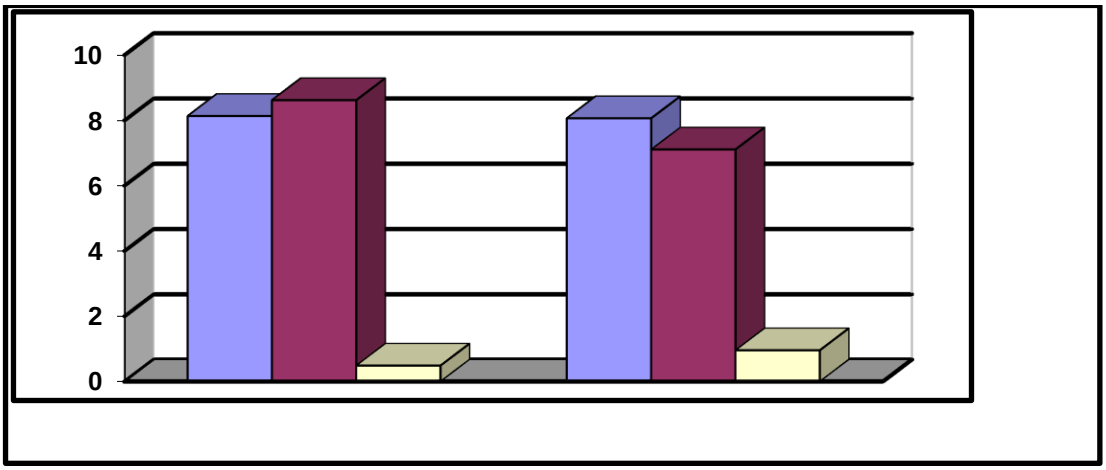


Figure (1) shows the computational media and the difference of the computational media between the results of the pre and post tests of the experimental and control groups in the power crest variable

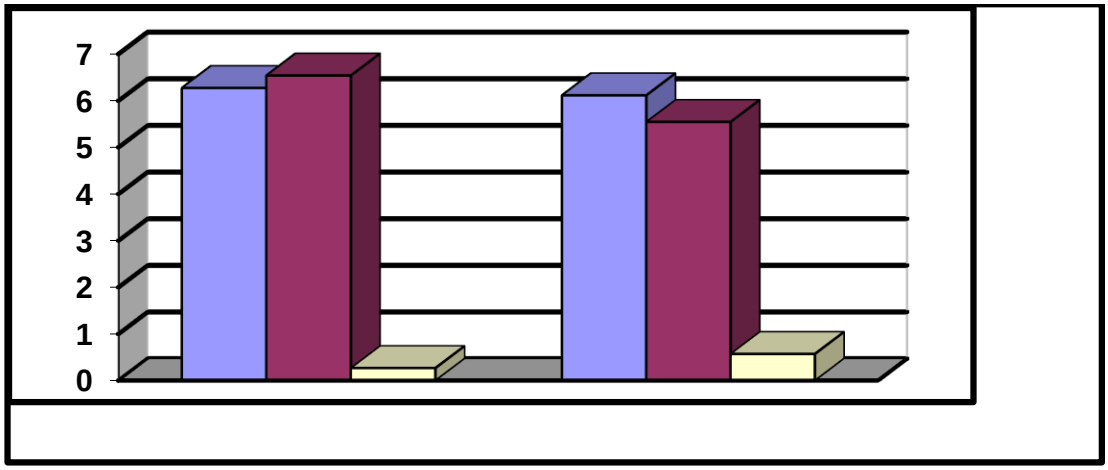


Figure (2) shows the computational media and the difference of the computational media between the results of the pre and post tests of the experimental and control groups in the average ability variable

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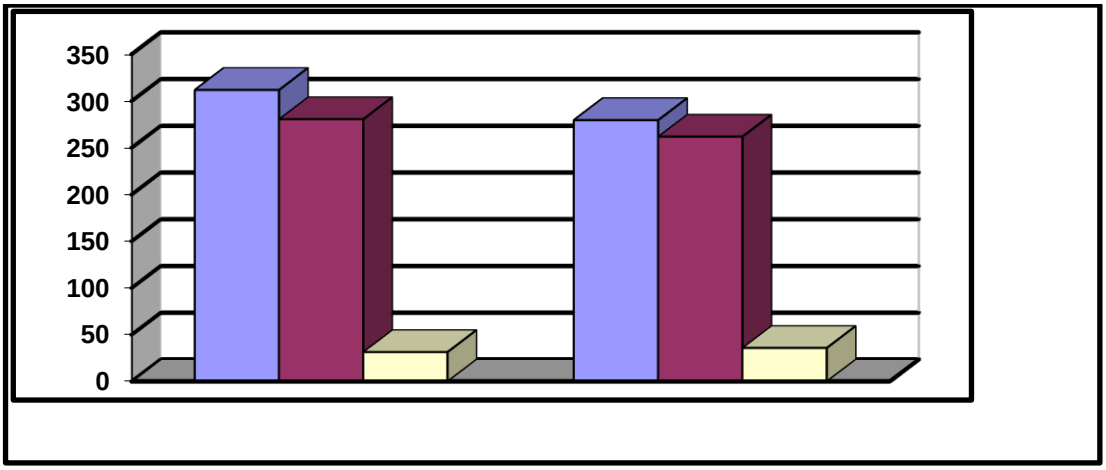


Figure (3) shows the computational media and the difference of the computational media between the results of the pre and post tests of the experimental and control groups in the CK concentration variable

**Discussion of Functional Test Results:**

In light of the previous presentation of the results reached by the researcher and in light of the objectives and hypotheses of the research and guided by the results of previous studies and what was stated in the scientific references, these results were discussed as follows:

Peak Power

We see through Table (4) that there is a difference in the value of (T) calculated and(percentage change) for each of the research tests (pre-post) in favor of the pre-test for physical tests. In the test (peak ability) of the experimental group, the value of (T) calculated was (1.626) (percentage change) (5.963), while in Table (5), the value of (T) in the control group was ( 2.492) and (percentage change) (11.844).

From the above results, it is clear that there are statistically significant differences between the pre- and post-measures of the experimental group in favor of the pre-measurement in the test(Ability Summit), which indicates that the proposed curriculum for the various exercises contributed to relatively maintaining the level of (Ability Summit), which contained different exercises and activities that are characterized by the element of suspense and fun, such as competitive small games, swimming exercises, water games, football, basketball, volleyball, earth tennis, gym, bicycles, and football tennis. All the various games or exercises that were used during this period were characterized in some of their joints by maximum rapid work, whether in basketball, swimming or other games that require deoxygenation work during specific times due to the link between their skills and deoxygenation work. All the various exercises led to the maintenance of a certain level of variables (physical, functional and biochemical), and that the exercises developed by the researcher were effective in maintaining the functional capabilities under

research, which the researcher took into account when developing the scientific foundations, which had a significant impact on maintaining a certain level of the (peak ability) test in the experimental group, and the researcher attributes the reason There are significant differences in the anoxic phosphagenetic ability between the two study groups and in favor of the (experimental) group. The development of this ability depends mainly on the use of high-intensity exercises and short distances. As fox stated, "Anaerobic ability begins to be used when the intensity is about(80%) of the maximum ability of the player. In order for the coach to be sure of the almost total dependence on anaerobic ability, it is appropriate to train with 90% of the ability of the player" ( ), In addition to the rest periods set according to a correct scientific basis based on the body's ability to take a sufficient rest period to restore phosphagene energy compounds quickly, whether those between repetitions and between groups and between exercises, as "phosphaginins, especially(ATP), recover very quickly within 30 seconds after stopping work, which led to an increase in the activity of enzymes responsible for restoring the formation of (ATP), which is the enzyme (ATp ase) and creatine phosphokines (CPK). The activity of these enzymes increases (10-15%)." Phosphaginins, especially (ATP), are restored by (70%) in 30 seconds, which is completed in several minutes, all of this It indicates that the exercises and the rest times used have a great impact in restoring the formation of phosphagene energy compounds, as they represent one of the main energy systems in the game of football. The skills and requirements of this game are of an extreme and rapid nature, such as fast running with the ball, jumping and scoring on goal, which worked to maintain a certain level of phosphagene deoxygenation ability of the experimental group, while the results of the control group were a clear loss of this ability due to negative rest and non-performance of the training of the transition period, contrary to what was stated in the sources and studies that preceded the importance of training during the transition period. Abu Al-Ela Abdel Fattah points out that if the player stopped training for a month, he begins to lose what he gained from anaerobic tolerance(عبدالفتاح، 2000، صفحة 227), and as a result of stopping or not training, only (Fox) mentioned that there is a clear decrease in the level of physiological work ability and physical performance of athletes. When athletes start to resume training as planned, their bodies use protein to build and repair damaged tissues by not using the body (protein), which leads to the body increasing the process of dissolution (protein). The body begins to disrupt the utilization of some of the benefits obtained during training and begins (protein), increasing the process of protein decomposition (regeneration) (FOX و Etal، 2000).

It is also mentioned that the shortage in the cross-sectional area of the muscle fiber becomes apparent after several weeks of stopping the performance of any physical activity. These changes result from the disruption of the work of (protein) and a decrease in the pattern of recruitment of motor units of the working muscles (م.م المدامغة، 2017، صفحة 453).

The researcher believes that if the trainers could not remove the fatigue and training pressures resulting from the intense training and participation from the many and stressful races of the previous season and determine, and compensate the negative elements of these pressures appropriately, through exercises or a training curriculum during the transitional period, then athletes can show those negative elements again throughout the training period of the new preparatory period, (the following).

Power, mean (Eng.)

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P-ISSN: 2073-6452, E-ISSN: 2707-5729
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We see through Table (4) that there is a difference in the value of (T) calculated and(percentage change) for each of the research tests (pre-post) in favor of the pre-test for physical tests. In the (average ability) test of the experimental group, the value of (T) calculated was (1.711and (percentage change) (4.258), while in Table (5) the value of (T) in the control group was (2.528) and (percentage change) (9.323).

It is clear from the above results that there are statistically significant differences between the pre- and post-measures of the experimental group in favor of the pre-measurement in the test(average ability), which indicates that the proposed curriculum for the various exercises contributed to preservation and this is clearly shown by the average ability index and its reflection on this indicator, which contained various exercises and activities characterized by the element of suspense and pleasure such as competitive small games, swimming exercises, water games, football, basketball, volleyball, ground tennis, gymnasium, bicycles and football tennis. All the various exercises led to average ability, and that the exercises developed by the researcher were effective in maintaining the physical abilities under research, which took into account the researcher when developing the scientific foundations, which had a great impact on maintaining the average ability level of the experimental group. Muhammad Rida Ibrahim Al-Madamgha states that the sudden transition from arduous (severe) training to a state of complete negative rest can be harmful to the members and organs of functional athletes, causing athletes to suffer from insomnia, loss of appetite for food, and finally swelling in the digestive system. Athletes can get rid of these cases if they resume training within a short period of time, because these cases are not serious symptoms. However, if training is stopped for a long period of time, these symptoms can appear in athletes for some time, indicating the inability of the bodies and devices of these athletes to adapt to the state of inactivity or inactivity (المدامغة،م. 2017، صفحة 452), and this is consistent with what was stated in a study (Bomba, 2000). As for the time required for the incubation cycle, these symptoms will vary from one athlete to another, but in general they can appear after (2) or (3) weeks of non-performance of any activity or lack of training. Lack of training makes athletes exposed to the symptoms of stoppages or lack of training(Bompa, 2000).

The researcher believes that negative rest in the alternative can also prevent athletes from being unable to start a new training year from a higher level than the previous year because starting at a higher level is a very important requirement if the achievement requires it to improve from year to year continuously.

CK concentration

We see through Table (4) that there is a difference in the value of ( T) and(percentage change) for each of the research tests (pre-post) in favor of the pre-test for physical tests. In the test ((ck of the experimental group), the value of ( T) was (1.005) and(percentage change) was (10.038), while in Table (5), the value of ( T) in the control group was ( 1.490) and (percentage change) was (12.000).

It is clear from the above results that there are statistically significant differences between the pre- and post-measures of the control and experimental study groups in favor of pre-measurement in the test(CK enzyme concentration), which indicates that the proposed curriculum for the various exercises contributed to maintaining a relatively high level of speed tolerance, which contained different exercises and activities, which are characterized by an element of suspense and pleasure such as competitive small games, swimming exercises, water games, football, basketball, volleyball, ground tennis, gymnasium, bicycles and football tennis. All the various exercises led to the fatigue index, and that the exercises developed by the researcher were effective in maintaining the physical abilities under research, which the researcher took into account when developing the scientific foundations, which had a great impact on the stability of the level of the fatigue index of the experimental group. Jabbar Al-Kaabi points out that the chemical energy released from the incomplete decomposition of glucose does not transfer directly to ATP, but rather to creatine reconstructing creatine phosphate, which in turn transfers to ATP. (الكعبي ، 2007، صفحة 230) This confirms what was stated in the results of the study that the enzyme creatine phosphokines is exposed to a clear decline when neglecting the exercises during the transitional period, as it was shown in the results of the tests of the control group that what was in the experimental group was maintained at a certain level of decline, as the various exercises affected the relative preservation of the level of the enzyme (CK), and the training curriculum played an effective role in maintaining the level of functional capabilities.

As Al-Madagha points out, the transitional period represents a link between two annual training courses, and its main objectives are to facilitate the task of reaching psychological comfort, mental and muscular relaxation, and restoring recovery from functional body shake, as well as maintaining athletes at an acceptable level of general physical preparation. (م.م المدامغة، 2017، صفحة 451)

Discussion of the resultsof the functional tests of the post-test:

It is clear from Table (6) that there are statistically significant differences in the results of the (post) measurement test for the two research groups in the functional variables under research in the tests (creatine phosphokines enzyme concentration, peak ability -average ability), where the value of (t) calculated for the two research groups ranged from (0.488), (2.784), (3.201), which indicates that the interruption in training during the transitional period led to a significant decrease in the level of functional variables.

(This is what Owais Al-Jabali, 2001, p. 263) pointed out that the player who performs during the transition period an activity will find an improvement in the physiological characteristics to start a good preparation phase. Either moving or changing from a hard load to a full rest negatively affects the organization of vital processes and that complete rest can be a reason for the player's inability to start a new training course at a high level (الجبالي، 2001، صفحة 263).

The researcher attributes the reason for this decrease to the conduct of players in this transitional period (exercises contrary to sports effectiveness, most of which are non-specialized by the type of game or activity practiced by the player must be away from his game, and this is confirmed by Zuhair Al-Khashab, which is indispensable in the previous stage and in the training

Journal of Physical Education

Volume 36 – Issue (4) – 2024 Open Access

P-ISSN: 2073-6452, E-ISSN: 2707-5729
https://jcope.uobaghdad.edu.iq

stage, general exercises are conducted significantly and always that the actual rest phase consists of the transitional period and this must be conducted exercises that are not of a special nature)(الخشاب و اسمر ، 2000، صفحة 91).

The researcher believes that the transition period is very important in the career of every athlete and must be adhered to scientifically and thoughtfully because any gap or shortage in this transition period will negatively affect the periods following this period such as the preparation period and the competition period).

**FINDINGS**:

In light of the objectives and nature of this study and within the limits of the research sample and the methodology used, and based on the data collected by the researcher and the results of the statistical analysis, the researcher reached the following conclusions:

The various exercises used during the positive rest period contributed to the preservation of the level of (creatine phosphokines enzyme, peak and average capacity) during the transition period of the experimental group.

The interruption of training for the control group during the transitional period contributed significantly to the change in the level (creatine phosphokines enzyme, peak and average capacity) during the transitional period of the control group.

The use of exercises or non-activity practiced has a role in maintaining the average ability as well as its role in recovery.

**Recommendations:**

Within the limits of the procedures involved in the study and its results, the researcher recommends the following:

Apply the proposed training curriculum using (miscellaneous training) during the positive rest period to the youth and youth category in football to maintain (creatine phosphokines enzyme, peak and average ability).

The need to develop a training curriculum during the transitional period to maintain the relative physical and functional level reached by the players.

The need not to interrupt training during the transitional period, which has negative effects on football players.

The trained trainers must know the landing levels of their players in order to provide training curricula commensurate with the landing level of the players.

The stress rates used during the training of the transitional period should be of medium intensity in order to contribute to the recovery of athletes and contribute to maintaining the physical and functional level of players relatively

Journal of Physical Education

Volume 36 – Issue (4) – 2024 Open Access

P-ISSN: 2073-6452, E-ISSN: 2707-5729
https://jcope.uobaghdad.edu.iq

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