

# A Proposed Rehabilitation Program for Connective Thigh Muscle Injuries of First- Class Football Club Players in Basra Governorate

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## **Abstract**

*The research is summarized in the design of the proposed rehabilitation program for people with connective muscle tears for first-class football clubs in Basrah clubs the importance of knowing the effect of the program and its vocabulary on injury, so the researcher used the experimental approach with the system of control and experimental groups with two measurements before and after a sample of twelve (12) injured six (6) Players of them represent the experimental group and the other six (6) players represent the control group, and the results of the research were that there were no statistically significant differences between the pre and post measurements of the control group that used traditional treatment, while it confirmed the existence of statistically significant differences between the two pre-measurements of the experimental group to restore muscle efficiency Macrophages in favor of telemetry.*

**Keywords:** Muscle tear, Basra clubs, injury, Traditional treatment

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## **Introduction**

Football is the most popular and widespread game in the world in general, and Iraq and Basra Governorate in particular, as it is one of the ancient provinces and is at the forefront of sports competition of all kinds. The warm nature of the governorate, its residents, and their relentless movement made them a creative slice of practicing sports, and this is evident through their presence in various local and international forums as well as the sporting progress of its clubs and the advanced results of various activities, especially the game of football. Among all these sports, football is ranked first because of its popularity and the individual and collective competencies it represents on the one hand, and the excitement and excitement it achieves in the show on the other hand. During practice and participation in leagues and competitions, various types of injuries occur due to strong collision and competition. Among the players, in addition to the presence of psychological or social factors that may increase the incidence of injury (Ammar Qaba, 1989, 5). The most common injuries are thigh muscle injuries of football players, especially the connective muscle and other injuries that justify our need for the importance of physical therapy and rehabilitation by multiple means especially therapeutic exercises for the injured, due to the severity of its positive effect on rehabilitating the injury and returning to its normal state without surgical intervention. As sports injuries pose a major threat to athletes in high-level teams, (Watins, 1996). The athlete must be educated about the nature of performance and the load on the joints as a result of the implementation of movements (Ibrahim Al-Basri, 1984). To treat and train the injured person to restore functional ability in the shortest possible time, by using physical therapy methods that are commensurate with the type and severity of the injury. (Mervat Youssef Al-Sayed: 1998, pp. 39:42). It is relatively simple and includes three basic short-term goals, which are pain control, maintenance and improvement of flexibility, and then the return or increase of strength.

## **Research problem:**

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In Basra Governorate, during the survey of a number of football clubs and continuous follow-up, the prevalence of connective muscle injuries reached about 60% of the total injuries in the stadiums and through the researcher's work and his proximity to the athletes and his direct contact with them were among the problems that the players face when they are injured and stop playing for a long time, therefore, the team's loss of players was important during competitions, as was the occurrence of injuries among soccer players in a striking way, with the players not interested in treating those injuries, which often resulted in functional (physiological) changes such as bruising, swelling at the site of the injury, skin color change, and anatomical changes that limit movement. For muscle or joint. (Osama Riyadh, 2002, p. 22) It causes delayed recovery and one of the most common injuries in football stadiums and clubs in Basra Governorate is lower limb injuries, including connective muscles, ankle joint injuries, and cruciate ligaments, which the player can be exposed to in sudden times, so it was a great motivation for the researcher to conduct an attempt to research based on scientific foundations and principles aimed at designing a rehabilitation program for the connective thigh muscle injury and what effect the program has on that injury and its rehabilitation.

### **Importance of Research:**

After examining this field, the researcher found that the lack of studies and research that follow a standardized method of rehabilitative exercises for muscles, and that therapeutic exercises develop and develop flexibility as one of the means of physical therapy and include the joints small and large (Mukhtar Salem, 1978). It is one of the methods that have a positive effect on the speed of treatment and rehabilitation of the infection, along with other natural treatment methods. This is due to the exposure of different muscle tissues to internal and external influences and factors that cause anatomical or functional defects, temporarily or permanently, according to the severity of the injury, which are specific sports movements for different disease cases whose purpose is preventive and therapeutic in order to restore the body to a normal or rehabilitative state, which is the use of the basic principles of sensory and motor work that work on the effect of satisfying the muscles and nerves by choosing certain movements and body positions (Samia Khalil, 2004). In order to enrich the governorate, its clubs and its employees with studies, it contributes to researching the problems of physical therapy, sports rehabilitation and specialists. Therefore, the researcher decided to study this problem and come up with positive results for its treatment that may contribute to finding the optimal solution for treating and rehabilitating connective muscle injuries from the practical side and thus open the door to other research to deal with other injuries most common among footballers.

### **Research objectives:**

- 1 - Designing a program to rehabilitate the injured with the connective thigh muscles.
- 2 - Knowing the effect of the rehabilitating program on players with connective thigh muscles.

### **Research hypotheses:**

- 1- There are statistically significant differences between the pre and post measurements in favor of the first group that uses the proposed rehabilitation program to restore the efficiency of the injured muscles.
- 2- There are statistically significant differences between the pre and post measurements of the second research group, which uses conventional treatment in restoring the efficacy of the injured muscles in favor of the telemetry.

### **Research fields:**

The human field: A group of twelve (12) athletes with connective thigh muscles who go to Basra Teaching Hospital.

Time range: from the period 10/27/2019 to 1/21/2020

Spatial field: Basra Teaching Hospital - Physiotherapy Unit - Martyr Qais Center for the Rehabilitation of the Injured

### **Research procedures:**

Research Methodology:

The experimental approach was used to suit the nature of the research problem.

The research sample:

Players with connective thigh muscles, for a sample of twelve (12) injured players, six (6) players of whom represent the experimental group and the other six (6) represent the control group.

6 - Hardware and Tools:

- 1- A ruler.
- 2- Electronic stopwatch.
- 3- A balance for measuring weight.
1. 4 - Digital camera.
2. 5 - Medicine ball, weight 5 kg.
3. 6 - A group of different weights (sandbags, starting from 1 kg - 2 kg).
4. 7 - Computer (laptop).
5. 8 - Swedish seats.

Homogeneity of the research sample Table No. (1)

Weight in kilograms		The length is in centimeters		Age	
deviation	Average	deviation	Average	deviation	Average
Standard		Standard		Standard	
6 , 3	68 , 4	9 , 91	5 7 , 9	3 , 78	23 , 39

From Table (1) we note the small standard deviation from the arithmetic mean of the age, height and weight variables of the research sample, which confirms the homogeneity of the sample

**2-5 the Exploratory Experience:**

The researcher conducted an exploratory experiment on one of the injured athletes on Monday, 11/4/2019 until 11/10/2019 at ten in the morning at Basrah Teaching Hospital. The exploratory experiment aims to know the accuracy of the tests and measurements, the safety of the devices' work, the validity of the tools used in the experiment, as well as the briefing Details of the performance of the rehabilitating exercises used in the research. An exploratory experiment is a preliminary experimental study that the researcher conducts on a small sample before carrying out his research with the aim of choosing research methods and tools. (Academy of the Arabic Language, 1984, p. 79).

**Tests used in the research:**

A- Name of the test: - He ran (30 meters) from the moving start.

Objective of the test: - To measure the maximum (maximum) transition velocity.

For tools: a whistle and an electronic stopwatch. Parallel lines determine the distance (three) between the first and second line (10) m and the second and third (30) m, so the first represents the starting place of the stand and the second represents the place of the stopwatch, while the end is represented by the error. For the third.

Performance: At the first line, the laboratory stops, and when the absolute whistle is heard, the continuous acceleration begins, reaching the highest possible speed at the second line and maintaining this speed until crossing the third line.

Registration: The time for one attempt is calculated from the moment it passes over the second line until the finish line (the third line) the moment it enters the chest.

**B- Test the jump from stability:**

The purpose of the test: The muscular capacity of the leg muscles.

**Tools: Flat floors.**

Performance: After drawing the starting point, the laboratory stands behind the starting line with the feet slightly apart and the metatarsal touches the starting line from the outside. And by swinging the arms with the knees bending in half by tilting the torso forward to reach the position like starting to swim, then swinging the arms strongly in front and extending the legs along the torso to push the ground with the feet and bounce forward strongly as far as possible.

Recording: The walking distance is measured from the starting point to the last close trace left by the laboratory from the starting line, and the feet must touch the ground until the moment of ascension.

Scoring: The best attempt is recorded from two attempts.

C- The sitting test:

The purpose of the test: Muscular endurance.

Tools: Mattresses

Performance: Lying on the back with hands crossed on the chest and the knees bent at a 90-degree angle. A number of sitting times are performed from lying down in 60 seconds, so that the knees are touched with the elbows and the mattress is touched by the shoulders each time.

Calculating the scores: - Calculating the best attempt of three attempts.

D- Test bending test from long sitting.

The purpose of the test: - To measure flexibility.

**Tools: Ruler, seat without back**

Performance: - Installed vertically on the ruler seat and graded from zero to 100 so that the number (50) is parallel to the surface of the ruler and the number (100) is for the bottom edge of the seat. The cursor moves on the ruler. As far as possible and fixed at the last distance up to two seconds and that the torso is slowly bent and the knees extended when performing.

Score calculation: Record the largest distance in centimeters for the tester from the two attempts.

indication	T value	Telemetry		Pre-analogy		the exams	M
		standard deviation	SMA	standard deviation	SMA		
D.	2, 7 3	8,9	6,16	0, 3 2	1 . 79	Power	1
D.	1,8 8	1,43	4,33	0, 5 6	4, 4 6	the speed	2
D.	2, 1 8	3,61	30,75	3, 77	24, 3 6	Endurance	3
D.	3, 8 4	2, 59	7 41,4	2, 2 1	54, 5 1	Flexibility	4

**Indication level( 0 , 0 5)**

Presentation and discussion of the results of the study assumption first, which states: - In the galleries y there are statistically indicative data between the pre and post measurements of a group that used rehabilitative exercises to restore the efficiency of the injured muscle and in favor of the Bo 'de scale.

When calculating the average arithmetic mean and standard deviation for measuring the tribal group and measuring the experimental dimensions in searching for tests and enabling the program to rehabilitate the connective thigh muscles and find a value category (v) v Cher the results appear in Table (2) mean arithmetic deviation brightest Yari from the two tribal scales, the experimental dimensional group, and the value category (t) calculated between (3.48 - 1.8 8) which is greater than the (v) tabulated amount of (1.94)) at a significance level (0.05), which is a sign of statistically significant differences between taking Yaseen Before and after the tests and in favor of the telemetry, which is an answer to the assumption of the first that was stipulated (the differences c and dy are statistically indicative of the data between the yassin ful and the tribal and the dimension of a group that used rehabilitative exercises to restore the efficiency of the injured muscle, and in the fav or t is the dimensional measurement) which is an indication of a rehabilitation program A proposal to rehabilitate connective thigh muscle injuries for players of first-class football clubs in Basra Governorate has an impact, and that the exercise chosen should be exercises organized to reap benefits and achieve the goal of them rehabilitating body parts for various types such as joints and muscles (Kawthar Abd Al Aziz Matar, 1993, 124). Through what the researcher mentioned above, the effect of the rehabilitation program and its containment of various focused exercises are used in its rehabilitation, as resistance training is part of any training program or qualification to improve health, physical fitness and attention, and it is increasing day after day (Bahaa Al-Din Ibrahim Salama 2002)Presentation and discussion of the results of the second study hypothesis: the second study hypothesis.

### **C - The sitting test:**

The purpose of the test: Muscular endurance.

#### **Tools: - Mattresses**

Performance: - Lying on the back with hands crossed on the chest and the knees bent at a 90-degree angle. A number of sitting times are performed from lying down in 60 seconds, so that the knees are touched with the elbows and the mattress is touched by the shoulders each time.

Calculating the scores: - Calculating the best attempt of three attempts.

D - Torso bending test from long sitting.

The purpose of the test: - To measure flexibility.

#### **Tools: Ruler, seat without back**

Performance: Installed vertically on the ruler seat and graded from zero to 100 so that the number (50) is parallel to the surface of the ruler and the number (100) is for the bottom edge of the seat. The cursor moves on the ruler. As far as possible and fixed at the last distance up to two seconds and that the torso is slowly bent and the knees extended when performing.

Score calculation: Record the largest distance in centimeters for the tester from the two attempts.

### **Qualifying program:**

On Thursday, 11/14/2019, the researcher began implementing his main experiment and applying the vocabulary of his proposed program (for eight weeks) at half past nine on the morning of Thursday, 11/14/2019, after the researcher surveyed the opinion of experts and scientific references specialized in the rehabilitation of injuries and sports training and review of previous studies in general and identifying aspects the basic requirements for preparing the proposed qualification program, the basic research variables, and the appropriate tests for the nature of the study, which were represented in the following:

- 1- The number of weeks and weekly training units for preparing the research sample.
- 2- The training times for the program for each of the stages and the total time for them.
- 3- Achieving the goals of the program by identifying appropriate methods of exercises.
- 4- Determining the pregnancy for each of the stages and its proportions to the sample level.
- 5- The exercise phase to rehabilitate the injury.

And after the survey, investigation, the results of the opinions of specialists and experts, and access to the scientific references and studies in rehabilitation, he arrived at the design of his following proposed program:

### **Designing the proposed program:**

The researcher designed his rehabilitation program for a period of (8 weeks) at the rate of three sessions per week to find out its effect on the members of the sample depending in its design on the scientific foundations required for rehabilitation and restoring the range of motion of the joint (Tariq Sadiq, 1994) and what is appropriate for the members of the selected sample, the time period and the number The weekly practice times and the time of the one training unit were applied at half past nine in the morning of Thursday, 11/14/2019 and until 1/21/2020, the following three stages of the program: -

1) The pain control phase: It is the stage of fixation in the ligaments after direct injury, during which the following exercises are used:

- 1- Mental rehabilitative exercises for the injured part and other static and moving exercises for the healthy part.
- 2- Static exercises for the injured part and static exercises for the joint near the injury.
- 3- Breathing exercises for blood circulation to increase the efficiency of metabolism for the rest of the body, the period of this phase is two weeks.

2) The stage of preserving and improving flexibility: - Its duration is two weeks and comes immediately after the first stage, in which the movements are performed with partial effort.

- 1- Static rehabilitative exercises for the healthy and injured part.

- 2- Rehabilitation exercises for the injured part without resistance first, then resistance to the injured member, then gradual manual resistance.
- 3- Moving rehabilitative exercises for the healthy part with severe resistance.
- 4- Breathing exercises to improve blood circulation and metabolism of the injured.
- 5- Various violent and moving exercises, and therapeutic exercises in the water medium.

3) The stage of restoring and increasing strength: - It is the longest stage of the program and extends for four weeks. Three training days per week are performed after recovery and the disappearance of pain and inflammation resulting from the injury and includes the performance of the following exercises: -

1. Exercises of maximum physical effort, static and moving, for the healthy and injured part.
2. Walking and jumping exercises for the lower and upper extremities are performed with weights and medical balls.
3. Various exercises to increase physical fitness, strength, speed and flexibility.
4. Treatment exercises in a water medium for healthy and injured parties.
5. Presentation, analysis and discussion of the research results: -

Table No. (2) Shows the arithmetic mean, standard deviation, and (t) value for the pre and post measurements of the experimental group

Indication	T value	Telemetry		Pre-analogy		the exams	M
		standard deviation	SMA	standard deviation	SMA		
Not D.	0 , 6 8	6 2 , 0	1 , 6 8	0 , 7 2	1 . 2 7	Power	1
Not D.	0 , 3 8	1 3 , 0	4 , 4 8	0 , 7 5	5 , 7 0	the speed	2
Not D.	1 , 6 1	7 , 6 8	27 , 89	1 , 8 8	2 2 , 1 7	Endurance	3
Not D.	1 , 8 6	10 , 2 9	59 , 6 4	5 , 2 2	4 5	Flexibility	4

**Indication level(0 ,0 5)**

Which stated (that there are statistically significant differences between the pre and post measurements of the second research group, which uses traditional muscle therapy in restoring the efficacy of the injured muscle and in favor of the telemetry).

The researcher extracted the arithmetic mean and the standard deviation of the pre and post measurements of the control group and found the value of the degree (T) for the variables of the proposed program and reached the results shown in Table No. (3) And from Table No. (3) above, we find that the value of (T) calculated for the research tests It was between (0.83 - 1.68), which is smaller than the tabular value of (T) (2.09) at the level of significance (0.05), which is the evidence that there are no statistically significant differences between the pre-measurements and the dimensional measurements of the tests under investigation in favor of the dimensional measurements of the research group. The second one that uses traditional muscle therapy to restore the efficiency of the injured muscle, which confirms that the traditional program for rehabilitating connective thigh muscle injuries for players of first-class football clubs in Basra Governorate does not have a positive effect and clearly answers the second hypothesis which states (There are statistically significant differences between The pre and post measurements of the second research group, which uses the traditional treatment of muscles to restore the efficiency of the injured muscle and in favor of the post measurement, and this is that the development of moral strength is done by choosing fixed and moving exercises It leads during the rehabilitation program to achieve better results for developing the characteristic of strength (Lkel, 1986). The researcher explains the reasons behind this result to the fact that the traditional treatment used in hospitals is mild in pain and eliminates infections only, and complete recovery of the injury is not achieved through it, unlike the group that used the proposed program, where the clear differences are due to the practice of training activities in accordance with specialized approaches to physical exercises and therapeutic. A positive effect on the body and this is clear and affecting the ligaments, muscles and joints (Abu Al-Ela Ahmad, 2000).

**Conclusions and recommendations:**

**Conclusions:**

Through data processing, analysis and interpretation, the researcher has reached the following conclusions:

- 1- There are statistically significant differences between the pre and post measurements in favor of the first group that uses the proposed rehabilitation program to restore the efficiency of the injured muscles.
- 2- There are no statistically significant differences between the pre and post measurements of the second research group, which uses conventional treatment to restore the efficiency of injured muscles.
- 3- There are no statistically significant differences between the pre and post measurements of the second research group, which uses traditional muscle therapy to restore the efficiency of the injured muscle.

#### **Recommendations:**

After the researcher extracts the results of his field of research, he recommends the following:

- 1- Making use of the results of the research by applying the proposed program in rehabilitating the connective thigh muscle injuries of football players
- 2- Intensification of educational and therapeutic courses and sports rehabilitation for football players and coaches.
- 3- Creating specialized centers for physical therapy and sports rehabilitation in Faculties of Physical Education and Sports Sciences, as well as sports clubs.
- 4- Discussing other similar scientific research problems.
- 5- Paying attention to the rehabilitation and training programs for the football player.

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