

# The Effectiveness Of A Curriculum To Use Laser Radiation And The Ability To Rehabilitate The Partial Injury To Achilles Tendon

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## Abstract

The aims of the research to Preparing a rehabilitation program by using laser rays and the ability to rehabilitate the partial injury to the injury tendon to Achilles and learn about which two groups are the best (the group used for laser radiation and the ability with qualified exercises or the group used for rehabilitation exercises only) to rehabilitate the partial injury to the injury to Achilles tendon and the researchers used the trial and post -testing method, The research community was chosen in the intentional way if the injury to Achilles sample was formed (6) and they were divided into two groups, the first is only qualifying exercises, and the second group was used (SPSS). It was shown and then discussed, then the following conclusions were reached: The results showed moral differences between tribal and dimension tests for the two experimental groups and in favor of the dimensional tests among members of the research sample, and the results in the post -tests showed the second group used for laser radiation and the ability to be able to qualify for qualification exercises, and it is necessary The use of a lift and powerful laser radiation by the herald therapy departments in hospitals and specialized centers to rehabilitate the injured athletes, but rather the partial injury to the injury to Achilles titer because of the effectiveness of their effectiveness in improving and strong muscles working on the injury to Achilles tendon.

**Keywords:** injury to Achilles, laser rays.

## Research problem:

As a result of the development in sports medicine associated with all sciences, medical and rehabilitation programs had a share of these developments, as these curricula help the injured athlete to practice his sports life. As for the science of rehabilitation of sports injuries, it is a modern and developed science. For the injury to Achilles tendon at its various levels, it occurs in general in general, among individuals, as a result of the solid floors of the stadiums, as well as the weak

physical ability in some athletes. The importance of research lies in finding a modern and developed program that helps, but accelerate the return of the athlete from the injury, and after the follow -up the researcher noticed the scarcity of using laser and lunch. The ability to rehabilitate the injury to Achilles, so the researcher wanted to study this topic.

## The research Aims:

1-Create a qualifying program by using laser rays and a slow ability to

rehabilitate the partial injury to Achilles.

2-Learn about which two groups are the best (the group used for laser radiation and the powerful capacity with exercises qualified exercises or the group used for qualification exercises only) to qualify the partial injury to Achilles .

### **The research hypotheses:**

There are statistically significant differences between tribal and dimensional tests of the two criminal groups (the group used laser in addition to the people qualified exercises or the group used for qualification exercises only) to rehabilitate the partial injury to the injury to Achilles tendon in favor of the dimensional tests.

### **Study methodology:**

The researchers used the experimental curriculum to suit the nature of the research problem.

### **Study Society and its sample:**

The research community is one of the players of the first-class clubs in Baghdad, the football ball for the lounges for applicants and youth, which numbered 14, and the number of the sample members (6) players was after distributing them as a questionnaire on the type of injury. - Intense) When the evaluation process by the doctors and experts, it became clear that (2) players fall within the first (simple) level and (12) players within the second level (Mediterranean).A sincere representation, knowing that a society .A community of origin consists of (14) players for the two experimental groups. The choice of (6) players in the intentional way, if the research sample is homogeneous and equal, as the following aspects have been taken into account: all members of the research sample are males. Homogeneity was made to them in (age,

height, and weight) to preserve the integrity of the experimental design.

### **Measurement Tools and Test:**

The researchers prepared the medical diagnostic form, and this form contained full information about the injury and its intensity, and also contained full information about each injured person. The form was filled by the specialized medical committee by presenting the injured to them, and a questionnaire for the validity of the rehabilitation exercises and the tests - the researchers did through the use of Arab and foreign references and sources by preparing a questionnaire form on the qualifying program and prepared tests, to be implemented on members of the research sample, and was presented Exercise questionnaire for a group of experts and specialists in the field of sports and sports training After referring to Arab and foreign scientific sources, including the researchers put a number of paragraphs regarding the importance of finding angles and strength and adopting them as variables for research and were presented to a group of Iraqi experts and specialists with a questionnaire of an opinion poll that the researcher adopted as variables in his research and the information was recorded by a form prepared for this purpose previously shown, on The research sample is one of the people with the average level of the injury only. The measurements and tests were divided into: measuring the angle of the soles of the feet (degrees), measuring the angle of the brutal bending of the foot (degree), measuring the angle of the foot bending (degree) and measuring the angle of the forgetfulness of the foot (degree) Second '(tests): Below is a presentation of the tests used in the research to measure the strength of the muscles working on Achilles tendon:

1- Test of the power of the sole foot bending: the purpose of the test:

measuring the power of the infected and uninfected foot and the extent of the affected foot with the stomach rehabilitation exercises. Description of performance: from the primary mode, the person with the maximum bending of the feet and read the amount of the force registered on the Dynamometer (per kilogram)

- 2- Test the strength of the human bending for the feet of the purpose of the test: Measuring the strength of the human bending of the affected and infected foot and the extent of the affected foot with the stomach rehabilitation exercises.
- 3- Test the brutal fold strength of the foot: The purpose of the test: Measuring the strength of the brutal bending of the affected and infected foot and the extent of the affected foot of the prepared rehabilitation exercises, performance description: From the primary mode, the person with the maximum brutal bend of the foot and read the amount of the force registered on the Dynamometer (per kilogram)

The researchers conducted the exploratory experiment on (2) of those with a partial injury to the Achilles tendon For members of the research sample from handball players with injuries The ankle joint twisting, on Tuesday (1/18/2022), and at (9) in the morning in the rehabilitation hall in the Sports and Physiotherapy Department, as a special treatment unit was conducted for the research sample members of the volleyball players with ankle injuries And that is on Tuesday (1/18/2022), and at exactly (11) in the morning in the rehabilitation hall in the Sports and Physiotherapy Department. The researchers also presented the exercises

prepared in the qualifying curriculum to a group of experts and specialists in the field of medicine, sports rehabilitation, physical therapy, sports training, and their observations, For the muscles operating on the Achilles tendon and carried out exercises in the style of gradient in intensity from the first week until the sixth week, according to what is proven in the curriculum of the prepared rehabilitation exercises and the beginning of the intensity of the rehabilitation units (the difficulty of performing exercises) ranged. For the healthy man for foot movements (bend the sole of the foot, bend the back of the foot, the brutal bending of the foot, the medial bending of the foot) for each injured. The tribal test was conducted on the research sample on Sunday, corresponding to (01/23/2022), At exactly (9) in the morning, and with the help of the assistant work team in the rehabilitation hall in the Sports and Physiotherapy Department, and the main vocabulary of the experience was started on Tuesday (25/1/2022) until the day corresponding to (3/13/2022 ), And for a period of (6) weeks and at the rate of (3) rehabilitation units per week, which is equivalent to (18) qualification units, and after the completion of the implementation of the qualifying exercises prepared on the singularity of the research sample of (6) injured people were conducted in the day Tuesday corresponding (3/15/2022), and at exactly (9) in the morning in the rehabilitation hall in the Sports Medicine Department in the same place and conditions of the tests and its procedures and with the direct supervision of the researchers. After the experiment is over, the researchers used the (SPSS) system to process research data.

### **Results and discussion:**

**Table (1)** shows the results of the tribal and remote test of the first group:

The test	Average Rang		Total Rang		Z	Sig	Ass
	Negative	Positive	Negative	Positive			
Fold the soles of the foot	2	0	6	0	2.213	0.03	S
For my feet	2	0	6	0	2.2	0.04	S
The brutal bend of the foot	2	0	6	0	2.213	0.03	S
The angle of bending the back of the foot	2	0	6	0	2.201	0.04	S
Five -foot bending angle	2	0	6	0	2.225	0.02	S
The angle of the forgotten bending of the foot	2	0	6	0	2.222	0.02	S
The angle of the brush bending for the foot	2	0	6	0	2.213	0.03	S

It is clear from Table (1) there are statistically significant differences in the test results and in favor of the remote test. Work in each muscle) (Suleiman, 1983)

**Table (2)** shows the results of the tribal and remote test of the second group:

The test	Average Rang		Total Rang		Z	Sig	Ass
	Negative	Positive	Negative	Positive			
Fold the soles of the foot	2	0	6	0	2.211	0.03	S
For my feet	2	0	6	0	2.213	0.04	S
The brutal bend of the foot	2	0	6	0	2.2	0.04	S
The angle of bending the back of the foot	2	0	6	0	2.211	0.04	S
Five -foot bending angle	2	0	6	0	2.2	0.04	S
The angle of the forgotten bending of the foot	2	0	6	0	2.214	0.03	S
The angle of the brush bending for the foot	2	0	6	0	2.214	0.04	S

It becomes clear from the table (2) there are statistically significant differences between the tribal test and the post -test in favor of the post -test. The researcher attributes that laser therapy works to stimulate the biological and functional tissues of the affected tissues and works to repair and rebuild tissues and cell growth and

accelerate the integration of wounds and is an anti -inflammatory and anti -pain. Pain diluted and improves and stimulates blood circulation and increases metabolic activity. It also improves the work of the nervous system and regulates immunity in the body. (Raouf, 1998)

**Table (3)** shows the results of between two groups:

The test	group	n	Average Rang	Manwtney	Sig	Ass
Fold the soles of the foot	(1)	3	7.02	6.168	0.04	S
	(2)	3	5.82			
For my feet	(1)	3	2.01	6.252	0.04	S
	(2)	3	5.51			
The brutal bend of the foot	(1)	3	2.02	7.2	0.02	S
	(2)	3	5			
The angle of bending the back of the foot	(1)	3	7.81	6.88	0.03	S
	(2)	3	5.18			
Five -foot bending angle	(1)	3	7.51	6.252	0.04	S
	(2)	3	5.51			
The angle of the forgotten bending of the foot	(1)	3	8	6.592	0.03	S
	(2)	3	4.67			
The angle of the brush bending for the foot	(1)	3	7.33	6.058	0.04	S
	(2)	3	5.67			

It turns out from Table (4) There are statistically significant differences between dimensional tests and for the benefit of the second group (used for laser and power of power), (that shedding low -level laser rays on the structural muscles causes an increase in the rate of blood (red blood cells) to the muscle Any increase in the amount of O+ and food and works to reduce anaerobic reactions to produce ATP and this leads to the prevention of the production of lactic acid in the muscle, which causes the occurrence of muscle concentration. (Levine, 1999)

### Conclusions and Implications:

- 1- The results showed moral differences between tribal and dimension tests for the two experimental groups and in favor of the post-tests of the research sample personnel.
- 2- The results in the dimensional tests showed the superiority of the group used for rehabilitation exercises with the laser rays.
- 3- Using the laser radiation and lunch by the physiotherapy departments in the specialized centers to rehabilitate

athletes with Achilles tendon because of their effectiveness in improving the corners of the extent of the ocean joint with the tendon.

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