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The impact of training units proposed by the system FST-7 To improve arm muscle size for amateur bodybuilders

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ABSTRACT

This study aimed to find out the impact of training units proposed by the system fst-7 on the size of the arm muscle for amateur bodybuilding athletes in the city of Djelfa. The experimental method was used in this study because it suits the nature of the study. The research sample was chosen intentionally and represented 5 bodybuilders. The program was applied to the experimental sample for a period of 8 weeks. In collecting data, the researcher used a measurement tool to measure the body mass index and the muscle circumference of the arm muscle. The results showed that training in a manner fst-7 has a positive effect on improving size biceps.

Keywords: training Program, Method Fst-7, Arm Size, Perfection Objects

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1.1 INTRODUCTION:

Muscle training aims to raise the levels of muscle strength as well as muscle size, and the observed increase is due primarily to nervous adaptation, followed by adaptation, muscle hypertrophy, and the occurrence of periods of central muscle contraction (abbreviation in the form of a muscle when contracting). Periods of eccentric contraction (stretching the muscle during contraction) are considered important for a rational development of muscle hypertrophy, and the phase of eccentric contraction and central contraction are always accompanied by muscle damage. This damage allows for a clear increase and development in muscle mass.(Lambert & Richard, G., 1996) This is what happens and it can be summarized that the stretching at the muscular level caused by contractions raises the levels of muscle hypertrophy. There is a direct relationship between strength and muscle hypertrophy, as the increase in muscle size occurs by increasing the actin and myosin filaments and energy-saving molecules (ATP,CP) Likewise, the increased production of calcium by the sarcoplasmic reticulum increases muscle contraction(Zatsiorsky, 1995).

The foundations of sports training, and one of its tasks is to work on knowing how to train strength of all kinds to reach muscle size, as well as knowing the factors affecting it, methods of measuring it, and models for improving it to know the final shape of the muscle after training. The primary purpose of presenting this study was to collect some of what has been published about muscular strength and its training to achieve it. For the desired muscular shape and to provide an opportunity for students and specialists in the field of sports training to obtain the good and comprehensive information it contains for muscular strength training and bodybuilding, as muscular strength is one of the basic elements of physical fitness, if not the first element, and strength is what the athlete's achievements are built upon in order to develop the morphological form. The muscle also has a direct relationship in developing and improving the level of other elements. Strength is defined by Zaciorski as the muscular ability to overcome or confront external resistance.(Al-Ridhi K, J, 2004, p. 54)

The sport of bodybuilding is nothing but an art to train the human body and means of achieving its beauty and perfection, correcting its physical defects, and eliminating its diseases. It has now become the first place in the required culture and important modern life sciences, and it has become of great interest in the various stages of growth and for the sake of enjoying the

acquisition of the necessary information. To have a happy and successful life physically, mentally and emotionally (Salem, 1987, p. 18).

Because those working in this field do not have to prepare training programs that include muscle groups only, but rather various bodily reactions are reflected in those programs. Testing and choosing the exercise, its type, the amount of intensity, and its suitability to the muscle, the body, and the player is an important thing in addition to knowing the origin of the muscle's strength to determine its movement and perform the exercise well. Because most muscle movements can be identified by the muscle's symmetry toward its origin (Jamil, 2016, page 06)

From the above, we find that training is organized, intentional, and relies on scientific foundations and design by specialists in the field. Many sports scientists point out that the link between muscular strength, motor speed, and muscle size is one of the most important requirements for athletic performance at a high level. (Khaled Shanouf, 2017, pages 87-113) As each sport has characteristics and advantages, the researcher tried to design a training program based on scientific foundations, expert opinions, and relying on knowledgeable Arab and foreign references. I designed a training program through which I tried to improve the muscular size of the arm for bodybuilding athletes.

This research is also considered a scientific attempt, especially because of the importance it attaches, both scientifically and practically, by supporting sports research in the field of bodybuilding so that trainers and specialists can benefit from it.

1.2 The problem:

The reality indicates that the sport of bodybuilding lacks carefully prepared and well-planned programs for improving muscle size in the stage of bulking or drying for advanced or professional beginners for young people and adults. We can say that there is a weakness in the culture associated with the methods and training programs about this sport in our state, as we interact with athletes. Experience, amateurs, and trying to know the extent of their knowledge of these programs, we found that there is a scientific deficiency in them, so their opinions varied and their ideas conflicted due to their lack of understanding of the available programs and the multiplicity of their sources on the Internet, and despite their differences, this led to avoiding them. There are those who applied more than one program, and this is due to it not being compatible with their aspirations or failure to implement it. The correct thing is through lack of knowledge of training methods or lack of continuity due to

weak muscular strength and endurance, and also the limits of their knowledge of the anatomical aspect, which is one of the foundations of satisfied training.

There are some bodybuilders who have field and scientific experience in this field and who are familiar with modern methods and methods that improve muscle size, and this is represented in the training method (FST-7) any (Fascia Stretch Training- 7), as this method works to improve strength endurance and muscle size according to the needs of bodybuilders, including many methods, but they are not available to other athletes because there is a problem they encountered in how to apply it correctly in terms of intensity, rest time, number of exercises, and the characteristics of each method, which depends on rules that must be It is applied during the training unit, and because there are previous studies and research that have confirmed the effectiveness of modern methods in developing and improving muscle size, many of them can be followed in strength training, and the coach or athlete must choose what suits his goal in the training process according to the type of sports activity, the training period, and the distinctive age, biological, and training characteristics. The athlete and the strengths and weaknesses characteristic of his individual training and physical condition (Helmy, 2015, p. 193).

Through this study, the researcher focused on the arm muscle, taking into account that the rhythm be appropriate for the intensity and rest periods to serve this method and to extract the greatest benefit from it. Through what was previously mentioned, we can ask the following question:

- Do the proposed training units have a system? FST-7 Impact on improving arm muscle size for amateur bodybuilders?

The problem can be formulated with the following questions:

-Are there any statistically significant differences between the results ? BMI For pre- and post-measurement among bodybuilding players ?

-Are there any statistically significant differences between the results ? Arm size For pre- and post-measurement among bodybuilding players ?

1.3 Research hypotheses :

a. General hypothesis :

For the training units proposed by the system FST-7 Effect on improving arm muscle size for amateur bodybuilders.

B. Partial hypotheses :

-There are statistically significant differences between the results BMI For pre- and post-measurement among bodybuilding players.

-There are statistically significant differences between the results Arm size For pre- and post-measurement among bodybuilding players.

4.1 Research objectives :

- Design and plan training units in the training system FST-7 For bodybuilding athletes to develop the muscle size of the arm muscle

- Know the effect of style FST-7 To improve the body mass index of amateur bodybuilders.

5.1 Importance of the study:

- Using the scientific method in training to develop arm size.

- Identifying the significance of the statistical differences between the pre- and post-measurement of the mass index results and the arm size results for the biceps and triceps muscles.

- Enriching the knowledge of researchers and trainers about developing maximum strength of the arm muscle as a whole

6.1 Study terms:

- Training units:

Its procedural definition is, in general, the operations required to be carried out, taking into account the start and end times of these operations according to a specific time and a clear goal. It consists of several organized training sessions, organized according to the sports training methodology. (Al-Helmi, 2002, p. 62).

-Style FST-7:

Style FST-7 It is an abbreviation for the word (Fascia stretch training It is a system discovered by the champions' trainer, Hani Rimbaud, and it was designed after years of research and learning from mistakes, as he said. The number 7 is due to the fact that it consists of seven groups that the trainee applies at the end of the training session to target a specific part of the body. It can also be used to strengthen and modify stubborn parts. In the body.

- Body Building:

It is a sporting activity that aims to develop muscular strength by increasing muscle mass. It is subject to systematic training and has unified principles, no matter how many goals it seeks. It is often practiced in its own halls. Saeed Othman points out the most accurate and clear definitions that have been developed to define bodybuilding as physical preparation on sound scientific foundations to reach muscular size and muscle strength. Consistency, Endurance. Flexibility (Heikal, 2014, p. 96)

7.1 Previous and similar studies:

A. First study :

Study (1 Zakaria Ziani, 2 Khaled Masoudi, 2021) The study aimed to know the effect of training units proposed in the Russian training style in improving the endurance of moving forces among bodybuilding athletes in the city of Al-Baidh. The experimental method was used in this study, and the research sample was selected in a deliberate, casual manner, and represented 15 athletes. Of bodybuilders distributed among three clubs, the researchers used muscular strength tests to measure dynamic strength in collecting data and relied on 12 training units. The results of the study showed that the training units proposed in the Russian training style had an effect in improving the dynamic strength endurance of bodybuilders.

B. Second study:

Study (1 Baroudi Muhammad Amin, 2 Larajam Rafi Jalal al-Din et al., 2020) The study aimed to identify the extent of the effect of training in the inverse hierarchical method with the projection set system. DropSet To develop the maximum strength of bodybuilding athletes under 23, they used the experimental method on a sample consisting of 5 athletes as an experimental sample and 5 athletes as a control sample, then they were selected intentionally. It was concluded that there were statistically significant differences between the pre-test and the post-test, which confirms the effectiveness of the proposed program. In developing the studied variables.

C. Study Three:

Study (Qasim, 2017) The study aimed to know the effect of a training program using the Bulgarian method in developing the muscular ability of the lower extremities in football players under 17 years old. In this study, the sample was chosen intentionally as it included 42 football players under 17 years old. This research was based on the experimental method, and the researcher used a physical testing tool to collect data. After collecting,

analyzing and discussing the results, it was concluded that the proposed training program in the Bulgarian method had an impact on developing the muscular ability of the lower extremities of football players under 17 years of age.

2. Method and procedures followed:

2.1 The scientific method followed:

Through the problem posed by the research group, the experimental method is the most appropriate to the nature of the study.

2.2 Study sample:

Due to the nature of our research and our aspiration for objectivity in the results and the methodology used in the research, our research sample was chosen in a deliberate, accidental manner and represented 5 bodybuilding athletes in the city of Djelfa.

2.3 Research variables:

a. Independent variable : Suggested training units FST-7

B. Dependent variable : Improving the muscle size of the arm muscle for amateur bodybuilders

2.4 Search tools:

2.4.1 Tools used in measuring and calculating variables:

a. The weight and height of the sample were measured using a medical scale without wearing clothes, without shoes, and on an empty stomach.

B. To measure arm size or circumference, a tape measure (meter) was used.

C. Measure body mass index using the following equation:

Weight (kg) ÷ Height squared (m).

2.4.2 Data collection tools:

The tools used in the research were:

- Medical scale: to measure the weight and length of the sample.

- Measuring tape: to measure the size and muscular circumference of the sample's arm muscle.

- Sports equipment: bodybuilding hall.

- **Physical measurements:**

1- Measure the length and weight of the sample on a medical scale:



Figure (1): explains How to measure the weight and length of a sample

A) Purpose of measurement :Measure the weight and length of the sample.

b) Tools used :Medical scale device, recording record

c) Performance specifications :Stand upright on the medical scale without wearing any clothes and on an empty stomach. It is preferable to take the scale in the morning after waking up.

d) Evaluation method :The weight and height are recorded on the device's electronic panel, and we copy them to the registration log

2- Measuring the muscle circumference of the arm muscle:



Figure (2):It is clear How to measure the muscle circumference of the arm muscle

A) Purpose of measurement :Measuring the muscle circumference of the arm muscle.

b) Tools used :Metric tape measure, tape recorder.

c) Performance specifications :This measurement is applied to the sample by measuring the circumference of the arm muscle while it is in a state of contraction. It is preferable to measure the weak arm for the sample, with the requirement to measure the same arm or side of the arm in the dimensional measurement.

d) Evaluation method :The number on the measuring tape is recorded in the recording log.

2.5 The limits of the study:

2.5.1 Spatial domain:

The field study was conducted in Sports facility for Zakaria Ben Slimane, Bodybuilding hall In the municipality of Djelfa and this is For pre and post tests.

2.5.2 Time domain:

This research was conducted over an extended period between The beginning of November 2022 Until the end of December This stage is divided into two stages:

*** Tribal measurements :** The pre-test was conducted on (10/29/2022) on members of the research sample before implementing the training program.

*** Dimensional measurements :** The post-test was conducted on (12/29/2022) on the members of the research sample after completing the implementation of the training program, in order to determine the developments in the measurements reached by the members of the research sample.

2.6 Training program:

The training program was implemented over a period of 8 weeks, in which a group of training sessions was built and was estimated at 4 sessions per week, 3 of which were programmed to train the arm with a special function. FST-7 There were 24 sessions in total over a period of two months, and the content of the sessions consisted of 4 exercises, the last exercise in which was performed in the studied manner for both muscles, in addition to the warm-up phase and return to the normal state.

Exercise intensity ranges from 60% To 70% At the beginning of the program and gradually increasing by 5% Weekly for 8 weeks, at a rate of 8 to 12 repetitions per set. While taking a diet rich in carbohydrates.

2.7 Statistical methods used:

It is done using a program spss

- Calculating arithmetic averages and standard deviations
- a test T etest for double observations (one sample): to find out the differences between the pre- and post-measurements.

3. Presentation, analysis and discussion of the sample results:

3.1 Presentation, analysis and discussion of the results of the first hypothesis:

The first hypothesis stated that there is Statistically significant differences between the results BMI For pre- and post-measurement among bodybuilding players This is in favor of post-hoc measurement, and to verify the validity of the hypothesis, we use paired observation tests.

In order for the results to be significant, we will analyze them statistically through the following table:

Statistical resolution	value (sig)	Degree of freedom	value (T)	standard deviation	SMA	Measurement	Variables
D	0.005	4	4.97-	2.31	20.56	Pre-measurement	Developing maximum strength of the biceps muscle
				2.17	21.09	Dimensional measurement	

Table (1): shows the statistical results of the pre- and post-tests for BMI

- Table No. (1) shows the results of the test (t) for the first variable, which is the body mass index measurement, where the arithmetic mean value for the pre-measurement reached 20.56, while the arithmetic mean value for the post-measurement reached 21.09. We also note that the value of t equals 4.97 - at the degree of freedom 4 and the level of significance equals 0.005, which is less than 0.05, from which it can be said that the value of (t) is statistically significant

Conclusion:

Since the value of (t) is statistically significant at 0.05, it exists Statistically significant differences between the results BMI For pre- and post-measurement among bodybuilding players This is in favor of the post-measurement, because the value of the arithmetic mean for the post-measurement is 20.09. Greater than its value in the pre-measurement 20.56.

And from it to the training program in style FST-7A positive effect on the development of body mass index, and it can be said that the hypothesis has been fulfilled.

3.2 Presentation, analysis and discussion of the results of the second hypothesis : The second hypothesis states that there is Statistically significant differences between the results Arm size For pre- and post-measurement among bodybuilding players This is in favor of post-hoc measurement, and to verify the validity of the hypothesis, we use paired observation tests.

In order for the results to be significant, we will analyze them statistically through the following table:

Statistica l resolutio n	valu e (sig)	Degree of freedo m	valu e (T)	standar d deviatio n	SM A	Measuremen t	Variables
D	0.00 5	4	-6.80	3.09	31.1	Pre- measuremen t	Developin g maximum strength of the triceps muscle
				2.92	31.7 5	Dimensional measuremen t	

Table (2): Shows the statistical results of the pre- and post-tests for arm size

- Table No. (2) shows the results of the test (t) for the second variable, which is arm size development, where the arithmetic mean value for the pre-measurement reached 31.1 while the arithmetic mean value for the post-measurement reached 31.75. We also note that the value of tequal to -6.80 at the degree of freedom 4 and the level of significance equal to 0.005, which is less than 0.05, and from it it can be said that the value of (t) is statistically significant.

Conclusion:

Since the value of (t) is statistically significant at 0.05, it exists Statistically significant differences between the results Arm size For pre- and post-measurement among bodybuilding players This is in favor of the post-measurement, because the value of the arithmetic mean for the post-measurement, 31.75, is greater than its value in the pre-measurement, 31.1.

And from it to the training program in style FST-7A positive effect on the development of arm size, and it can be said that the hypothesis has been fulfilled.

3.3 Presentation, analysis and discussion of the general hypothesis:

The results of the study can be summarized in the following section:

Statistical resolution	Statistical significance	Hypothesis text	Partial hypotheses
Realized	Realized	There are statistically significant differences between the results BMI For pre- and post-measurement among bodybuilding players This is in favor of dimensional measurement.	Body mass index development
	Realized	There are statistically significant differences between the results Arm size For pre- and post-measurement among bodybuilding players This is in favor of dimensional	Develop arm size

		measurement.	
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Based on what was previously mentioned in the first partial hypothesis, which says that there is Statistically significant differences between the results BMI For pre- and post-measurement among bodybuilding players This is in favor of the post-measurement, as well as the second partial hypothesis, which says that there is Statistically significant differences between the results Arm size For pre- and post-measurement among bodybuilding players In favor of the post-measurement, we conclude that the general hypothesis that states:

"For the training units proposed by the system FST-7 "Effect on improving arm muscle size for amateur bodybuilders". Realized

CONCLUSION:

The sport of bodybuilding is a mixture of several sciences and several factors in order to achieve results according to cost and time. This sport, as the majority of people around the world call it, is a sport for the rich, but you find most people practicing it, and this is evidence of what this sport achieves from the point of view of its practitioner, from determination and appearance to good physical health. Therefore, in order to achieve the best result despite the lack of capabilities, it is necessary to practice according to modern methods, and through this the student researcher aims to design training units using the system FST-7 Despite not adhering to its correct principles, this was for bodybuilding athletes in the city of Djelfa to improve muscle size, classified as amateurs, and to identify the effect of the training units proposed in the aforementioned method on the muscle size of the arm. The goal of the student researcher included standardizing the training load according to the specifications of the research sample, using the maximum weight to determine the intensity of the exercises with reliance. On Arab and foreign studies in designing training units.

Within the limits of the procedures used and the results reached, the researcher recommends the following:

- Study the effect of the system FST-7 Under longer time conditions than those conducted in the current study.
- Conducting studies to develop muscular strength and its types using weights and different training methods.

- Conduct further studies on the effect of weight training on the development of various elements of physical fitness.
- Use the training system FST-7 In other studies, different age groups and both sexes are affected.
- We recommend students STAPS By choosing bodybuilding as their research focus in order to enrich this aspect with various studies and all physical and psychological aspects...etc.

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