The effect of proposed training units according to the dropset system on some physical and physical variables among young players in the game of bodybuilding

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ABSTRACT

Exponents variedAleb Programs and AllenOrganize Training related to the allocation of training forOne hundred and the development of the worldStray Structural Playerbetween Youth in irrigationWadha Building a termSam . So, thepurpose From thisstudy She sucksM Knowingly ProgramMe Depends onY Systems Dropset Training, studyA MC effectAnd Nata On bitingLat And someDorat PhysicalFor you muscles. Done brotherStream Sample MKuna Who is it 10 Players Bmethod Mayoral, Trange Their ages are between18–20 years, where they underwent a single group system. A set of means, tools and tests related to physical characteristics and body contours were used to assess muscle hypertrophy, and the most prominent of these tools was the training program that was prepared for a period of 10 weeks, where each exponent includesSink 4 T UnitsDribia, Duration Kfor Unit Trange between 60 and 70 minutes. DoneExecute Exercises ands system Dropset . anymoreLost WhoBeech The programTraining Done STo serve FS TestsStory To measure theCapacity Physical andWall Some of themuscles Structural ofSelectRatio offrame Muscular. And afterT TestsScourge And after thatAddressed Statistically, tHere he comes Researcher LY S kitoutputs, he was mnun Most notable:.

- The dropset system, which relies on the concept of maximum loadgraduality by repetition, has achieved outstanding results in enhancing muscular prominence andimproving some physical abilities.

The recommendations were the most important.

- Conducting additional studies using various training methods, and comparingthem with the results of this studyto benefit fromthem.

1- **Definition of research** :

1.1 **Introduction to the research and its importance** :

   Physical education is a measure of the progress of peoples, as countries have sought toInterest With the science of sports training and thus the science of sports training has taken steps in Recent years are great strides Forward WhereThe efforts of scientists in various fields of science related to sports in general have doubled, as well as the study of the structure of the human body extends since ancient times and that its importance in the sports field has emerged clearly Because of its impact on determining training programs and reaching sports achievement, as the countries of the world compete among themselves in sports events to obtain medals For You raise the name of that country, and here I oftenHe said about the sport of bodybuilding, the sport of strength, health and beauty, and that we are close to that or far away, it is one of the events that depend on strength in which the art of intensity, size and repetitions that contribute to muscle inflation or what is said about muscular protrusion, but this only happens using scientific training methods in which the intensity or size or repetition is organized, Therefore, bodybuilders rely on their training basis in the organized exercise for each muscle of the body and what it needs to meet its goal of strengthening joints, ligaments and muscles to contribute to reducing injury when moving from one training effort to another depending on the intensity of training and the type of training, and this means that (bodybuilding sport is unique to the effects The positivity left by the training method, which helps to increase the activity and effectiveness of the muscles). (5، 1991)In light of the above, the importance of research in the adoption of training according to the system Dropset To increase the ability of muscles in terms of physical in addition to muscular prominence in order to break the deadlock suffered by most bodybuilding players, as the change in construction methods in such a duty is required to achieve the ultimate goal set by the coach to achieve an Olympic or world medal aimed at raising the name of the country high in the countries that sponsor such Events .

1 – 2 **research problem**:

   From the motherIt is very important to achieve the goals of sports training to reach a good understanding of muscle structure and functions, because when you know how to form muscles and how they work and respond to muscle building exercises, It makes it possible to develop a program Commensurate with the needs of the players, hence the problem of research, which relied on the coach's simulation of the player in the use of an effective training method whose use leads to gains and development in his physical abilities and the achievement of the desired muscular prominence depending on measuring the circumference of the muscles, in addition to providing our libraries with such research for the continuation and sustainability of training sciences to achieve the goal The highest is to reach achievement or high level of training.

1 – 3 **Research Objectives** :

- Develop a training program according to the training method (Dropset).

- Knowing the impact of dropset exercises on physical abilities and body surroundings in question.
- Knowing the differences in post-tests and pre-tests for physical research variables and body surroundings.

1 – 4 **research hypotheses** :

- Dropset exercises have an impact on the physical abilities and body surroundings of the subject of research.
- There are statistically significant differences for the research variables in the pre- and post-tests of the research sample.

1 - 5 **areas of research** :

- Human field: a sample of young bodybuilding players.
- Time Range: For the period from 17/12/2022 to 10/3/2023.
- Spatial field: Fitness and bodybuilding hall Baghdad - Rusafa.

2 –   **Research Methodology and Field Procedures** :

2 - 1 **Research Methodology** :

The researcher used the experimental method to suit the solution of the research problem.

2 – 2 **Research sample** :

(10) players were selected deliberately from the young players in the bodybuilding game, aged between 18-20 years, and that their average weight (76.3 kg) and average height (170.4 cm), underwent (2) players for the exploratory experiment and (8) players for the main experiment, knowing that they all underwent the experimental design with one group.

2-3 Tools and means of collecting information and devices used:

- Observation and experimentation.
- Information form.
- Arab and foreign sources.
- Computer (Laptop).
- Height and weight measuring device.
- Body circumference tape measurement.
- Fitness hall.
- Weights of different weights.
- Regular iron bar weighing (20) kg.
- Multi-purpose weightlifting device (Maltegim).

2 – 4 **physical measurements (oceans):**

It was measured through the use of a tape measure for all selected physical variables to identify the level of change in (humeral circumference, chest circumference, groin circumference, foot fat circumference).

2 - 5 **First** : **strength tests** :

A- **Strength stretching test for chest, shoulders and arms muscles (ping press) until fatigue**. (7، 1994) .
  - **Test objective** : Measure the strength stretching of the chest, shoulders and arms muscles.
  - **Tools** : Bench + iron bar weighing (20) kg type Schneille of German origin.
  - **Recording** : Calculation of repetitions until the effort is exhausted.

B- **Sitting test from lying down with knees bent until the effort is exhausted**: (3، 1998)
  - **Test objective** : to measure the strength and endurance of the trunk muscles of the abdomen.
  - **Tools** : tool for fixing the legs, stopwatch.
  - **Recording :** Calculates the correct number of performances until the effort is exhausted.

C – **Test of standing and weight load on the shoulders behind the neck (back squat) Bending and stretching the legs until the effort is exhausted** :   (8، 1982)
  - **Test objective :** to measure the stretching and strength tolerance of the muscles of the legs during the movement of complete descent down and then rise **.**
  - **Tools** : iron bar weighing (20) kg, type of German origin chenille, iron tablets of various weights (2.5, 5, 10, 15, 20) kg, iron carriers.
  - **Registration** : The test is performed with intensity (50%) and records the largest number of repetitions until the effort is exhausted.

 Second : Tests of strength characteristic of speed :

A- **Pressure test from lying on a flat bench (ping press)** : (7، 1994)
  - **Test objective** : to measure the distinctive strength of the muscles of the chest, shoulders and arms.
  - **Tools** : Terrace + iron bar type Schneill of German origin.
  - **Registration** : The repetition is calculated in (10) seconds.

B- **Sitting test from lying down within (10) seconds of knee bent position** (10، 1987)
  - **Test objective** : to measure the strength characteristic of speed of the muscles of the trunk and abdomen.
  - **Tools** : stopwatch, tool to stabilize the legs.
  - **Registration** : The number of times is recorded within (10) seconds.

C_ **Test of standing and weight on the shoulders behind the neck (back squat) Bending and stretching the legs to measure the strength characteristic of the speed of the muscles of the legs** (10) Tha: .(13، 2005)
  - **Test objective** : to measure the strength characteristic of the speed of the muscles of the legs during the downward movement and then full rise.
  - **Tools** : iron bar weighing (20) kg, German origin chenille, iron tablets of various weights (2.5, 5, 10, 15, 20) kg, iron straps.

- **Registration** : The largest number of repetitions within (10) seconds.

Third : **Maximum Strength Tests** :

A- **Pressure test from lying on a flat bench (Bing Press)** : .(15، 1986)

- **Test objective** : to measure the maximum strength of the muscles of the chest, shoulders and arms.
- **Tools** : iron bar weighing (20) kg, German origin chenille, iron tablets of various weights (2.5, 5, 10, 15, 20) kg, iron straps.
- **Registration** : The test is performed only once, and the maximum possible weight is recorded.

B- **Dead Drag Test with Leg Stretch ((Dead Left To measure the maximum strength of the trunk muscles** . (8، 1982) **.**

- **Test objective** : to measure the maximum strength of the trunk muscles.
- **Tools** : Iron bar weighing (20) kg type Schneill of German origin, iron tablets of various weights (2.5, 5, 10, 15, 20) kg.
- **Registration** : The test is performed once, and the maximum weight raised is recorded.

C_ **Test of standing and weight load on the shoulders behind the neck (back squat) Bending and stretching the legs once to measure the maximum strength of the muscles of the legs :** (8، 1982)

- **Test objective** : to measure the maximum strength of the muscles of the chest, shoulders and arms.
- **Tools** : iron bar weighing (20) kg, German origin chenille, iron tablets of various weights (2.5, 5, 10, 15, 20) kg, iron straps.
- **Registration** : The test is performed only once, and the maximum possible weight is recorded, as it is carried out once with the maximum load.

2 - 6 **Exploratory Experiment** :

This experiment was conducted on 17/12/2022, at five in the afternoon, on a sample of (2) players who were randomly selected from the research community.

2 – 7 **Pre-tests** :

The pre-tests were conducted for a period of three days in the period from 20-22/12/2022 according to three main stations:

First: Wednesday 20/12/2022 included body circumference measurement tests + strength stretching tests.

Second: Thursday 21/12/2022 included tests of strength characteristic of speed.

Third: Friday 22/12/2022 included the implementation of maximum strength tests.

2 – 8 **Training Program** :

In order to achieve the objectives of the research, the researcher has developed a training program that includes several procedures, the most important of which are.

- Emphasizing the readiness of the research sample towards implementing the vocabulary of the training program regularly.
- The duration of the implementation of the program is ten weeks starting from Saturday 23/12/2017 and ending on Wednesday 7/3/2017.

- The program was implemented at a rate of (4) training units per week, which included the vocabulary of the training program.
- Unit time (60-70 minutes).
- The intensity, comfort and volume were dealt with through the application of ripples in pregnancy, as the researcher used ripples according to the principle (1-3) stating that "the use of the ripple principle leads to better results, and the ripple means the exchange of high and low by carrying training and not walking at one pace or level."(1، 1997) (1، 1997).
- The researcher relied on obtaining the intensity of one exercise through (best achievement× 100 / required intensity).

2 – 9 **Post-tests** :

The post-tests of the research sample were conducted for a period of three days on 8-10/3/2023, and the researcher followed the same conditions, requirements and procedures of the pre-tests in terms of time, place, tests, tools and the assistant work team.

2 – 10 **statistical methods used in research** :

The results were extracted based on the statistical bag (SPSS) and as shown in the body of the research.

3 – **Presentation and analysis of the results and discussion** :

3 - 1 **Presentation and analysis of the results of physical abilities and physical measurements of the research sample** :

Table 1

Shows the results of the research sample in the pre- and post-tests in physical abilities

Significance of differences	Sig	Calculated T-value	P a	Q-P	Post-Test		Pre-test		audition	Variables
					on	Going to-	on	Going to-		
Moral	0.00	17.45	0.406	7.10	1.779	41.5	1.505	34.40	Bing Press (arms)	
Moral	0.00	16.242	0.597	9.70	3.259	49.8	2.33	40.10	Sitting from lying down (trunk, abdomen)	Stretched Strength
Moral	0.00	21.0	0.333	7.0	1.135	36.20	0.788	29.20	Dbni behind me (legs)	

Moral	0.00	14.655	0.348	5.10	1.54	21.0	0.737	15.90	**Bing Press 10s (Arms)**	**Speed characteristic force**
Moral	0.00	20.358	0.260	5.30	1.433	17.50	0.788	12.20	**Sit from lying down 10s (torso, abdomen)**	
Moral	0.00	19.365	0.258	5.0	1.840	17.50	1.433	12.50	**Dbni back 10s (legs)**	
Moral	0.00	14.548	0.371	5.40	1.646	93.60	1.619	88.50	**Bing Press (arms)**	**Maximum power**
Moral	0.00	18.692	0.433	8.10	1.333	121.0	0.737	112.90	**Dead Turnip (trunk)**	
Moral	0.00	25.107	0.326	8.20	1.197	121.10	0.994	112.90	**Dbni behind me (legs)**	

Table (1) shows the results of the physical aptitude tests of the research sample in the pre- and post-tests, as the results showed significant differences in favor of the results of the post-test, it was found that the value of the arithmetic mean of the pre-test **for the strength of the arms** (ping press) is (34.40) with a standard deviation of (1.505), but in the post-test was the arithmetic mean of the same variable (41.5) with a standard deviation of (1.779) while it was (x – q) (7.10) and the value of (p p) (0.406) and when statistical treatment to obtain the calculated value (T) it was found to be (17.45) and statistical significance (0.00) and because it was less than (< (0.05), this indicates that the difference is significant and in favor of the post-test.

The value of the arithmetic mean of the pre-test **for the extension of the torso and abdomen** strength (sitting from lying down) is (40.10) with a standard deviation of (2.33), while in the post-test the arithmetic mean of the same variable was (49.8) and a standard deviation of (3.259) while it was (x – q) (9.70) and the value of (p p) (0.597) When the statistical treatment to obtain the calculated value of (T) it was found that it is (16.242) and the statistical significance (0.00) and because it was less than (< (0.05), this indicates that the difference is significant and in favor of the post-test.

The value of the arithmetic mean of the pre-test **of the strength extension of the two men** (back brown) is (29.20) with a standard deviation of (0.788), while in the post-test the arithmetic mean of the same variable was (36.20) and a standard deviation of (1.135) while it was (X – P) (7.0) and the value of (P) (0.333).) When the statistical treatment to obtain the value of (T) calculated has been found to be (21.0) and statistical significance (0.00) and because it was less than (< (0.05) this indicates that the difference is significant and in favor of the post-test.

In the **force characteristic of velocity** and for the three variables (arms, torso, legs) the value of the arithmetic mean of the pre-test **of the force characteristic of speed** arms (ping press 10s) is (15.90) with a standard deviation of (0.737), while in the post-test the arithmetic mean of the same variable was (21.0) with a standard deviation of (1.54) while (x – q) was (5.10) and the value of (p p) (0.348) and when statistical processing to obtain the calculated value of (T) it was found that it is (14.655) and statistical significance (0.00) and because it was less than (< (0.05 This indicates that the difference is significant and in favor of the post-test.

 The value of the arithmetic mean of the pre-test **of the strength characteristic of the speed of the trunk and abdomen** (sitting from lying 10s) is (12.20) with a standard deviation of (0.788), while in the post-test the arithmetic mean of the same variable was (17.50) and a standard deviation of (1.433) while it was (X – F) (5.30).) and the value of (P) (0.260) and when the statistical treatment to obtain the value of (T) calculated it was found to be (20.358) and statistical significance (0.00) and because it was less than (< (0.05), this indicates that the difference is significant and in favor of the post-test.

 The value of the arithmetic mean of the pre-test **of the force characteristic of the speed of the two legs** (Dbni back 10s) is (12.50) with a standard deviation of (1.433), while in the post-test the arithmetic mean of the same variable was (17.50) and a standard deviation of (1.840) while it was (x - q) (5.0) and the value of (p p) (0.258) and when the statistical treatment to obtain the value of (T) calculated it was found to be (19.365) and statistical significance (0.00) and because it was less than (< (0.05), this indicates that the difference is significant and in favor of the post-test.

 In **the maximum power** and for the three variables (arms, trunk, legs) the value of the arithmetic mean of the tribal test **of the maximum strength of the arms** (Bing Press) is (88.20) with a standard deviation of (1.619), while in the post-test the arithmetic mean of the same variable was (93.60) and a standard deviation (1.646) while (X-P) was (5.40) and the value of (P) (0.371) and when statistical processing to obtain the calculated value of (T), it was found that it was (14.548) and statistical significance (0.00) and because it was less than (< (0.05). This indicates that the difference is significant and in favor of the post-test.

The value of the arithmetic mean of the pre-test **of the maximum strength of the trunk** (Dead Lift) is (112.90) with a standard deviation of (0.737), while in the post-test the arithmetic mean of the same variable was (121.0) and a standard deviation of (1.333) while it was (X – P) (8.10) and the value of (P) (0.433).) When the statistical treatment to obtain the value of (T) calculated has been found to be (18.692) and statistical significance (0.00) and because it was less than (< (0.05) this indicates that the difference is significant and in favor of the post-test.

 The value of the arithmetic mean of the tribal test **of the maximum strength of the two men** (Dhbni back) is (112.90) with a standard deviation of (0.994), while in the post-test the arithmetic mean of the same variable was (121.10) and a standard deviation of (1.197) while it was (X – P) (8.20) and the value of (P) (0.326) When statistical treatment to obtain the calculated value of (T), it was found that it is (25.107)

and the statistical significance (0.00) and because it was less than (< (0.05), this indicates that the difference is significant and in favor of the post-test.

Table (2)

Shows the results of the research sample in the pre- and post-tests in physical measurements

Significance of differences	Sig	Calculated T-value	P a	Q-P	Post-Test		Pre-test		Unit of measurement	Physical measurements
					on	Going to-	on	Going to-		
Moral	0.00	14.154	0.452	6.40	1.074	41.40	1.154	35.0	poison	Huercopic circumf
Moral	0.00	14.030	0.335	4.70	1.074	94.60	1.523	89.90	poison	Chest circumf
Moral	0.00	15.0	0.333	5.0	1.264	54.60	1.505	49.60	poison	Thigh circumf
Moral	0.00	15.652	0.447	7.0	0.942	37.0	1.414	30.0	poison	Obese circumf

Table (2) shows that the arithmetic mean **of the circumference of the humerus muscle** in the pre-test was (35.0) with a standard deviation of (1.154), while in the post-test the arithmetic mean of the same variable was (41.40) and a standard deviation of (1.074) while it was (X – P) (6.40) and the value of (P) (0.452).) When the statistical treatment to obtain the value of (T) calculated has been found to be (14.154) and statistical significance (0.00) and because it was less than (< (0.05) this indicates that the difference is significant and in favor of the post-test.

 The arithmetic mean **of the circumference of the chest muscle** in the pre-test was (89.90) with a standard deviation of (1.523), while in the post-test the arithmetic mean of the same variable was (94.60) and a standard deviation of (1.074) while it was (X – P) (4.70) and the value of (P) (0.335).) When the statistical treatment to obtain the value of (T) calculated has been found to be (14.030) and statistical significance (0.00) and because it was less than (< (0.05) this indicates that the difference is significant and in favor of the post-test.

The arithmetic **mean of the circumference of the thigh muscle** in the pre-test was (49.60) with a standard deviation of (1.505), while in the post-test the arithmetic mean of the same variable was (54.60) and a standard deviation of (1.264) while it was (X – P) (5.0) and the value of (P) (0.333).) When the statistical treatment to obtain the value of (T) calculated has been found to be (15.0) and statistical significance (0.00) and because it was less than (< (0.05), this indicates that the difference is significant and in favor of the post-test.

The arithmetic mean **of the circumference of the foot** obesity in the pre-test was (30.0) with a standard deviation of (1.414), while in the post-test the arithmetic mean of the same variable was (37.0) and a standard deviation of (0.942) while it was (X – P) (7.0) and the value of (P) (0.447) When the statistical treatment to obtain the value of (T) calculated it was found to be (15.652) and statistical significance (0.00) and because it was less than (< (0.05), this indicates that the difference is significant and in favor of the post-test.

3-2 **Discuss the results of the research sample in the pre- and post-tests in physical abilities and physical measurements.**

Through the previous presentation of the analysis of the significance of the differences in physical abilities and physical measurements in the pre- and post-tests, which show that there are significant differences between the results of the pre- and post-tests and for all research variables and in favor of the post-test, the researcher attributes the reason for these moral differences to the effectiveness of the training program, which included vocabulary and method that effectively affected physical abilities And muscular protrusion depending on the circumference of the body, as the ability of the athlete increases as a result of the change in training and intensity as it works to excite all or most of the fibers in one muscle by increasing the number of nerve stimuli, the number of muscle fibers involved in muscle contraction will increase, and increases accordingly muscle results when performing movements (11، 1997)**.** Therefore, the researcher worked to increase the individual's ability to exert continuous physical effort with the presence of resistances on the muscle group concerned for as long as possible. Just as the researcher here relied in his training program on strength stretching, he also relied on maximum strength and speed strength in order to raise the degree of efficiency of organic organs in resisting fatigue under maximum and submaximum stress pressures and maintaining the required level of speed in sports events. This helped in the development of neuromuscular activity that also contributed to adapting the nervous system to the speed of decision-making, improving the work of neural receptors and transmitters, increasing neuromuscular compatibility within the muscle, and increasing the frequency of nerve impulses to excite the muscle at high speed. According to him, the researcher, who relied on a new method of training, (6، 2011) (9، 2013) (18، 1994)Dropset Which depends on the performance of the maximum work that the individual can lift, then the aggregate method is used for that repetition and according to the streamlined training ability of (50% - 75% - 100%) of the maximum ten repetitions and this means that the researcher deliberately not only in coordination in determining the intensity, but to coordinate

between the types of muscle strength training different depending on the nature of muscle contraction and its type and this is what needs bodybuilders who within the process of proper planning to achieve the goal of developing muscle strength and according to the test of the best training systems with the possibility of avoiding the negatives resulting from training.

5 - **Conclusions and recommendations** :

 5.1 **Conclusions :**

   Through the objectives of the study and in the light of the presentation and discussion of the results, the researcher reached the following conclusions:

1. The training program and its training vocabulary have a clear impact on the ability of the research sample to continue to give and achieve the desired goal.
2. The emergence of very good levels to increase the values of the arithmetic means in the post-test of physical abilities, and this is what contributed to the development of the level of body circumference, which was reflected in the muscular prominence.
3. The use of training methods of various types associated with the implementation of the program contributed to achieving the training requirements and retaining them to achieve the required scientific and practical levels.

 5.2   Recommendations:

 Through the conclusions presented, the researcher recommends the following:

1. Conducting this study on other samples.
2. Conducting a similar or related study and for other training variables.
3. Compare this study with studies using other training systems and different training samples.

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