



## A Training Program to Develop the Endurance Strength and Effect of the Enzyme Sgot and the Level of Some Performance Some of the Complex Skills in the Basketball for Youth

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### Abstract

The objective of the research is to prepare a training program to develop the endurance of the strength, as well as to know the effect of this program on the enzyme SGOT and the level of performance of some skills in the basketball youth. The study sample consisted of (12) players, selected from the total community of (14) players, has been excluded (2) player for the purpose of conducting the exploratory experiment, and the experimental method was used to suit the nature of the research procedures. After the tests were carried out and the application of the training program was carried out the post-test to obtain the results through which the most important conclusions were reached. The researchers concluded that there was a significant effect of the training curriculum in the development of strength endurance of the muscles of the arms, increased rates of SGOT enzyme, and the emergence of a significant development in the level of performance of offensive youth composite basketball skills.

**Keywords:** *Endurance strength, Enzyme (SGOT), Complex offensive skills and basketball.*

### Introduction

The endurance of strength is meaning that the athlete's ability to work long periods, or the ability of the body members to resist fatigue during the continuous effort. We conclude that endurance is the extent to which muscle tension is maintained for a long period of time. Endurance exercises provide many benefits to the public health, such as weight loss, increased daily body energy, and reduced disease. If a person has a heart problem, it is necessary to start slowly and gradually, and act according to the rate of heart rate [1].

The assumption of power is an important aspect in the implementation and performance of sports events and their importance stems from the rapid changes and the flow of information that has no limits in our time, it invites us all to think new ways and methods to keep pace with these changes and developments and most trainers assert that the ability to bear power is important in the game of basketball is a fast-

acting performance and needs to be tolerable to power, [2] where the basketball game is one of the games that have seen a significant development and quickly spread to contain complex technical skills and variety can be counted from games that promote the spirit of cooperation and the aim of the research is that its results may reveal the development of carrying strength and performance and support the learning of basketball offensive skills among young players through the use of more than one method in the unit[3].

In addition, the importance of research in the need to study and research in the field of developing offensive skills in basketball, given the skill of this game.

### The Practical Part

#### The Procedures of Field Research

The researchers used the training curriculum to suit the nature of the problem on the players of the Youth Solidarity Club for the

season (2018-2017) and the number of (14) players, was adopted method of comprehensive inventory in the selection of the sample and the identification of two players for the purpose of conducting the pilot, (12) players.

## Tests

### First

Measurement of the strength endurance, test the measurement of the strength of the muscles of the arms [4]:

### Purpose of the Test

Measure the endurance strength of the muscles working on the extension of the arms.

### Possibilities and Tools

Small playground, colleague to count the number and stopwatch.

### Test Specifications

From the oblique forward position, the laboratory is to bend the two elbows, then return to the primary position. Repeat this function as many times as possible.

### Evaluation

The maximum number can perform to endurance strength of the arms during (60) seconds.

### Estimation

The registered numbers collect the raw grades and thus we obtain the indication of the strength of the arms. Instructions, notes and general rules:

### Notes

Integrity of the body in all attempts

- Not allowed to stop during performance.
- Any situation that violates the previous conditions is canceled.

### Second

Test the level of the level of the enzyme (SGOT):

### Objective of the Test

Measure the level of the level of the enzyme (SGOT).

### Tools Used

Enzyme-specific cores and AISA analysis.

## Test Specifications

The blood sample was collected from the players by withdrawing (5 cc) of intravenous blood in the arm of the young basketball player using a disposable plastic medical

syringe to measure the SGOT ratio in the blood. The blood is in clean dry tubes to be transferred to the laboratory and placed in Centrifuge, which rotates at 2000 cycle / minute to isolate the serum from other blood components.

The serum is then withdrawn by a micro-pipette and placed in other tubes for use in various tests. Before the training curriculum two days and the hour the intention of the afternoon after the training curriculum and two days after six hours of eating it for the purpose of the return of the variables mentioned above to normal.

### Third

Measuring the offensive skills compound basketball:

The researchers relied on the identification of offensive skills based on sources and previous studies on complex skills, as well as personal interviews. In order to identify the most important offensive skills based on their priorities and importance, a questionnaire was distributed to poll experts and specialists to select the most complex offensive skills by marking the importance of and then add the other skills they consider appropriate for the sample and in favor of the research.

The researchers then collected the data and emptied it and calculated the percentage of each composite offensive skill. Which achieved the highest degree of acceptable rate, namely (Receiving + passing from above the head), (receiving + high dribble + chest passing with both hands), (receiving + high pitched + jump correction) and (receipt + high dribble + Stairs scoring) A test of each complex offensive skill was developed. These tests were selected from the Farsi Sammy test battery to measure some of the offensive skills of the youth basketball.

### First Test

Receiving + Passing from Above the Head: [5]

### Purpose of the Test

To measure the ability to perform offensive skills.

## Tools

Basketball court, bunkers, one person, two precision instruments, 8 legal basketball balls, 20 gauge leather tape, adhesive tape, electronic timer, three booklets, and whistle.

## Measures

- A central point below the basket is determined to mark the main points.
- A forward point, which lies away from the center point (8.35 m), represents the player's pause.
- Two points on each side (8 m) are separated from the center point and represent precision measuring instruments, and are removed from the side line of the stadium (1.50 m) facing the laboratory player.
- Two walls (200 cm high and 100 cm high and 50 cm wide) were placed on both sides, each of them on the front and towards the measuring instrument (1.25 m).
- Place a person behind the front point and at a distance (2 m) in order to rotate around it.
- A member of the team who delivers the ball on the right side of the laboratory player stands away from the measuring instrument (1.50 m).

## Performance Description

- The laboratory player stands on the front point pointing to the ground, while at the same time a member of the team stands with the ball on the specified point (the right side of the lab player).
- At the start of the whistle, the ball is handed over to the laboratory player, which leads to the receiving end from the head directly towards the precision measurement instruments, as shown in steps 1, 2, 3.
- Once on the right and again on the left until the end of the eight attempts.
- The eight attempts are divided into four attempts of stability, and the last four occur after a rotation takes place around the person behind the front point and back to the same point.

## Test Conditions

- The speed of performance, the rotation around the person is free and the way the player wants the laboratory, and helps the player (the alarm) to start the rotation

around the person, and each player only two wrong attempts.

## Test Management

- **Timer:** It gives the start signal as well as the time it takes to perform the test.
- **Caller:** A member of the color team calls for the eight attempts on precision instruments.
- **Registered:** Call the names first and indicate both colors and time second.

## Account Grade

- Calculates the time since the player receives the lab's ball until the end of the eighth attempt after touching the mesh measuring instrument.
- Divide time on (60 second).
- The player is calculated (3) for red, two for blue, and for green.
- Calculated the player two degrees of mixed colors for the four boxes (collection ÷ 4), and (2.5) degree Red chromatin Blue (collection ÷ 2), and (1.5) degrees of colors blue and green (collection ÷ 2), and the degree to half of the blue color and (0.5) degrees for half of the green color, and (0.75) degrees for half of the color blue and half green color (collection ÷ 2).
- Approximate final number of colors (precision) to the nearest integer if is there.
- **Total (Final):** division of the output of precision over time.

**Second Test:** Receiving + high dribble + Chest passing with both hands:[5]

- **Purpose of the test:** measuring the ability to perform three offensive skills.
- **Tools:** Basketball court, two persons, two precision instruments, four legal basketball balls, a leather measuring tape (20m), adhesive tape, electronic timer, three booklets, and a whistle.

## Measures

- A central point below the basket is based on the marking of some key points.
- Two points for the precision measuring instruments are located on the sides and 8 meters away from the center point, which are both separated from the side line of the stadium (1.50 m) and facing the central circle.

- Set a volleyball court within the basketball court.
- Two points (directly behind the line) are located three meters away from the midline and the second at 9 meters. They represent the position of the player in the middle, as well as two points on the left side of the first and second laboratory players, the first and the second (4.60 m), and they represent a member of the team with the ball at each point.
- Place two persons on the center line and on both sides of the central circle (representing the allowable limits of execution).

### Performance Description

- The player stands on the first point set in the middle and the pointer behind the line, while at the same time a member of the team stands with the ball next to him on the left.
- At the start point (whistle), the ball is delivered by a team member at the first point of the laboratory player, which leads to the high reception and discarding directly towards the midline to perform chest passing with the arms towards the instruments of accuracy measurement (alternately) and return quickly to the point Himself to repeat the attempt, and then rush back to the second point to repeat it twice.
- Once on the right and again on the left until the end of the four attempts.
- The four attempts are divided into two attempts from the first point and towards the midline as in step (1). The last two attempts are from the second point and towards the midline as in step (2).

### Test Conditions

- The player has the right to cross the midline after performing hand-to-hand passing, as well as to adhere to the specific zone between the two players, and each player has two wrong attempts.

### Test Management

- **Timer:** It gives the start signal as well as the time it takes to perform the test.
- **Caller:** A member of the color team calls for the four attempts on precision instruments.
- **Registered:** Call the names first and indicate both colors and time second.

### Account Grade

- Calculates the time since the player's receipt of the ball until the end of the fourth attempt after touching the network measuring instrument accuracy.
- Divide time on (60 second).
- The player is calculated (3) for red, two for blue, and for green.
- Calculated the player two degrees of mixed colors (\*\*) for the four boxes (collection ÷ 4), and (2.5) degree Red chromatin Blue (collection ÷ 2), and (1.5) degrees of colors blue and green (collection ÷ 2), and the degree to half of the color blue, and (0.5) degrees for half of the green color, and (0.75) degrees for half of the color blue and half green color (collection ÷ 2).
- Approximate final number of colors (precision) to the nearest integer if any.
- **Total (final):** Division of the output of precision over time.

**Third test:** Receiving + High dribble + jumping shoot (2 points):[5]

- **Purpose of the test:** measuring the ability to perform three offensive skills.
- **Tools:** Basketball court, four barriers, basketball basket number (10) legal, leather tape measure (20 m), adhesive tape, electronic stopwatch, two chairs, whistle.

### Procedures

- A central point below the basket is determined to mark the main points.
- Identifies the first five points and the second on either side of the central point dimension (4.63 m) and at the same time away for the two pillars of the free-throw line (30 cm), third, fourth and fifth in front of the central point dimension (2.33 m, 4.44 m, 8.35 m), respectively, represent a stand player lab.
- Place four barriers (height of each column 2 meter and the suspension hanger on each of them 100 cm length of the top and width 50 Cm) at a distance of (75 Cm) and towards the laboratory player.
- Two points are located on both sides and 8 meters away from the center point, which is separated from the side line of the court (1.50 meter) and represents the pause of a member of the team that delivers the ball to each point.

## Performance Description

- The laboratory player stands on the forward and pointing point on the ground (the point away from the center point), while two team members and the ball stand on the specified points.
- At the start of the whistle, the ball is delivered from the right side of the laboratory player, which leads to the high reception and discarding directly to the side point (on the right) outside the free throw line to perform the jump (two points) for one attempt And then return to the same point to perform another attempt towards the side point (on the left) (delivery is from the left side), and then return to the front point to complete the four attempts in the same way and in exchange. At the end of the sixth attempt, the villages of the free throw line (delivery is part of the right) to perform four consecutive attempts, and as shown in the steps (1, 2, 3).
- The player performs ten attempts divided into (three attempts from left and right alternately - four consecutive attempts from the front point over the free throw line).

## Test Conditions

- Speed performance, help the player laboratory (alarm) to perform the attempts of precise locations, and is a member of the team standing on the side point (on the right) hand over (7) balls and according to the description of the performance, and then (3) balls by a member of working Group II (from the left), and each player wrong only two attempts.

## Test Management

**Timer:** It gives the start signal as well as the time it takes to perform the test.

**Registered:** Call the names first and indicate both successful and unsuccessful attempts and secondly time.

## Account Grade

- Calculates the time since the player receives the ball until the end of the tenth attempt after the ball leaves the hand of the laboratory player.
- Divide time on (60 second).
- The player scores a score for each successful skipping event.

- The score for the player (zero) of the grades for each failed jump correction case.
- Collect scores (accuracy) of successful attempts.

**Total (final):** division of the output of precision over time.

**Four Test** Receiving + high dribble + shooting of stairs:[5]

- **Purpose of the test:** measuring the ability to perform three offensive skills.
- **Tools:** basketball court, three barriers, basketball basket number (10) legal, leather tape measure (20 m), adhesive tape, electronic timer, two chairs, whistle.

## Procedures

- A central point below the basket is determined to mark the main points.
- A forward point (4.44 m) is located from the center point and represents the player's pause.
- Three hurdles (each column height 200 Cm and the suspended hinge on each one of them with a length of 100 Cm from the top and a width of 50 Cm) were placed first and second (2.21 meter) in front of the laboratory player and third (75 Cm) from the front point.
- A forward point and a distance (8.35 meter) are located from the center point and represent the pause of a member of the team that delivers the ball.

## Performance Description

- The laboratory player stands on the forward and pointing point on the ground, facing a member of the team with the ball, and stands at his or her point.
- At the start of the whistle, the ball is delivered to the player in front of the player, which leads to the high reception and planking directly towards the basket and to the right of the existing barrier to perform the peaceful shooting for one attempt, and then return to the same point to perform another attempt towards the basket and to the left of the barrier (Delivery is from the front point), and then return to the same point to complete the eight attempts in the same way and in exchange, as shown in steps (1,2,3,4).

- The player performs ten attempts divided into (five attempts from the right and five attempts from the left and in exchange).

### Test Conditions

- The player has to hand over 10 balls in exchange, according to the performance description, the correct steps and the right arm for the peaceful correction. The player has the right to start entering the arm. Favorites and each player have only two wrong attempts.

### Test Management

- **Timer:** It gives the start signal as well as the time it takes to perform the test.
- **Registered:** Call the names first and indicate both successful and unsuccessful attempts and secondly time.

### Account Grade

- Calculates the time since the player receives the ball until the end of the tenth attempt after the ball leaves the hand of the laboratory player.
- Divide time on (60 second).
- The player scores a score for each successful skipping event.
- The score for the player (zero) of the score for each case of a failed jump or incorrect performance.
- Collect scores (accuracy) of successful attempts.

**Total (Final):** division of the output of precision over time

### Main Procedures

- The training curriculum proposed by the researchers was applied to the members of the research sample. The curriculum was composed of the exercises in which the weights were used. The duration of the proposed course is eight weeks and the average of two units per week is Sunday and Wednesday. The total training modules are 20 units divided into three sections: The preparatory section / - the main section / - the final section.
- The intensity used is 50-70% of the player's ability.
- Number of groups 4-6 groups.

- Number of repetitions per exercise 20-30.
- Rest period between exercise and last 1-4 minutes.
- Strengthen the muscles (arms, abdomen, back, legs)
- Various exercises have been used, such as: Bing Bryce, Pulling the Grip, Dragging from the ground, Jumping, Jumping, Half Bump, Quarter Bears, Push earth with two hands, Lumbar Workout with weights, Weighting, Negative Performance, Backgammon Exercise, Weighting, Exercises were conducted at the Tadamon Sports Club Hall on 12/2/2018 until 9/4/2018 on the members of the research sample.

### Pretest

The researchers conducted a pretest on Sunday, February 11, 2018, at the Tadhamon Sports Club Hall, in order to measure the level of strength of the players. The blood was then withdrawn by a specialized team of nurses working at Al-Hakim Hospital (2) (Including receiving + passing from above the head), (receiving + high dribble + chest passing with two hands), (receiving + high dribble+ shooting jump) and (receiving + high dribble + shooting stairs).

### Application of the Training Program

The application of the training program for the period from 12/2/2018 to 9/4/2018 was extended by two units per week (Sunday and Wednesday) every week for eight weeks.

### Posttest

The researchers carried out the posttest on Tuesday, 10/4/2018 at the Tadamon Sports Club Hall by measuring the level of strength of the players. The blood was then withdrawn by the same team that worked on blood extraction in the pretest. The process was carried out in the same way that the pretest was carried out by hand and time tools.

### Results and Discussions

This section included the presentation of the results of the statistics to carry the strength and the level of the enzyme (SGOT) and the performance of some of the offensive skills compound basketball after being processed statistically and in line with the aims.

**Table 1: Shows the mean values and standard deviation to endurance of strength and the level of the enzyme (SGOT) and the performance of some offensive skills installed in the pre and posttests**

Variables	Unit measurements	Pretest		Posttest		(t) calculated	Significant	Significant type
		Mean	STD.EV.	Mean	STD.EV.			
Strength endurance	Grade	18.7	1.63	23.52	1.63	4.59	0.000	Sig.
Enzyme (SGOT)	mg/dl	9.38	0.52	12.34	1.16	3.76	0.001	Sig.
Receiving + passing from above the head	Grade	21.73	5.44	25.73	5.44	3.43	0.000	Sig.
Receiving + high pituitary + chest passing with both hands	Grade	15.66	3.45	18.66	3.45	4.58	0.000	Sig.
Receiving + High dribble + shooting Jump	Grade	5.01	1.36	7.01	1.36	4.21	0.000	Sig.
Receiving + high pitched + shooting stairs	Grade	3.23	0.98	4.99	0.98	3.86	0.000	Sig.

The results showed the development of the strength endurance ability between the pretest and posttests. The researchers explain this development in the research sample to the training curriculum to include special exercises to develop strength status of the muscles of both men and arms through the performance of relatively high repetitions as well as increasing training groups and incomplete rest periods through planning of the programmer for the training units used in the weight training method, which led to this development.

This was confirmed by Talha, who pointed out that "the use of weight exercises with relatively high repetitions leads to the development of tolerance"[6]. The results showed a high SGOT rate, and this increase is within the normal human population ranging between 9-13 U / L [7]. The researchers attributed it to the fact that the exercises used in different weights and weights had an effect on the adaptation of the body organs and structural muscles.

"The change in the level of enzyme activity in the exercise of endurance exercises is a normal physiological condition for the adaptation of muscle cells in the body and heart to the components of the training load used and an indication of the training situation that reached it," said Mindy and others[8]. William also noted that "high-

endurance sports training leads to an increase in serum SGOT activity"[9]. In terms of basketball offensive skills, there has been a marked improvement in the results between the tribal and remote tests. The practice has helped to improve the performance of the composite skills in the basketball.

The researchers attribute this development to the training curriculum for various exercises of strength, speed and flexibility. Regardless of the different sources of their scientific and practical culture that the training program leads to the development of the achievement if built on the basis of scientific in the organization and training of the training process and use of appropriate and gradual intensity and observation of individual differences and the use of optimal repetitions and interruptions ",[10] There is no doubt that the previous factors combined lead to the development of offensive skills in the director for young basketball players.

## Conclusions

The researchers concluded that there was a significant effect of the training method in the development of the strength trait of the arms of the arms, the significant effect of strength exercises on the increase of the SGOT enzyme levels, and the significant improvement in the performance level of the composite offensive skills of youth basketball.

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