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Suggested exercises to develop the aerobic capabilities for diabetes

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Abstract

The great development in the sports field and the difference in the levels and records of sports games, especially in the game of football, because of the great effort it needs in a long period of time, so update sports programs are included that help the player rise from one level to a better level.

Through this problem, we address some sports groups of players who are not shed light or are not interested in them, such as players who suffer from diabetes, where such a group of athletes need special care, in addition to biting training programs. Periodic measurements of blood sugar differ from what they are. When other athletes, that is the physical and respiratory problems of players with diabetes rise more when compared with regular athletes who do not suffer from such a disease.

Therefore, we made a program of suggested exercises to develop the aerobic capabilities of the respiratory system and what indicates them, and through it, the minimum health status of the player can be monitored.

Research objective:

- Identifying the effect of the suggested exercises on developing the aerobic capabilities of diabetics.
- Detecting the rate of development in the aerobic capabilities of the research group.

Research hypotheses :

- There are statistically significant differences between the pre-test and the post-test of aerobic capacity
- There are differences in the rate of development in the aerobic capabilities of the research sample

Research methodology and field procedures:

Research Methodology:

The experimental approach was used for its relevance to the nature of the research.

Community and sample research:

The study sample was chosen by the deliberate method, and it consisted of 15 diabetic players, and they were chosen from the first-class clubs of Wasit Governorate in the football

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game.

Spatial field:

- Aerobic measurements were made for the pre-test and post-test at Al-Kut Olympic Club Stadium in cooperation with the Ministry of Youth and Sports.
- Application of the qualifying program for the research sample in the Al-Kut Olympic stadium.

Time field:

- Both the exploratory and basic study were implemented during the period 5/3/2020 - 5/6/2020

Table (1) The period of application of the research to the study sample

N	Content	From	To
1	The first exploratory study	2020/3/5	2020/3/15
2	Pre -measurements	2020/3/20	2020/3/22
3	Implementation of the program	2020 /4/1	2020/6/1
4	Post- measurements	2020/6/3	2020/6/5

Table (1) The period of application of the research to the study sample.

Search measurements:

1- Pulse rate
2- Blood pressure
3- The number of times you breathe
4- Vital capacity
5- Oxygen consumption

Measurements were taken during rest and at maximum effort: Appendix No.(1)

Exploratory study:

This study was conducted on 3/5/2020 - 3/15/2020 and aims to: -

- Identification of soccer players with diabetes, the research sample from first-class clubs for Wasit Governorate.
- Agreement with three assistants to assist the researcher in applying the research measures, and they were chosen from those who have experience in the field of physical education.
- Explain the importance of applying the research and its goal for the football players, their coaches, and the researcher's assistants, to ensure accurate results in the research procedures.
- Obtaining the approval of the soccer players and their coach to participate in the application of the research procedures.
- Obtaining the approval of the Directorate of Youth and Sports to use the Olympic Stadium.
- An agreement with a specialist doctor to measure heart rate and blood pressure rate.
- Explain how to conduct a measurement for the research sample players

Proposed Rehabilitation Program: Appendix No.(2)

The goal of the program: To develop the aerobic capabilities of diabetic soccer players through:

1- Improving pulse rate and number of breaths at rest and during maximum effort.

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2- Improve blood pressure at rest and during maximum effort.
3- Improving vital capacity at rest and during maximum effort.
4- The rate of oxygen consumption improves at rest and during maximum effort.

Conditions that must be followed when implementing the proposed program:

1- The program is implemented after the exploratory experiment and the determination of the research sample.
2- Graduation in the intensity of exercise in the stages of program implementation in proportion to the athlete who suffers from diabetes.
3- Make periodic measurements of blood sugar.
4- Stay away from exercises that have complications in excess sugar.
5- Maintaining the air and respiratory capabilities.
6- Providing the individual with the correct information that can be followed to maintain the blood sugar balance.

Presentation and discuss results:

Presentation results:

Presentation mean results, standard deviations, calculated (T) value, and error rate:

Variables	Pre-test		Post-test		T value
	Mean	Std. Deviation	Mean	Std. Deviation	
Pulse rate before effort	69.862	0.916	59.546	0.923	30.709
Pulse rate during effort	189.949	49.051	175.376	2.437	22.799
Systolic blood pressure before effort	125.387	0.791	119.992	1.287	13.824
Systolic blood pressure during effort	212.347	307.083	127.815	0.943	1.066
Diastolic blood pressure before effort	83.518	1.212	81.332	0.267	6.473
Diastolic blood pressure during effort	96.426	0.834	90.148	1.326	15.512
The number of times you breathe before effort	17.85	0.690	15.224	0.172	14.972
The number of times you breathe during effort	44.01	0.96	37.094	0.840	25.5
Vital capacitance before the effort	2.831	0.040	3.936	0.040	76.69
Vital capacity during effort	1.996	0.020	3.012	0.777	198.69
Maximum oxygen consumption before effort	0.457	0.010	0.889	0.012	99.15
Maximum oxygen consumption during effort	42.895	0.935	52.826	0.821	30.9 -

It is evident from Table (1) that the arithmetic mean of the pulse rate before the effort of the search sample for the pre-tests reached (69.862) with a standard deviation (0.916). As for the post tests, the arithmetic mean was (59.546) and with a standard deviation (0.923), where it reached (T) calculated (30.907). As for the pulse rate during the voltage, the value of the arithmetic mean was (49.051) and a standard deviation (49.051) for the pre-tests. As for the post tests, the arithmetic mean of the pulse rate during the voltage for the research sample was (175.376) with a standard deviation (2.437), the (T) calculated reached (22.769).

According to Table (1), the results of systolic blood pressure before exertion for pre-

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exertion tests with arithmetic means of the research sample amounted to (125,387) and a standard deviation (0.791). As for the dimensional tests, the arithmetic mean was (119.992) and with a standard deviation (1.287) and the calculated (T) reached (13.824), As for systolic blood pressure during exertion, the arithmetic mean was (212.367) with a standard deviation (307.083), the arithmetic mean for the post tests was (127.815) with a standard deviation (0.943) and the mean (T) was calculated (1.066).

Through Table (1), it became clear that the arithmetic mean of the pre-exertional diastolic blood pressure tests was (83,518) and with a standard deviation (1,212), and the arithmetic mean of the post-tests was (81,442) and with a standard deviation (0.267) and reached (T) calculated (6.374).

As for the diastolic blood pressure during the exertion, the arithmetic mean for the pre-tests was (96.426) and with a standard deviation (0.834), the arithmetic mean for the post tests was (90.148) and with a standard deviation (1.326) and the calculated (T) reached (15,512).

Through Table (1), the arithmetic mean of the number of breaths before the effort for the pre-examinations is shown (17.85) and with a standard deviation (0.690). The arithmetic mean for the post tests is (15.224) and with a standard deviation (0.172) and the calculated (T) reached (14.972).

As for the number of times of breathing during the effort, the arithmetic mean of the pre-emptive reached (44.01) with a standard deviation (0.526). As for the post tests, the arithmetic mean was (37.094) and with a standard deviation (0.840) and the calculated (T) reached (25.5).

It was shown through Table (1), the arithmetic mean of the pre-tests of vital capacity before the effort was (2.831) and a deviation (0.040), the arithmetic mean of the post- tests was (3.936) and a standard deviation (40%) and the calculated (T) reached (76.69).

As for the vital capacity during the effort, the arithmetic mean of the pre-tests reached (1.996) with a standard deviation (0.020). As for the post test, its arithmetic mean was (3.012) and a standard deviation (0.777).

And it became clear from Table (1) that the maximum oxygen consumption before the effort for the pre-tests reached its arithmetic mean (0.457) and a standard deviation (0.010). As for the dimensional tests, the arithmetic mean was (0.889) with a standard deviation (0.012) and the calculated (T) reached (99.15).

As for the maximum oxygen consumption during the pre-test effort, the arithmetic mean was (42.895) with a standard deviation (0.935), the arithmetic mean for the post tests was (52.826) and with a standard deviation (0.821), and the calculated (T) reached (30.9).

Discuss results:

Through Table (1) we show the results of the pulse rate before the effort, where the calculated (T) was (30.709) and the error rate (0.03), which is less than the standard error rate (0.05). The heart rate is improved through exercise, adaptation to a variety of exercises, and efforts to develop aerobic capabilities. The beat rate of some people "depends on the level of respiratory fitness and is influenced by the activity of the parasympathetic nervous system during the recovery period" (6: 329/2000). And therapeutic exercises have an effective role to raise the

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aerobic capacity by lowering the pulse rate of the research sample, who are diabetic patients.

As for the pulse during the voltage, it reached (T) the favorability (22.769) and the error rate was (0.02), which is less than the error rate (0.05), as it was in favor of the post-tests and this is due to the therapeutic exercises that developed the pulse status of diabetics that have a great role in developing the pulse, as the pulse rate decreases when performing training loads and using therapeutic exercises, and this is confirmed by (THOMAS ROWLAND) when he emphasized that the standard for pulse rate For individuals it is an indicator of physical fitness in the face of high training loads (128: 7), this indicates that the suggested exercises led to an increase in the efficiency in the aerobic capacity and led to a decrease in the pulse rate.

As for the blood pressure, it reached (T) for systolic before effort (13.824) and during effort (1.066). As for the diastolic pre-effort (6.473) and the voltage flexion (15.512), the error rate was (0.01 - 0.04), which is less than the error rate (0.05). It indicates that individuals with diabetes have developed aerobic abilities after giving them the suggested exercises, and this indicates that blood pressure depends on preparing and developing internal organs when practicing sports, as blood pressure, whether diastolic or systolic, has become at a better level than post-tests, because of the therapeutic exercises that have occurred to her, and because blood pressure is in an unequal and sporadic state, as it depends on the blood pressure flowing in the arteries coming from and out of the heart, Nasreddin Radwan (1998) states that blood pressure is the driving force of blood inside the circulatory system, where the flow of blood is in areas of high pressure to areas of low pressure, and this leads to an unequal blood pressure during the cardiac cycle (1: 158).

As for the number of times of breathing, the value of (T) calculated for the number of times of breathing before the effort reached (14.972) and during the effort reached (25.5) and the error rate was (0.01), which is less than the percentage of error (0.05), the reason for this is due to the exercises that the sample members do, as sport is one of the basic elements for regulating blood sugar levels, and the quality of exercise varies according to age, gender, health status and the ability of the individual. This makes the breathing process in diabetic patients in a better condition than the physical exertion and exercises given to the research sample led to the development of the number of breathing times through the depth of breathing and the increase in the depth of breathing affected and developed by sports work and exercises that develop fitness and aerobic abilities and this led to the proposed exercises that were applied to a sample search.

As for the vital capacity, the value of (T) calculated for the number of times of breathing before the effort reached (76.69) and during the effort reached (198.69) and the error rate was (0.02-0.04), which is less than the error rate (0.05), and this indicates the effect of the proposed exercises on the research sample. In developing respiratory capabilities, especially vital capacities, where vital capacity is an important and basic marker in determining the vital efficiency of the respiratory system (2: 212).

The results of this research agree with (Inspo 1997 and others) that sports training leads to a change in the sizes and capacities of the lungs, as the vital capacity increases relatively as a result of organized sports training (8: 63).

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It is evident from Table (1) that the calculated value of (T) the maximum oxygen consumption before the voltage was (96.15) and during the effort it reached (30.9).

The error rate was (0.03), which is less than the error rate (0.05), The maximum oxygen consumption was less than it was before performing the proposed exercises, which led to an increase in the efficiency of the circulatory and respiratory systems in the research sample. And as Bahaa El Din Salama (2008) confirmed that the maximum oxygen consumption is one of the factors affecting physical competence (3: 90).

Table (2) shows the arithmetic mean for the pre and post tests and the rate of development:

Variables	Pre-test	Post-test	Development
Pulse rate before effort	69.862	59.546	17.324
Pulse rate during effort	189.949	179.051	8.309
Systolic blood pressure before effort	125.387	199.992	4.496
Systolic blood pressure during effort	212.367	127.815	66.151
Diastolic blood pressure before effort	83.518	81.442	2.549
Diastolic blood pressure during effort	96.426	90.148	6.964
The number of times you breathe before effort	17.85	15.224	17.249
The number of times you breathe during effort	14.01	38.094	18.644
Vital capacitance before the effort	2.831	3.936	28.074
Vital capacity during effort	1.996	3.012	33.731
Maximum oxygen consumption before effort	0.457	0.889	48.593
Maximum oxygen consumption during effort	42.895	52.826	18.799

Through Table (2) it became clear that the rate of development in all tests is in favor of the post-tests, and this instructs that the proposed exercises have an effective role in changing the ratios of results and their effect on the research sample, as the individuals with diabetes improved their condition and their efficiency increased by raising their aerobic capacity. The increase in these percentages was due to the therapeutic exercises proposed by the researchers who conducted their tests on the research sample, as the effect of all vital systems through exercise is the result of an internal adaptation of these devices to meet the needs of the loads that fall on them (5: 291).

Conclusions and recommendations:

Conclusions:

The results of the research were achieved after applying the proposed exercises to a decrease in some special aerobic abilities for players with diabetes, such as pulse rate - blood pressure and the number of times of breathing in addition to an increase in some abilities such as vital capacity and increased oxygen consumption and this is what was worked on during the research.

Recommendations:

- Coaches focus on working to develop the aerobic capabilities of the players.
- Working on setting up special training programs for players with diabetes.

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- Holding special sessions for coaches and making them aware of dealing with such a group during the training.
- The use of modern equipment for periodic measurement of blood sugar for players with diabetes.

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Appendix (1)

Physiological tests:

First - measuring heart rate during rest and effort:

- The pulse is measured through pressure by two fingers (index and middle) on one of the arteries (temporal - carotid - radial - or directly above the heart).
- The number of beats is calculated for a period of (ten seconds), then the resulting number within ten seconds is multiplied by (six) so that we can calculate the number of heart beats per minute (4: 331)

Second / measuring blood pressure

The device consists of a rubber bag connected to a hand pump with a valve to relieve the exit of air and an indicator that expresses the amount of pressure.

device components:

The device consists of a rubber bag connected to a hand pump with a valve to relieve the exit of air and an indicator that expresses the amount of pressure.

Performance specifications

A rubber bag is wrapped around the arm of the laboratory, above the elbow, the air is raised by the pump, then the stethoscope is placed on the skin at the brachial artery and a pulse is heard until the sound completely disappears and by means of the valve, the air is gradually and slowly removed from the rubber bag until the first distinctive sound is heard due to the rush of blood at the same time we notice the reading of the indicator and this systolic pressure and the air exit from the rubber bag continues until the sound disappears from the stethoscope and at this moment the reading of the indicator indicates that it is the lowest pressure In the artery and represents the diastolic pressure. (4: 331)

Third / measuring the number of times you breathe at rest and effort: The number of times a person breathes is measured by means:

- Putting the palm in front of the person's nose and counting each inhale and exhale is considered one.
- Placing the hand on the laboratory belly, counting both the rise and fall of the abdomen, one breath.

Fourth: Measuring vital capacity: Spirometer is used to measure the vital capacity of the lungs. Measurement method: The player stands with his hand holding the spirometer and then makes a preliminary inhale and exhale 1-2 times quickly, then takes in his chest the largest amount that he will take from the inhaled air and exhale regularly and continuously until that through the mouth where he closes the nose with a clamp, perform this experiment three times and record the best reading (4: 330)

Fifth / The maximum oxygen consumption:

Method for measuring the maximum oxygen consumption: It is one of the most important functional measurements that give an indication of the level of efficiency of the circulatory and respiratory systems, thus judging the efficiency of physical work and endurance for an athlete.

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Devices and tools:

Fit mate Pro:

Performance method: Before the test begins, the test performer cleans the respirator for measuring the maximum oxygen consumption with the disinfectant solution, connects the parts of the Fit mate Pro system together, attaches the grip belt to the tester chest, and installs the Bluetooth pulse signal in the Fit mate device after entering the laboratory information into the device, which is organized name, date of birth, gender, height, weight and choosing the type of test required to be performed is Vo_2max, and then fixing the respirator tightly by its belts and making sure that breathing air does not leak from the mask, and then the laboratory climbs onto the treadmills, and the work on the device begins with a two-minute warm-up, running gradually and increasing with speed, as the tester controls the increase in running speed on the device with a speed gradient from the special button for that in the mobile device, where it starts from (4,5) to (13-14) km / hour The L Fit mate Pro includes a small screen with a graph box that shows the pulse at the maximum oxygen consumption with the proportions of both of them, which is monitored by the rectifier.

Conditions:

- Attention should be paid to increasing the load gradient by controlling the speed in the treadmills at the fifth and seventh minutes, monitoring the pulse, and monitoring the tester when the maximum effort state is reached or according to the tester's request of the inability to continue.
- Stopping the treadmills by controlling gradually reducing the speed.
- The device readings are accepted when the tester reaches (84%) or more of the maximum pulse.

Registration: The device provides a comprehensive reading tape for measurements for (VO_2max).

Measurement unit: L / s .

The measurement is also used to measure oxygen consumption while at rest (4: 329).

A meter that measures the oxygen consumption at rest, and the maximum oxygen consumption.

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Appendix (2)

The training program

N	Exercises
The first week, the first training module	
	From a standing position, walk only 75m x 2 (back and forth).
1	From brook position, jog only 150m x 2.
2	From standing position, walk with torso wrench left and right for a distance of 60 m.
3	From a standing position, walk forward with the arms rotating like a grinder starting
4	from the front to the bottom, back, and then up.
5	From a standing position, walk forward with knees up in succession.
6	From a standing position, walk forward 15 meters, then return to the rear in a stepping stone for the same 15
The first week - the second physical unit	
1	From a standing position, walk 75m x 2 (back and forth) with arms raised and lowered to either side.
2	From standing position, jog 125m x 2 with arms raised and lowered forward.
3	From standing position, light jog with left and right torso wicking for 75 m.
4	From a standing position, walk forward with arms up, then sideways, then down.
5	From a standing position, jog forward with your knees up in succession.
6	From a standing position, jog forward 10 meters and back up the same 10 meters In the form of a retreat
The first week - the third physical unit	
1	From standing position, only light jogging 75m x 2.
2	From standing position, sprint at only low speed 75m x 2.
3	From a standing position, walk 75 meters left and right with your torso bent.
4	From a standing position, jog forward with arms rotating like a grinder starting in the front They turned down, back, and up.
5	From standing position, run at low speed with knees up in succession for a distance of 150 m.
6	From a standing position, walk forward 15 meters, then return to the back the same 15 meters in the form of a retreat, then go sideways 15 meters, then return to the back the same 15 meters in the form of a side belt as well
The second week - the first physical unit	
1	From a standing position, walk only 250 meters, with arms back and forth raised and lowered.
2	From a standing position, jog 150 meters with arms back and forth raised and lowered.
3	From a standing position, walk with the torso bent forward, touching the foot every 12 m.
4	From a standing position, walk forward with the knees bent and alternately touching the back end with the feet.
5	From a standing position, jog forward 15 meters, then return to the back the same 15 meters in the form of a retreat, then go sideways 15 meters, then return to the back the same 15 meters in the form of a side belt as well.
The second week - the second physical unit	
1	From the brook position - then stand up, walk only 150 km with two hands clapping back and forth in front of the body.

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2	From a sitting position - then standing, swing walking (different speed) for 125 m.
3	From a sitting position - standing, jog 125m with legs back-to-back forward.
4	From the sitting position - then standing, walk forward with the arms rotating like a grinder starting from the back towards the bottom, then the front and then the top
5	From the brook position, walk forward with the knees raised and rotated in succession 60 seconds.
6	From a standing position, walk with arms fluttering forward and backward alternating for a distance of 12 meters and then back to back the same 12 meters as a walk back down.
The second week - the third physical unit	
1	From a sitting position - standing, swing walking for 75 m.
2	From a sitting position - standing, swaying jogging 75 m.
3	From a seated position - standing, jog with arms back up to 100 meters.
4	From the sitting position - standing, walking forward with both arms rotating starting from the front towards the bottom, back and then up.
5	From the sitting position - standing, walk forward with the knees raised upward in succession and touch each knee with the elbow joint of the opposite arm.
6	From a sitting position - standing up, walking forward 15 meters with clapping up and back to back while clapping up the same 15 meters in a recoil shape
The third week - the first physical unit	
1	From a long sitting position standing, walking only for a distance of 250 m.
2	From a long sitting position - standing, jogging only 250m.
3	From a long sitting position - standing, walking with torso wicking left and right for a distance of 200 m.
4	From a long sitting position - standing, jog forward with the knees up in succession for a distance of 125 meters.
5	From a long sitting position - standing with arms high, walking with arms folded and extended up to a distance of 125 meters.
The third week - the second physical unit	
1	From a long sitting position - standing, walk for 250 meters with arms swinged at a 90 ° angle at the elbow joint.
2	From a long sitting position - standing, jog 150 meters with arms folded and extended upward at a 90 ° angle at the elbow joint
3	From the long sitting position - standing, walking 10m, then jogging 10m, then light jogging for 10m, then re-walking, jogging and running until the completion of the 100m distance.
4	From a sitting position, bending the legs - standing, walking forward with the right knee raised to the side once and then the left knee raised to the side again in succession for a distance of 125 m.
5	From a sitting position, bending the legs - standing, jogging with the arms crossed while they are bent at the elbow joint at a 90-degree angle and then spread apart while they are bent towards the sides.
The third week - the third physical unit	
1	From the prone position - standing, walk for 250 meters with arms swinged In front of high.

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2	From the prone position - standing, walking for 125 meters with arms crossed in front, then jogging only 125 meters, then go back to walk 125, hands close together with arms pushed back.
3	From a prone position - standing, jog with torso twisting to the right and left, arms extended to sides for a distance of 125 m.
4	From a prone position - standing, walk with your legs back-to-back and try to touch your feet with your hands.
5	From the prone position - standing, walk forward with the torso twisting and legs alternately swinging sideways.
6	From the lying position - standing with arms aside, walking on top of toes for a distance of 15 meters, then jogging for a distance of 15 meters, then repeat walking and jog in the same way until completing the distance of 100 meters
Fourth week - the first physical unit	
1	From standing, walk 100 m while the ball is rolled.
2	From standing up, jog with the ball rolling 100m.
3	From standing, walk with torso torsion left and right with arms outstretched holding the ball 100 m.
4	From a standing position, walk forward with the ball rolling and with the arms rotating like a grinder starting from the front towards the bottom, then back and then up.
5	From a standing position, walk forward with the knees raised in succession and try to touch the arms-borne ball for a distance of 100 meters.
6	From a standing position, walk forward 10 meters while the ball is rolled, then return to the rear in a retracting position the same 10 meters as the ball is rolled
Fourth week - the second physical unit	
1	From standing, walk 100 m while rolling the ball with arms raised and lowered to the sides.
2	From standing, jog 100m with the ball rolled with arms raised and lowered forward.
3	From standing, light jogging with ball rolling with torso wicking left and right for 100m.
4	From standing, walk forward with arms raised holding the ball forward and then up.
5	From standing, jog forward with knees up back-to-back while trying to touch the arms-borne ball.
6	From standing up, jog forward 10 meters while the ball is rolled and then return to the back the same 10 meters in a rolling back as the ball rolls.
Fourth week - the third physical unit	
1	From standing position, jog lightly as the ball rolls 125m.
2	From standing position, run at a low speed as the ball rolls 125 meters.
3	Standing, walking with torso bent to the right and left for a distance of 125 meters, arms holding the ball high.
4	Standing, jogging forward with the ball rolling with the arms rotating like a grinder, starting from the front towards the bottom, then back and then the top.
5	Standing, sprinting at low speed with the ball rolled with the knees up in succession for a distance of 125 meters.
6	Stand up, walk forward 10 m, then return to back the same 15 m in the form of a recoil, then go sideways 15 m with arms carrying the ball forward
Fifth week - the first physical unit	
1	Square sit - stand up, walk with the ball rolling 250 meters.

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2	Sitting square - standing, jogging with the ball rolling 250m.
3	Quarter Sitting - Standing, walking with the ball rolled and with torso twisting left and right for a distance of 150 meters.
4	Sitting - stand with arms side to side, walk forward with the ball roll and arms small circles.
5	Sitting cross-legged - stand up, jog forward as the ball rolls, with your knees raised in turn For a distance of 150 m.
6	From a seated position - standing with arms high, walking with the ball rolled 125 meters. With arms folded and extended upward.
Fifth week - the second physical unit	
1	Sitting, legs bending - standing, walking 250 meters with the ball rolled and with the arms swinging while the arms are bent at 90 degrees at the elbow joint.
2	Leg Extension - Standing, jogging 150 meters with the ball rolling and with arms bent and extended upwards at an angle of 90 at the elbow joint.
3	Sitting, stretching the legs - standing, with the ball rolling, walking for a distance of 10 meters, then jogging for a distance of 10 meters, then jogging for a distance of 10 meters, then re-walking, jogging and jogging until he has completed the distance of 100 meters.
4	Sitting Outstretched - Standing, walking forward with the ball rolling and with arms crossed while it is outstretched.
5	Sitting Legs Extend - Stand up, walk forward with the ball rolled with the right knee raised to the side once and then the left knee raised to the side again in succession for a distance of 125 meters.
6	Sitting Legs Extension - Standing, jogging while rolling the ball and with arms crossed as it is bent at the elbow joint at a 90 degree angle and then spread apart while bending towards the sides
Fifth week - the third physical unit	
1	Lying Down - Standing, walking 250 meters with the ball rolling with arms back-to-back.
2	Lying Down - Standing, walking 125 meters with the ball rolling with arms crossed forward, then jogging only 100m, then go back to walking 100m with the hands meeting and pushing the arms back.
3	Lying Down - Standing, jogging while rolling the ball with torso spinning left and right 100m.
4	Lying Down - Stand up, walk with your legs back-to-back and try to touch your feet with your hands while rolling the ball.
5	Lying Down - Stand up, walk forward while rolling the ball and twisting the torso and swinging the legs back to side.
6	Lying Down - Stand with arms aside, walk tiptoe for 10m and jog 10m, rolling the ball until it completes the 100m distance
Sixth week - the first physical unit	
1	Long sitting - standing, walking 350m with ball roll and attempting to jump up every 25m.
2	Long sitting - standing, jogging with the ball rolling for a distance of 125m, then jogging another 125m.
3	Long Sit - Stand up, jog with ball rolling with torso wicking left and right 100 M, then bend the torso to the sides and try to touch the knees alternately for another 100 meters.
4	Long Sitting - Standing, walking sideways intersecting with ball rolling and arms raised to sides 100m.

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5	Long sitting - standing, light jogging with the ball rolling and with arms raised in turn.
6	Long sitting - stand up, walk 15 meters with the ball rolled, then partridge on one leg for a distance of 15 meters, then repeat the exercise until the 150th distance has been completed.
Sixth week - the second physical unit	
1	Standing, walking for 150 meters while holding the stick with both arms and raising it horizontally in front of the body.
2	Standing, jogging 150 meters while holding the stick with both arms and raising it horizontally in front of the body.
3	Standing, walking with torso twisting left and right for a distance of 150 meters while holding the stick with both arms and raising it in front of the body in a horizontal manner.
4	Standing, walk forward while holding the stick in both arms and raising it horizontally in front of the body. With arms rotated forward.
5	Stand up, walk forward with knees up in succession. While holding the stick with both arms and raising it horizontally in front of the body.
6	Stand up, walk forward 15 m, then return to the back in a regressing fashion at the same 15 m while holding the stick with both the arms and lift them above the body horizontally.
Sixth week - the third physical unit	
1	Standing, walking for 100 meters while holding the stick with both arms and raising it horizontally above the body. With the arms raised and lowered to the sides.
2	Standing, jogging 100 meters while holding the stick with both arms and raising it horizontally above the body. With the arms raised and lowered forward.
3	Standing, light jogging with the torso twisting to the right and left for a distance of 100 meters while holding the stick with both arms and lifting it horizontally above the body.
4	Standing, walk forward with arms raised while holding the stick horizontally up and then back.
5	To stand up, jog forward with the knees up in succession while holding the stick with both arms horizontally and trying to touch it with the knee
6	Standing, jogging forward 15 m and then back to back the same 15 m in the form of recoil while holding the stick with both arms perpendicular to the front of the body