

# *The effect of rapid strength training in developing the skills of handling and scoring youth football*

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## **Abstract:**

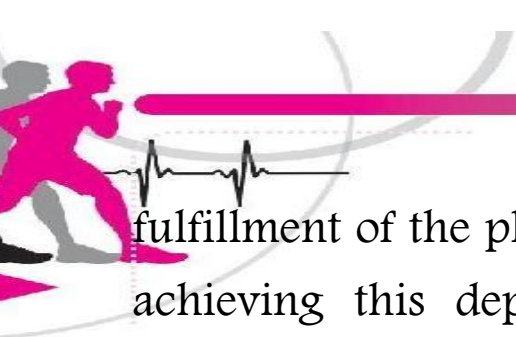
The research consisted of four chapters or chapters, in the first chapter outlining, introduction, and the importance of the research. Exercises and their importance were addressed, especially the diversity of exercises in football due to the many requirements. The teams in the Iraqi league, the way of playing and preparing for the attack, seem to be slow and traditional, which leads to the loss of many balls and lacks a lot of accuracy when applying the planned performance and random implementation and the aim of The research is to the effect of preparing rapid strength exercises in developing the skills of handling and scoring football for youth. Randomize my group (experimental, and another control) of Al- Zawra club players and used special tests, and the researcher concluded that the adoption of rapid strength exercises in developing the skills of handling and scoring for youth football



**Key words:** fast power, handling, scoring.

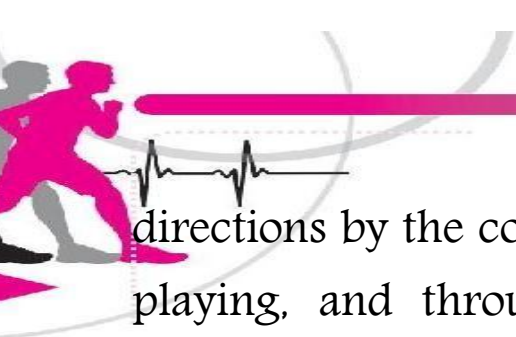
**Introduction:**

Football is one of the most popular games in the world recently. And it has importance in the hearts of its fans and followers. The nature of the football game differs from the rest of the games in terms of performance, the performance is affected by the difference of this nature, as a result of the diversity of requirements, and football is one of the mathematics that includes a variety of Movement skills similar to other sports but requires special abilities that differ in terms of the speed and strength of performance, such as the basic skills of receiving, rolling, handling and scoring, is the basis on which the preparation and building of young players is based and built at a high level, and this is clearly evident through the performance in matches, and physical exercise has a special importance in direct results, in the performance of football, which is distinguished Its performance is in the rhythm of fast and strong play, And this of course requires a high ability of the players to perform effectively and quickly in the match. As the success of the training process depends on studying the scientific foundations and applying them in the correct and integrated preparation of the skills of handling and scoring to reach the player to the high level of performance, which is characterized by the diversity of performance and the speed of correct implementation against these changing and multiple situations and this requires the



fulfillment of the planning duties by the players as the degree of achieving this depends on A number of reasons, the most important of which are rapid performance, speed of movement response and accuracy , as a football player needs to understand the complex and complex performance of the skills of handling and scoring and taking quick and accurate decision-making at the same time, so it has become a priority to pay attention to fast and accurate playing styles (Ismail , 2012). Hence the importance of research in preparing rapid strength exercises and applying them during training programs. Rapid strength is an accurate and effective combination between strength and its time of performance, ie exerting force in a quick instantaneous form that enables players to perform the kinetic performance of the skill in the best possible way, and its weakness leads to poor performance of the skill And the level of play and in order to reinforce the fast performance characterized by high accuracy, which is consistent with modern playing methods to achieve this goal.

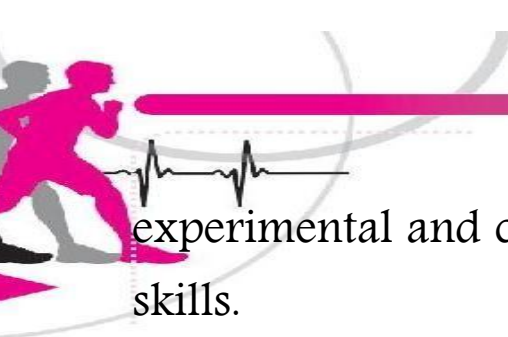
**Research problem:** The performance of modern football is characterized by rapid performance, transportation, ease of transfer of balls and accuracy, as the team appears as a programmer and depends on the skills of handling and scoring, and that the planned performance can be easily performed , reaching the opponent's goal and scoring goals. With simple



directions by the coach, he can change the rhythm or method of playing, and through the work of the two researchers, two coaches and specialists in football, I noticed that most of the teams in the Iraqi Youth League, the way of playing and preparing for the attack appears to be relatively slow as it is compared to the international teams, which leads to the loss of many balls and misses a lot Accuracy when applying schematic performance and random execution. One of the most important reasons may be the coaches' reliance on traditional training methods that are not consistent with modern playing methods, fast play, and accurate performance in their training units, in which the skills are trained and implemented with the speed, strength and accuracy required in order to achieve these skills and planning duties during the match. So the researchers tried to study this problem and work to develop solutions by preparing rapid strength exercises to develop the skills of handling and scoring football

**Research objectives:** To identify the effect of preparing rapid strength exercises on developing the skills of handling and scoring football

**The two research hypotheses:** There are significant differences between the pre and post tests of the two research groups in handling skills and soccer scoring. There are significant differences in the results of the post-tests between the



experimental and control groups in handling and soccer scoring skills.

**Fields of research:** The human field: A group of players from the Al- Zawra Youth Club. Time domain: the period from 12/6/2020 to 2/8/2021. Spatial domain: Baghdad.

**Methodology:**

**Research methodology:** The experimental approach was adopted to suit the research methodology, in the manner of equal groups

**Research community and its sample:** The research community was identified with the soccer players participating in the general youth league, which numbered (18) teams participating in the league, and they are the original community. Al- Zawraa club was selected by lottery and (14) players were chosen to conduct the main experiment, as the two researchers conducted the normal distribution

**Table (1) shows the homogeneity in the search variables**

T	the test	measuring unit	the middle	Mediator	deviation	skewers
1	Handling speed	sec	4.299	4.320	0.163	0.046-
2	Handling accuracy	Degree	3.357	3	0.633	0.433-
3	Scoring speed	sec	5.240	5.220	0.085	0.258-
4	Scoring accuracy	Degree	2.714	3	0.611	0.192



After that, the two researchers divided the sample into two groups (control and experimental) by drawing lots, and the experimental group became (7) players and the control group (7) players.

**Table (2) shows the equivalence of the control and experimental groups in the studied variables**

T	the test	measuring unit	the group Control		Group A of the experimental		T Calculated	the value Probability	indication Statistic
			s-	± P	s-	± P			
1	Handling speed	sec	4.32 2	0.16 5	4.27 5	0.16 9	0.408	0.690	Non moral
2	Handling accuracy	Degree	3.28 5	0.75 5	3.42 8	0.53 4	0.525	0.609	Non moral
3	Scoring speed	sec	5.24 0	0.08 9	5.24 1	0.08 8	0.866	0.403	Non moral
4	Scoring accuracy	Degree	2.85 7	0.69 0	2.57 1	0.53 4	0.030	0.977	Non moral

At a degree of freedom (12) significant, when an error ratio is less than or equal to (0.05)

Means of collecting information, equipment and tools used

Means of collecting information: Arab and foreign sources. Observation and experimentation. Personal interviews. Tests and benchmarks.

Devices and tools used: American-made personal computer (laptop), metal tape measure, signs, football, count (10), stopwatch, football goals.

Measurement and testing: a test of handling speed and accuracy on overlapping squares (modified) (Ismail, 2012)

The aim of the test: to measure the speed of the kinematic response and the accuracy of handling on overlapping squares.

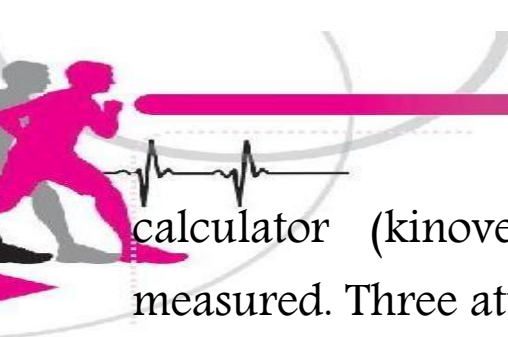




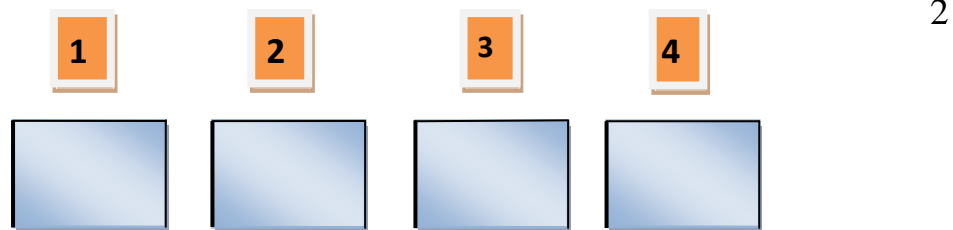
Tools used: a leather tape measure, a football number 10, a whistle, a stopwatch, two cameras, a registration form, a random target device, a digital camera to measure the response time, 4 pieces of plastics with three overlapping squares, the dimensions of the overlapping squares respectively. (30-60-90) cm

Method of performance: The player stands behind a line 14 meters away from the goals. The player begins to move by rolling the ball forward and when it passes in front of the random correction device, which in turn is 12 meters away from the target, and when a certain number is heard, he must lead the handling to the middle of The mentioned number and as soon as possible before crossing the 10-meter line, while the second attempt is rolled from behind The 12th line and when the random shot device is reached, the sound of a specific number sounds in a non-sequential (random) manner, and the player must handle as soon as possible before the ball crosses the 8m line, and so on for the third attempt, which is performed from behind the 10m line and the device on the 8m line. M and handling takes place from the 6 m line, and is done in succession

Scoring: The player is given 3 when the ball hits the middle of the small square and two points when the ball is in the next square and one point in the large and last square, and no point is scored when it is outside the overlapping square mentioned by the device, while the time is recorded through the player's side photography and is extracted from Using a program in the



calculator (kinovea), where 1 / 1000th of a second is measured. Three attempts are given and the result is extracted by means of the modified FTSE law, sum of points / total time, or sum of time where the unit of measure is degrees / sec.



### Scoring Speed and Accuracy Test (Modified) (Ismail, 2012)

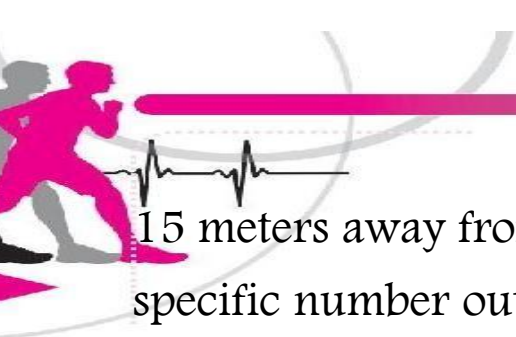
Scoring speed and accuracy on the four target angles of the roll

The aim of the test: to measure the speed of the motor response and the accuracy of scoring from the roll.

The tools used: a soccer goal painted on a wall, a leather tape measure, a football number (10), a whistle, a camera number (2), a color sticker, a plastic material divided into several sections. Each section has a specific number where the largest number is at the farthest corner. As well as the use of a digital camera to measure the response speeds of the player, the random aiming device.

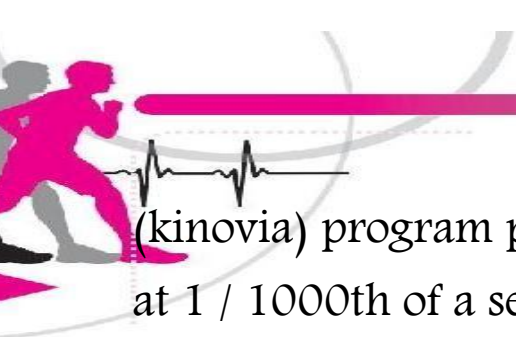
Method or description of performance: the player stands 18 meters from the goal and when the signal starts off with the ball rolling, and when it reaches the random correction device that is





15 meters away from the target, the device makes a sound with a specific number out of the four numbers randomly (1,2,3, 4) The player must aim the ball directly to the aforementioned number at its maximum angle before the ball crosses the 14 m line and after performing that attempt for all players in a successive manner, the second attempt is performed from behind the 16 m line where the device is shifted to a distance away from the target 15 m at the signal. The player rolls and when he reaches the device the device makes a sound with a specific number of the four numbers randomly as well, and the player must aim the ball to the mentioned number in the far corner, and after all the players perform the second attempt, each player performs three attempts.

Scoring method: The player scores 5 points when hitting the extreme square in the corner of the goal, 4 for the next one, and 3 for the next. Two points are also given when the goal hits either side of the middle goal, and when it hits the middle area, he scores one point, and when none of these divisions is hit, he scores a zero addition In addition, when the target is hit in the other part of it other than the aforementioned number, it is given a zero, because the aim of it is to score to the void zone when the goal guard is located in the far side from that corner, and it is a simulation of the playing situation as much as possible. As for the time, it is extracted from the digital camera movie through the



(kinovia) program placed on the computer, where it is calculated at 1 / 1000th of a second.

Note: The time for the three attempts is calculated by the distance between the device and the scoring line, which is 2 m for all attempts, then the sum of the scores for the three attempts is calculated divided by the sum of the times for the three attempts also through the modified FTSE law.

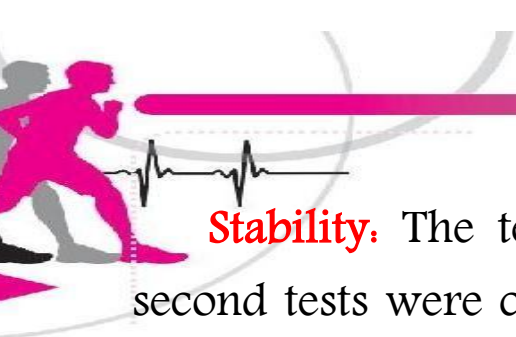
### **Field research procedures:**

The first exploratory experiment: The exploratory experiment was carried out on 6/12/2020 on a sample consisting of (4) players randomly selected from the community, and the aim of this experiment was to conduct scientific research for the two modified tests for open football and to know the readiness of the assistant work team to know the problems And the difficulties that face the researcher when applying the tests

The second exploratory experiment: The exploratory experiment was conducted on 12/8/2020 on a sample consisting of (4) players randomly selected from the community, and the aim of this experiment was to conduct scientific research for the two modified tests for open football

### **Scientific parameters of the tests:**

**Truthfulness:** The two researchers used apparent honesty by distributing the two test questionnaires to a group of (7) experts, and all the experts agreed.



**Stability:** The tests were applied to the sample, where the second tests were conducted at the time of the first tests and in the same place to achieve the same conditions. After treating the results statistically using the simple correlation coefficient (Pearson), it emerged that the calculated values in the speed and accuracy of handling test (0.936) and the speed and accuracy of scoring (0.912), all of which had significance less than 0.05.

Pre-Examinations: The pre-tests were conducted on the research group with the help of the auxiliary work team on Saturday 10/12/2020 in the Al- Zawra Club hall

### **The main experience:**

The two researchers conducted the main experiment on Tuesday (12/12/2020) and completed it on Wednesday (7/2/2021) for period of (8) weeks. Rapid strength exercises were applied during two units of team training per week to train the strength element (Sunday and Thursday) during the main part of the training. The number of training units in the main experiment reached (16) training units, and the two researchers worked within the main section with a time ranging between (20-50) minutes from the time of the main section to train the team. The performance time is for several seconds (between 1-15 seconds), training through weights, exercises, and use of the equipment. Barriers. And the stairs rebound jogging and plyometric exercises let the deep jump and the continuation of



the exercise for periods that do not lead to muscle fatigue and the use of interval breaks according to the intensity of the exercise

**Table (3) shows the working system and the type of resistance**

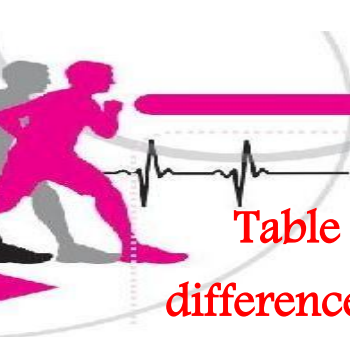
Work system	Resistance type	The intensity of the resistors	Repetition	Comforts	Speed of movement performance
Regular weights	the weight	30% -80%	1-8 seconds	120 -180 seconds	80- 90%
Multimeter device	the weight	10% -70%	2-12 seconds	120 -150 seconds	80-90%
Boxes and baffles	Box height + bulkhead	50% - 100%	4-8 seconds	90 -120 seconds	90-100%
1- Free jumping. Jogging. Stairs bounce off jogging	Body weight + weight	2.5% - 20%	6-12 seconds	60 -90 seconds	90-95%

- Rapid strength exercises were applied to the experimental group in the special preparation period.
- The control group: This group will use the exercise system used by the coach of the team.

Dimensional tests: The dimensional tests were conducted on the research sample on Monday (2/9/2020), taking into account the same circumstances related to the pre-tests.

Statistical means: Use the statistical means of social sciences (SPSS) to extract the statistical results. Arithmetic mean. Median. Torsion factor.

Presentation and analysis of the results of the control sample.



**Table (4) shows Arithmetic means, standard deviations, differences, and the calculated t value for the control group in the search for pre and post tests .**

Variables	measuring unit	The pretest		Post test		Then	P. P	Values t Calculated	Error level	Error level
		s	P	s	P					
Handling accuracy	Degree	3.285	0.755	4.242	0.165	1.142	0.005	0.005	0.005	Moral
Handling speed	sec	4.322	0.165	4.428	0.786	0.080	0.001	0.001	0.001	Moral
Scoring accuracy	Degree	2.857	0.690	3.428	0.786	0.571	0.030	0.030	0.030	Moral
Scoring speed	sec	5.240	0.089	5.160	0.073	0.0800	0.000	0.000	0.000	Moral

At a degree of freedom (7) and a level of error (0.05)

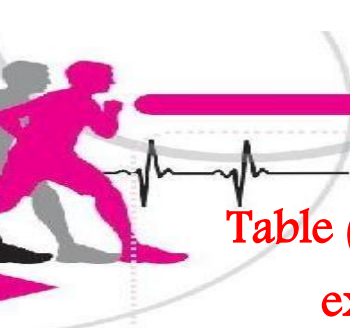
View and analyze the results for the experimental sample.

**Table (5) shows Arithmetic means, standard deviations, differences, and t-value calculated for the experimental group in the search for pre and post tests.**

Variables	measuring unit	The pretest		Post test		Then	P. P	Values t Calculated	Error level	Error level
		s	P	s	P					
Handling accuracy	Degree	3.428	0.534	6.142	0.690	2.714	0.000	0.000	0.000	Moral
Handling speed	sec	4.275	0.169	4.077	0.079	0.198	0.002	0.002	0.002	Moral
Scoring accuracy	Degree	2.571	0.534	4.428	0.534	1.857	0.000	0.000	0.000	Moral
Scoring speed	sec	5.241	0.088	5.072	0.058	0.168	0.000	0.000	0.000	Moral

At a degree of freedom (7) and a level of error (0.05)

Presenting the differences between the results of the control and experimental groups in the post-tests



**Table (6) shows the differences between the control and experimental groups in the searched variables**

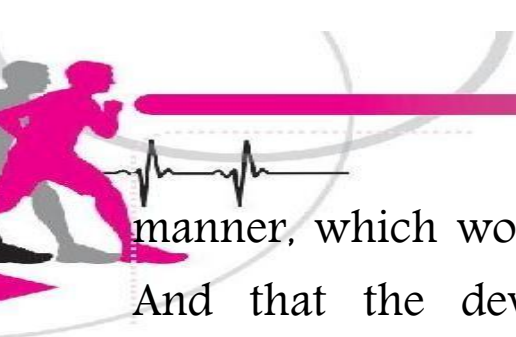
T	the test	measuring unit	the group Control		Group A of the experimental		T Calculated	the value Probability	indication S tatistic
			s-	± P	s-	± P			
1	Handling accuracy	sec	4.428	0.786	6.142	0.690	4.334	0.001	Moral
2	Handling speed	Degree	4.242	0.165	4.077	0.079	2.394	0.034	Moral
3	Scoring accuracy	sec	3.428	0.786	4.428	0.534	2.782	0.017	Random
4	Scoring speed	Degree	5.160	0.073	5.072	0.058	2.450	0.031	Moral

At a degree of freedom (14) significant, when an error ratio is less than or equal to (0.05)

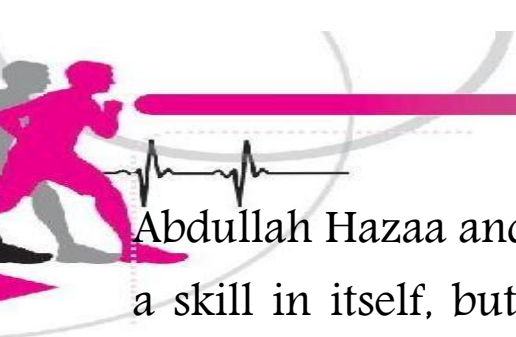
### **Discussion of the differences between the results of the control and experimental groups in the post-tests.**

The results of the previous tables showed the improvement in the speed and accuracy of the handling and scoring skills by comparing with the control group in the post-test, in order to achieve the research hypothesis. To use the maximum power at maximum speed the fast power. Which made the development of the level of the experimental group members quickly and effectively in the results of this test, which is an indication of the growth of strength and speed in a prominent way, as the effectiveness of weight training exercises, playmaking and jumping depended on the integration of muscle strength and kinetic ability in one exercise in a scientific and thoughtful





manner, which worked on the development of rapid strength. ,  
And that the development indicates the good consistency  
between performance time and the quality of performance and  
their non-contradiction, as training in this method allows  
achieving high speed and thus helps to produce the largest  
possible amount of rapid force as it is considered "about the  
speed of filling the largest number of muscle fibers at the  
beginning of the movement of the characteristics "The  
importance of rapid force development" (Abu Al- Ela , 1997), in  
addition to this that the quality of the exercise has a direct impact  
On Developing The Level Of Explosive Strength And Speed thru  
The Formation Of These exercises the by vBulletin® Merging The  
Elements Of Strength And Speed Together In The Exercise, That  
Is, Performing Strength exercises the At High Speed, color : as He  
Referred To That ( Qasim Hasan 's by Hussein. The strength  
increases the shorter the period of muscle contraction and vice  
versa, ie the longer the period of muscle contraction, the greater  
the amount of force changes, i.e. the greater the force, the greater  
the speed. " ( Qasim , 1998) ... in addition to the use of a variety  
of different types of stimuli, training in scoring and rolling  
handling with no emphasis on time in a large way and with  
multiple exercises and from different distances leads to an  
increase in focus and install and activate movement programs,  
improve motor control, and then increase experience, and all of  
this leads to Evolution of the level of accuracy (Muhammad

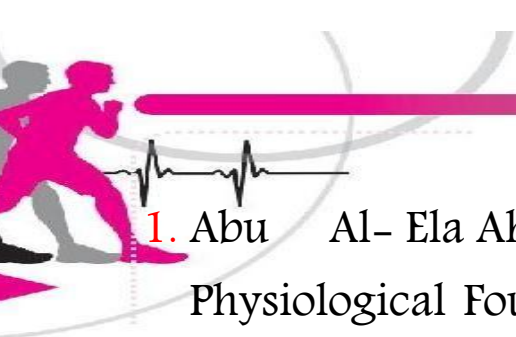


Abdullah Hazaa and Mukhtar Ahmed) assert that scoring “is not a skill in itself, but rather a final result of a set of overlapping skills, as the performance of basic skills such as suppression, rolling and handling is nothing but preparation for the service and success of the scoring skill, if handling is a means of reaching To the opponent's goal , scoring is the goal of this handling."This was evident in the results of the post-tests, and the results were logical

### **Conclusions and recommendations:**

1. The adoption of rapid strength training improves the accuracy of soccer scoring for young club players
2. The adoption of rapid strength training improves the speed of scoring football for young club players
3. The adoption of rapid strength training improves the accuracy of football handling among young club players
4. The adoption of rapid strength training improves the handling speed of football for young club players
5. The necessity of adopting rapid football training exercises for young club players
6. Emphasis on developing various complex exercises to develop physical abilities that can be used in line with the type of sample.
7. The need for the study to be approved by football coaches
8. Conducting studies similar to this one that measure other skills such as rolling

### **References :**



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## Appendix:

### Exercise model

T	the exercise	Training time	Total iterations in the training unit	The ratio of work time to rest	Comfort type
1	A deep jumping exercise from the front 50 cm in 5 boxes, then rolling the ball between 3 signs and scoring	20 sec	5	1: 4	Passive comfort walking, flexibility exercise
2	Bear with the vertical jump with the feet with the ball hitting the head and upon landing receiving a foot ball	25 sec	4	1: 4	Passive comfort walking, flexibility exercise
3	Side right jump 3 boxes and return left 3 boxes with each landing receive a ball and return handling to the opposite side	10 Tha	4	1: 4	Passive comfort walking, flexibility exercise
4	Backup, header, landing, receiving, back jumping and landing on 4 boxes	20 sec	5	1: 4	Passive comfort walking, flexibility exercise

**Note:** All exercises are performed at high speed.