

# The Effect of a Training Program in Developing Young Soccer Players' Accuracy and Endurance of Scoring Skill Performance

Asst. Prof. Dr. Sadiq Jaafer Mahmoud<sup>(1)</sup>

## **Abstract**

*The research aims to verify the effect of a training program on developing the young soccer player's accuracy and endurance for scoring skill performance. It also aims to verify the statistical differences in the accuracy and endurance of scoring skill performance between the pre and post tests of the individuals of the research sample. To verify the research objectives, the researcher hypothesized that there are statistically significant differences between the pre and post tests results in the accuracy and endurance of scoring performance.*

*The researcher made use of the experimental approach to make the nature of the research more appropriate. The experiment was carried out on 34 players of the Youth Sport Club for Soccer (17-19 years) for season (2019-2020). These players were intentionally chosen. Uniformity was achieved among the members of the research sample in the variable covered by the research, which is accuracy and endurance of scoring performance in soccer. The experimental design was adopted in the style of a single group with a pre-post test, namely; accuracy and endurance of the scoring performance in football. The experimental design was adopted in the style of one group with a pre and post test. The researcher used (SPSS) for statistical treatments coming up with key conclusions that the training program achieved an improvement in the accuracy and endurance of scoring performance by comparing the results of the pre-post test for the individuals of the research sample. The researcher recommends using the training program in the accuracy and endurance of young soccer player's scoring skill performance.*

**Keywords:** training program - accuracy and endurance of scoring skill performance – soccer.

## **INTRODUCTION**

Training programs in soccer should be adopted on thorough and correct scientific bases aimed at training players to reach the ideal training condition for each player and raise their levels to the highest level in all aspects of training physically, skillfully, planning, and psychologically. After football has totally included the performance of planning duties, the defender moves forward to participate in the attack process and the attacker moving back from his team goal. This requires the player to endure this effort and continue his physical and skillful ability throughout the match. The importance of accurate performance skills in general and scoring skills in particular are noticed, because they are one of the factors

---

<sup>1</sup> Ph.D. in Sports Training, Football, College of Physical Education and Sports Sciences, University of Diyala, Iraq  
E-mail: [sadiq.jaafer@sport.uodiyala.edu.iq](mailto:sadiq.jaafer@sport.uodiyala.edu.iq)

affecting the match result on the one hand, and the player's performance level during the two halves of the match on the other hand.

An incompetent player with special endurance faces the greater oxygen, which leads to a slow state of hospitalization and early fatigue. ” (Al-Rubaie, 1988, 184) In addition, there is a correlation between the player's mastery of soccer technique and the level of growth of the endurance component. Developing providence in the effort exerted to perform a skill reduces the amount of energy to control the ball and to act in a manner of play. (Abdel-Fattah, 2003, 97) stated that ‘All kinds of fitness training in soccer must be similar to the nature of the performance in the match as much as possible. This is one of the reasons that emphasize the importance of performing fitness training using the ball, which gives the player an opportunity to develop his technical and planning skills under conditions similar to the match. This type of training has more motivation than training without a ball. "(Abdel-Fattah, 2003: 326-327)

Hence, the significance of this study emerged in an attempt by the researcher to reach results that show the importance of the training program, whose content depends on skillful physical exercises aimed at developing accuracy and endurance of scoring performance and making sure that developing endurance away from skill performance is not feasible. The researcher hopes to reach results that contribute to the development of the game, especially through the preparation of a training program and knowledge of its impact in developing the accuracy and endurance of scoring performance for young soccer players.

Through the researcher's experience, he noticed that most coaches are more interested in their training programs to endure than the skillful side, which generates dissimilar situations to that in the match leading to decrease player's level of concentration. It affects the accuracy of the performance of some skills, including the skill of scoring during the match , especially the player is in continuous movement on the field, who needs to develop the ability to make performance and accuracy through a training program which whereby he can develop the accuracy and endurance of scoring performance. By this program, the researcher tries to solve the research problem determined in the following question: Is there an effect of the training program on the accuracy and endurance of the scoring skill performance of young soccer players?

As for the research objectives, they reveal the effect of a training program in developing accuracy and endurance of scoring performance for young footballers. They also reveal the statistical differences in accuracy and endurance of scoring performance between the two pre-post tests for the individuals in the research sample are revealed.

The researcher assumed that there are statistically significant differences between the pre- and post-tests in the accuracy and endurance of scoring performance for the members of the research sample.

**The research areas are:**

- i- Human: the youth sports club players for the youth category (17-19) years.
- ii- Spatial: Al-Shabab Sports Club Stadium.
- iii- Temporal: the period between (4/9/2019) until (7/1/20120).

**Research procedures:**

**1-2 Research methodology:**

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

**2-2 The research community and sample:**

The research community was determined in an intentional way representing the youth club players for an athlete aged between (17-19) years who are (34) players. (10) Players were disqualified, (3) of them are goalkeepers and (5) players to conduct the expeditional experiment and (2) players due to injury. The sample was (24) players who would represent a percentage of (70.58%) of the research community.

**3- Sample uniformity**

For the purpose of ascertaining the moderate distribution of the research sample, the researcher used the code of torsion coefficient in the researched variable as shown in Table (1).

Table (1): shows the moderate distribution of the research sample in terms of strength and skill of handling and scoring football.

The value of the torsion coefficient	Medium	Standard deviation	Arithmetic means	Measuring unit	Sample no	Statistical parameters Variable
1.731-	63.111	0.931	62.574	degree/sec	24	Accuracy and endurance of scoring skill performance

By looking at Table (1), it is clear that the value of the torsional coefficient was between ( $\pm 3$ ). The sample is distributed in a moderate distribution.

**3- Devices and Tools used:**

Tape measure of (50) m length, (4) electronic watches type ‘Damond’, (25) signs – (20) funnels, (20) footballs, (3) whistles, (4) legal goal numbers.

**2-4 Means of collecting data:**

The following data collection methods were used: (content analysis, personal interview, metrics and tests).

**5- The test used in the research:**

Test name: Ability test to score through the accuracy and endurance of soccer performance. (Al-Rubaie, 2003: 89)

**The test goal:** To measure the ability to score through the accuracy and durability of soccer performance.

**The equipment used:** a soccer field, 9 balls, and a goal divided into three sections, with a distance of 1.5 meters per column, a measuring tape and a stopwatch.

**Test specifications:**

The test begins when the player takes the ball No. (1) from the first station, which is (2) m away and rolling it to the distance specified for scoring, which is (18) meters away and with a width of (2) meters for each area. He shoots the ball at the two areas designated for scoring which are signed inside the goal that are one and a half meters wide for each region, then he goes to the second station to take the ball No (2) rolling it to the second area for shooting from the specified area. He goes then to the third station to take the ball No (3) rolling it to shoot it from the shooting area for the third shooting station. Then he returns to the third station to take the ball No (4) and rolls it to shoot from the area to shoot for the third station. The player then goes to the second station to take the ball No (5) and shoots it, going to the first station to take the ball No (6) and shoots it after rolling. The player returns to the first station to take the ball No (7) and shoots it, then goes to the second station to take the ball No (8) and shoots it, then goes to the third station to take the ball No (9) shooting it, and here the test ends.

**Registration:**

- The time is calculated from the starting moment until the player hits the ball at station (9).
- Two marks are given for each ball entering the two designated areas to score on the goal line.
- One mark is given if the ball touches the pillars or the crossbar.
- A mark is not given if the ball enters the middle of the net.

An attempt is not successful if the ball is rolling while shooting, whether it is fast or slow.

- The time is calculated from the starting moment to the end of the test. That is, once the player shoots the ball in the last station, the number of goals is calculated, and then the two degrees are converted into a standard degree. We have two degrees for time, and the goals are collected and divided by (2). So that we have one mark that refers to the player's ability to shoot in this test.

**6- Experimental design:**

The experimental design was used in the method of one group with two tests, pre and post-tests in accordance with the nature of the problem.

**2-7 Exercises Used in Research:**

After analyzing the content of the scientific sources and by conducting a personal interview, a set of exercises were presented to develop the accuracy and endurance of the scoring skill performance. (9) Exercises were chosen from the set of exercises presented that fit the sample. Namely;

**Exercise (1):** The aim of the exercise is to develop accuracy and endurance of scoring performance.

Exercise explanation: Player A moderately passes the ball from the penalty area to player B, who is 15 meters away from him, then runs and rotates around him with 5 meters. The player receives the ball and then performs counter-

attack 'double bus' then shoots from the penalty area line, then run (5) meters inside the penalty area and shoots the second ball passed by player C from the wing towards the penalty area and then runs (5) meters to play the second ball from the penalty line. Accordingly, the 12 balls shall be handled by putting 6 balls on the penalty line and 6 balls inside the penalty area.

**Exercise (2):** The aim of the exercise is to develop accuracy and endurance of scoring performance.

Explanation of the exercise: the exercise is of two groups, each group consists of (2) players. Group A shall stand on the line beside the penalty area and the other group shall do so behind the arc of penalty behind the first group and the exercise continues.

**Exercise (3):** The aim of the exercise is to develop accuracy and endurance of scoring performance.

Explanation of the exercise: The first player from each group runs the ball for (5) meters, then jumps over the first barrier to receive the ball, and so on for the second and third barriers. The distance between bars is (2) meters. The player shall run (5) meters to the penalty area line, then shooting, and runs to the starting point. The second and third ball performance is carried out in the same way.

**Exercise (4):** The aim of the exercise is to develop accuracy and endurance of scoring performance.

Explanation of the exercise: The player receives the ball in the area (2 x 2) meters specified in the center of the penalty area and in front of the sign in the center of the specified area of the players present in each corner of the penalty area, then shoots (8) balls. Two balls from each corner alternately.

**Exercise (5):** The goal of the exercise is to develop accuracy and endurance of scoring performance.

Explanation of the exercise: The first player from each group starts running with the ball from the corner area at a distance of (20) meters, then passes a medium pass his teammate who (15) meters away, then runs a distance of (5) meters around the sign, receiving the ball, then running the ball (5) meters away. Finally the player shoots and runs to the start of the other corner (20) meters away. The player performs four balls from the right and four balls from the left.

**Exercise (6):** The aim of the exercise is to develop accuracy and endurance of scoring performance.

Explanation of the exercise: The player stands between four sign persons facing the goal, starting to run (5) meters distance, then running the ball placed between the two people in front of the penalty area, then running the ball to two people and the passing between them placed on the left side at a distance (5) meters. The distance between each person is (1) meter then runs (5) meters to the two people and pass between them on the right, then run a distance (5) meters to the two people in front of an area penalty and pass between them, then run the ball (5) meters and shoots from among the four people. Working on 3 balls continues consecutively.

**Exercise (7):** The goal of the exercise is to develop accuracy and endurance of scoring performance.

Exercise explanation: The first player from each group begins by passing (5) barriers where the distance between the first barrier and the starting point is (1) meter, and between each barrier is (1) meter, then running (5) meters towards the three

balls that are behind the sign person located at the penalty line. The player shoots the first ball and turns around the sign person and then the second and third and then runs (5) meters to the balls in the left area and then shoots the three balls in the same way.

**Exercise (8):** The goal of the exercise is to develop accuracy and endurance of scoring performance.

Explanation of the exercise: the players stand in a form of a group in the corner of the midfield line with the side line. The first player from each group runs (10) meters diagonally, then passes (5) barriers and between each barrier (1) meter, then receives a ball from the teammate who is 3 meters away, then he did a wall pass with the same teammate then shoots the ball. The other 3 balls are carried out consecutively.

**Exercise (9):** The goal of the exercise is to develop accuracy and endurance of scoring performance.

Explanation of the exercise: The first player from each group begins by running the ball with the two sides of the triangle at 10 meters distance, then does zigzag running between (2) sign people on the base of the triangle. The distance between each sign persons is (2) meters then the moment you pass the finish line is counted to score towards the goal, which is 15 meters from the finish line. Three balls are worked on continuously.

### **8- Exploratory experiences:**

"The exploratory experience is one of the most important required and necessary measures for the purpose of implementing the requirements of accurate scientific work, in order to overcome difficulties and non-economic measures from the material and human efforts" (Mahmoud, 2003: 38).

Therefore, the researcher conducted a number of exploratory experiments:

2-8-1 The first exploratory experience of the exercises used.

The researcher conducted the first exploratory experiment on 4-9-2019 to identify the exercises that the experimental group is trained on.

2-8-2 The second exploratory experiment for the tests.

This experiment was conducted on 14/9/2019 on 4 players except for the research sample. The objective of this experiment was the following: To verify the validity of the devices and tools and to verify the duration of the test.

### **8-3 The Third Exploratory Experience:**

The maximum values for all individuals in the sample were determined on 18-19 / 9/2019.

### **2-8-4 The fourth exploratory experience:**

This experiment was on 20-9-2019. After adopting the necessary directions and amendments regarding the training program, a training unit was conducted.

## **2-9 Final Research Procedures:**

### 2-9-1 Pre-tests:

The pre-test was conducted in accuracy and endurance of scoring skill performance on 23/9/2019.

### **9-2 Implementation of the training program:**

After analyzing the content of sources, research, and scientific studies, accuracy and endurance exercises for scoring skill performance in research were designed and prepared and exercises were finalized. After the researcher finished applying the pre-test in accuracy and endurance of scoring skill performance, the training program was implemented on the experimental group as in the table (2) on 28/2019 and until 27/1/2019. The researcher took into consideration a set of important points when implementing the training program, namely: -

All training units start with the general preparation in order to prepare all the body muscles and then perform the special preparation within a single training unit.

- Special exercises were applied accurately and withstand the performance of scoring skill in the special preparation stage and in the main section.

- The maximum values for the exercises used were determined.

- Three exercises were defined for each training unit of the experimental group.

- The training program was implemented for a period of (9) weeks (minor courses).

- The training program was implemented through (3) intermediate courses, at the rate of (3) minor courses in each intermediate cycle, as the endurance was rippled in the intermediate courses (Al-Basati, 1998: 1). Each minor course consists of (3) training modules per week on (Saturday - Monday - Wednesday) as 27 training modules are implemented besides using the low intensity interval training method when implementing the training program.

-The degree of endurance was controlled by relying on the variable in size, i.e. raising the volume and fixing both the intensity and the interval period. Many sources indicate that "when using a low-intensity interval training method, it is preferable to control the size of the load by increasing the number of iterations, or by reducing the interval period with intensity." (Al-Bishtawi and Khawajah. 2005: 27)

-The intensity of loading was determined in the proposed exercises by relying on the literature reviews that dealt with low-intensity interval training and the specificity of the proposed exercises in terms of the correlation between physical effort and skills and the ranges mentioned by scientific sources in determining the loading intensity for long-speed exercises to work. With a ratio of (60 - 80%) of the maximum values of the exercise, it is suitable to raise the pulse rate to (160) beats / min, in addition to using the (Karvonen) method to extract the intensity used. (Al-Basati 1998: 45)

-The duration of rest between the repetitions was determined by means of the exploratory experiment and the analysis of scientific sources. That is, the rest between the repetitions is the pulse volume 120 – 130 beats per min, is sufficient to restore player’s recovery, a positive and incomplete rest. The pulse index was an important role in reaching to the rest between repetitions. The winding endurance used was dependent on the training endurance time for each minor cycle.

Table (2): shows the intermediate (first and fourth) courses.

(First Intermediate Course / First Week)

Time of endurance for each main part	Time of total exercise	Interval between groups	Interval between repetitions	Group No	Repetitions	Time of exercise	Intensity	Used exercises	Today
36.67 min	13.64min	4min	85Sec	2	2	42.12Sec	%75	First	Saturday
	13.49min	4min	85Sec	2	2	39.89Sec	%80	Second	
	9.54 min	4min	85Sec	2	2	40.66Sec	%75	Third	
36.54 min	13.57min	4min	85Sec	2	2	41.11Sec	%75	Fourth	Monday
	13.43min	4min	85Sec	2	2	38.96Sec	%80	Fifth	
	9.54 min	4min	85Sec	2	2	40.54Sec	%75	Sixth	
36.71 min	13.57min	4min	85Sec	2	2	41.14Sec	%75	Seventh	Wednesday
	13.48min	4min	85Sec	2	2	39.78Sec	%80	Eighth	
	9.66 min	4min	85Sec	2	2	42.44Sec	%75	Ninth	

(Third intermediate course / seventh week)

Time of endurance for each main part	Time of total exercise	Interval between groups	Interval between repetitions	Group No	Repetitions	Time of exercise	Intensity	Used exercises	Today
49.16min	17.88min	4min	85Sec	2	3	42.12Sec	%75	First	Saturday
	17.65min	4min	85Sec	2	3	39.89Sec	%80	Second	
	13.73min	4min	85Sec	2	3	40.66Sec	%75	Third	
49.05min	17.77min	4min	85Sec	2	3	41.11Sec	%75	Fourth	Monday
	17.56min	4min	85Sec	2	3	38.96Sec	%80	Fifth	
	13.72min	4min	85Sec	2	3	40.54Sec	%75	Sixth	
49.33min	17.78min	4min	85Sec	2	3	41.14Sec	%75	Seventh	Wednesday
	17.64min	4min	85Sec	2	3	39.78Sec	%80	Eighth	
	13.91min	4min	85Sec	2	3	42.44Sec	%75	Ninth	

### 9-3 Post Tests:

After completing the implementation of the training program, the researcher conducted the test in the accuracy and endurance of the post-scoring skill performance on the players of the research sample on (30-11-2019) in the same way as applying the pre-test.



**2-10 Statistical means:**

The statistical means were extracted by relying on the statistical suitcase (spss), which are as follows:

(Arithmetic mean, median, standard deviation, T-test for correlated samples, percentage and standard score).

**3- Results Presentation and discussion:**

**3-1 Presentation of the results:**

Table (3): shows the statistical parameters in the variable of accuracy and endurance of scoring skill performance among the members of the research sample in the pre-post test.

result	value ) *sig(	T-Value Calculated	Post-test		Pre-Test		Measuring unit	Statistical parameters variable
			v- ± c	v- ± c	v- ± c	v- ± c		
Moral	0.00	-106.86	0.977	65.648	0.931	62.574	degree / second	Accuracy and endurance of scoring skill performance.

\* Moral at confidence (0.05), as the degree (sig) was less than (0.05) with a degree of freedom (19).

Table (3) shows that there are significant differences between the pre and post tests among the members of the research sample and in favor of the post test in the accuracy and endurance of scoring performance under consideration.

**2- Discussions**

It is evident from Table (3) that there are significant differences in the accuracy and endurance of the scoring performance that the research dealt with between the pre-post-test, because the sig values are less than the value by (0.05). The researcher attributes the reasons for those differences and the variable (under study) and for the benefit of the post-test to the use of the training program and the method of interval training (low intensity) and the exercises to develop accuracy and endurance of scoring performance in addition to organizing training loads in the daily units used by the researcher. He meant to develop the scoring skill according to accuracy and endurance of performance by relying on controlling intensity, size and interfacial comfort.

The researcher also attributes the moral differences in the accuracy and endurance of the performance of the scoring skill as a result of following the non-oxygenating exercises that had the main reason for the rise in lactic acid because the energy system used is proportional to the type of training. This led to the occurrence of adaptations that make the soccer player continue to perform with a high acidity Lactic is one of the important things that accompanies players.

This is what Jabbar Rahima pointed out that "following the non-oxygenic exercises that are characterized by the severity of less than the extremity, leads to a lack of oxygen necessary for energy production and thus the energy is produced with insufficient oxygen and then accumulation of lactic acid more than the rate of disposal. Resultantly, the blood becomes

acidic, thereby reducing the blood (PH), which can become dangerous when the vital organisms are unable to neutralize the blood and the internal organs and systems are not able to get rid of lactic acid. (Al-Kabbi, 2007: 207). Likewise, Abdel-Fattah, Abu Al-Ella, Hassanin, and Mohamed Sobhi indicated that "soccer requires developing these capabilities because of their importance in developing anaerobic potentials aiming to develop the muscle capacity and to withstand the muscle performance resulting from the anaerobic energy system with a system Lactic acid which indicates endurance of speed and power. " (Abdel-Fattah, 1997: 64).

Likewise, accuracy and endurance exercises of scoring performance, which include in its content two aspects: accuracy and endurance are performed by the player during the implementation of these exercises. These exercises have been linked to the lengthening force and speed, in addition to relying on the accuracy of scoring and enthusiasm throughout the implementation of all these exercises. All of this led to high levels of accuracy and endurance of the player's scoring skill. "The training is an integrated issue and not including any of the components of the game with adequate training makes the player ineligible to perform duty in the game. The player cannot perform any technical or planning activity unless having sufficient physical ability. The execution of any plan can be successful if the player does not possess a good ability in technical skills and so on "(Al- Saffar, 1981: 17)

Mowaffaq also pointed out that the planning side is considered one of the factors that develop the game, as improving tactics and raising the level of moves during playing must be accompanied by improvement and development in technique and physical fitness as well as high speed and intensity of the performance of kinetic movements during moves. The many moves taking place in the match in different ways and in the parts of the stadium must be accompanied by raising the requirements related to the degree of mastery of basic skills and the level of physical ability "(Mahmoud 2009: 95). " The special physical fitness is morally related to skill fitness, and the art of performance depends on the player's physical fitness" (Al-Tikrity and et al. 1986: 47).

The researcher attributes this development in the accuracy and endurance of the performance of the scoring skill to the nature of the training program, including the exercises that are directed towards developing the accuracy and endurance of performance. Furthermore, the interest in distributing load and regularity and the continuation of training according to a scientific method and sound planning makes scientific training as the ideal method adopted by the coach in building his players and accustoming them to face possible difficulties in the match. Moreover, the progress in re-exercises and repetition led the players to mastering the scoring skill and developing their abilities to withstand performance taking into account the appropriate training method that is compatible with this method of exercises. The researcher believes that the use of the training program close to the atmosphere of the match in training had a significant effect on developing the accuracy and endurance of the performance of the scoring skill of the players.

### **Conclusion:**

The researcher concluded the following:

1. The training program led to the development of accuracy and endurance of scoring skill under consideration.

2. The training program with a low-intensity interval training method allows the coach to work and control the components of the training load and leads to the development of accuracy and endurance of scoring performance for soccer players.

3. The method of choosing the privacy, quality, number and distribution of the exercises had a clear impact on developing the accuracy and endurance of scoring skill performance significantly.

The researcher recommends the following:

1. The necessity of applying the training program in a low-intensity interval training method based on sound scientific foundations in maintaining the accuracy and endurance of the performance of the soccer scoring skill.

2. Emphasizing the football coaches that physical exercises are linked to the skill and planning aspects.

3. Emphasis on football coaches that the exercise time is an approximation of the main work times in the match or similar to performance in the different playing situations.

4. It is necessary to implement the training program, which depends on developing the accuracy and endurance of scoring performance on age groups and other skill and physical capabilities, taking into consideration the possibility and capabilities of players.

## References

1. Taha, I, and et. al (1989): Foundations and rules of sports training and its applications, Faculty of Physical Education, Alexandria University, Egypt.

2. Al-Basati, A, A. (1998): The Foundations of sports training and its applications, Faculty of Physical Education, Alexandria University, Egypt.

3. Al-Bishtawi, M, H. & Khawaja, A, I. (2005): Principles of Athletic Training, University of Baghdad, Iraq.

4. Al-Tikriti, W, Y, & Muhammad , A, Yassin, T.(1986): Physical Preparation for Women, Dar Al-Kutub for Printing and Publishing, University of Mosul, Mosul, Iraq.

5. Al-Rubaie, K, A. & Muwaffaq, M. (1988): Physical preparation for football. Dar Al-Kutub for Printing and Publishing, University of Mosul, Iraq.

6. Al-Saffar, S, and et al. (1981). Soccer, Part 1, Dar Al-Kotob for Printing and Publishing, Mosul

7. Abdel-Fattah, A, (2003). Physiology of Athletic Training, Dar - Arab Thought, Cairo

8. Abdel Fattah, A, & Hassanein, M, S. (1997). *Mathematical Physiology and Morphology, Measurement and Evaluation Methods.* : Cairo, Arab Intellect Press.
9. Al-Kaabi, J, R. (2007). *The physiological and chemical foundations of sports training: Qatar, Qatar National Press.*
10. MuhammadDergham, J and et al. (2012). *Building a test of ability to score through accuracy and durability in soccer, Al-Rafidain Journal of Sports Science (bi-annual) - Volume (18) - No. (58), Mosul, Iraq.*
11. Mahmoud, B & Kamilan (2003): *The level of physical growth of some functional physical abilities for ages (9-12) years. Unpublished Master Thesis, College of Physical Education, University of Baghdad, Iraq.*
12. Mahmoud, M, A, (2009). *Tests and Tactics in Soccer, 2nd Edition, Tigris Printing House, Jordan.*
13. Epley, Boyed (2007): *The Bath to Athletic Poer, (Principle 10: Interval), Training, (WWW.HumanKinetics).*