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Training in accordance to oxygen differential threshold and its impact on the heart metabolic need and the two cortisol and growth hormones for the advanced 1500m runners

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ABSTRACT

The study aims to set a training program with an altitude mask to achieve an oxygen differential threshold. This is set to know the program impact on the oxygen metabolic need of the heart and the two cortisol and the growth hormones.

The researcher employed the experimental program of the single 8-player group. This group is used as a specimen that is intentionally selected. Furthermore, many methods, tools, devices, and tests used the most critical setting of the an-8weik training program with 3-tracing sessions per week. The duration is 50-60 minutes. Each session is executed at a 75-95% velocity of the runner's capacity with the altitude mask. The mask was used to know the endurance of the functional organs, especially the heart and the hormones, for the study's physical effort.

The pre and post-tests were done. The results were statistically treated, and accordingly, the researcher has arrived at certain conclusions using training according to oxygen differential threshold with altitude mask. It has developed the heart metabolic need level and the level of cortisol and growth hormones. It is possible to carry out a study by using other pieces of training and altitude masks and different thresholds.

Keywords: Training, Oxygen Threshold, Heart Metabolic Need, Hormones

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1. Introduction

The world today is witnessing spectacular developments in the scientific and practical aspects of the world's athletes. Laboratory devices and auxiliary tools have contributed to the delivery of knowledge to higher levels, not only on the theoretical side, but on what happens to the player's body from physiological responses that translate the level What the player has to do with this is the science of supporting the science of sports training, but the levels of training which are often the physiology itself, there are physiological conditions that the player reaches during the athletic performance called particular physiological specifications such as the use of the differential sample Oxo genetic and Latex both, although different in terms of energy production, are associated with the maximum consumption of oxygen, heart rate, lactic acid, and pulmonary ventilation, the threshold of aerobic difference is the key to the physiological transformation of the training. The basis for the acceptance of physical effort and planning for future training especially and that there are many teams and training methods to take out the training load associated with the competition on it is the minimum intensity of physical load that can improve the aerobic capacity while the threshold of anaerobic difference represents the maximum load physical development of aerobic capacity. Hence, the problem of research which lies in need of the metabolic heart when training the oxygen threshold with knowledge of the amount of both hormone cortisol and growth hormone on the role played the basis in the production of energy and metabolism of cells and bodily tissues to continue the athlete in the performance of running (1500 meters) in One of the most important sporting events that require such studies in addition to informing the trainers on the levels of their players and especially that most athletes did not have specialized laboratories to know their physiological

levels as a reflection of sports training[1-3]. The objective of this study is to develop a training program based on the oxgenetic threshold. The values of both the metabolic need of the heart and the hormone (cortisol and growth) are defined in the tribal test for it at the dimensional of the research sample.

2. Methodology

The researcher used the experimental method based on direct and factual interaction with the various phenomena and is based on two fundamental pillars: observed facilitation of the lord of the species [4]. The researcher deliberately selected the number of (8) runners for the effectiveness (1500 meters) ranged between (±1.71 m) and their weights (±71 kg) while their time age (23.3 years) all underwent the experimental design of the one sample.

The blood test for (cortisol and growth) was tested from rest mode before and after the application of the training curriculum as the laboratory sits and the tester withdraws (5Cc) from the blood and then carries a special preservative to the Jenin laboratory. For pathological analyses to be processed and extracted, the values of both the hormone and growth hormone. The researcher used an oxygen metabolism test for the heart. The exploratory experiment was conducted to avoid errors that the researcher could have on Monday, 10/12/2018 at 4 pm, and the researcher has since benefited, especially the extent. The commitment of the sample and the staff to the assistant and get the results in the site to perform the test. The tribal tests were conducted on Wednesday, 12/12/2018. The training program was applied for eight weeks from 15/12/2018 to 9/2/2019Several methods were used to develop the maximum oxygen consumption in the cells and tissues of the body. The number of weekly training modules was three units with the number of units (24) units. The time of each training team is from (50-60) minutes, and the intensity of training is between (70-80) %. The tests were carried out on Sunday, 11/2/2019, at 4:00 pm with the same system, sequence, and conditions of application of tribal tests.

3. Results and discussion

Table 1 shows the statistical variables of cortisol hormone tests and the growth and metabolic need of the heart oxygen.

Table 1. Statistical variables of cortisol hormone tests and the growth and metabolic need of the heart oxygen

	Variables Search	**Tribal**		**The Friendly**		**Diff.**	**Sd err**	***T**	**Sig**	**The significance**
		M	**± sd**	**M**	**± sd**					
1-	**The metabolic need for oxygen for the heart**	**5.37**	**0.70**	**8.05**	**0.75**	**2.62**	**0.85**	**3.15**	**0.000**	**Moral**
2	**Cortisol**	**19.25**	**0.88**	**13.01**	**0.66**	**6.24**	**0.85**	**7.28**	**0.000**	**Moral**
3-	**Growth hormone**	**4.875**	**0.79**	**8.18**	**0.59**	**3.30**	**0.79**	**4.13**	**0.000**	**Moral**

From Table 1 and after looking at the arithmetic and arithmetic communities' values, the calculated values (T) appeared with values (3.15, 7.28, 4.13). When comparing the level of significance obtained from the program and the adult (0.000), We find that it is smaller than the indication that the data was processed underneath. It means that the differences are good and in favor of the dimensional test, the researcher attributes the reason for these differences to the training program developed by the researcher where the program system and the responsiveness of the players and the intensity of training and the time of the training unit the significant

impact in showing the difference of morale add the use of Training methods such as oxygen deficiency training masks He was the other one that affected the metabolic need of the oxygen of the heart. Any latest training this adaptation in functional devices at the level of cardio-respiratory function This means that physiological adjustment seems to be a degree of specialization so it is almost limited to Muscles used in training only [5-6]. In addition, it affects the values of the metabolic needs of the heart, as we said in hormones. In cortisol we see that before the program differs from it after the program at the beginning of the muscular work continues secretion of cortisol with other hormones, where this helps to burst chlorosis blood from the liver after continuing and adjusting to the intensity of exercise, the rate of hormone secretion drops to continue secretion of epinephrine and growth of epinephrine [7].

As for growth hormone, sources indicate that the relationship with increased growth hormone concentration is related to structural, metabolic processes [8, 9].

That is, the increase in this hormone is a continuation of the performance and because of the development of tissue capacity and this is what he pointed out that growth hormone increases with training to help maintain plasma chlorosis and some of these effects are due to the direct impact of growth hormone on tissues.

The researcher has the effect of assessing the heart and supplying it with oxygen, growth hormones, and cortisol. He believes that structured training is the basis in the variability of the accident in the cells and tissues of the body for the better but according to physiological and training tests.

The researcher reached several conclusions, which were trained under the oxgenetic threshold of oxygen deficiency training methods, which has an intestinal effect on the oxygenetic need of the heart. The training program, which is based on the anaerobic threshold of training intensity and the number of training modules, impacts research variables along with the effect on cortisol hormone values and growth hormone.

4. Conclusion

1. There is a considerable effect of training according to oxygen threshold on the heart metabolic need. This was shown through the significant differences seen in the post-test as compared to the pre-tests

2. There appear to be some significant differences in Cortisol Hermon values of the post-tests compared to the pre-tests for the study specimen under training.

3. There appear significant differences in growth Hermon values in the post-tests compared to the pre-tests of the study specimen as a result of training.

4. Training according to the oxygen threshold for eight weeks in three training sessions, each with 70% - 80% velocity, is enough to make significant changes on behalf of the study specimen.

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