

# 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

Asst. Professor Dr. Abdul Razzaq Al Majidi

Al Esraa University College

## ABSTRACT:

*The present study aims at setting a training program with altitude mask, that is performed according to the oxygen differential, threshold. This is set in order to know the program impact on the oxygen metabolic need of the heart and the two cortisol and the growth hormones.*

*The researcher used 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 were using the most important of which were setting an-8week training program with 3-tracing sessions per week the duration of each 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, specially the heart and the hormones for the physical effort, given by the study.*

*The pre and post tests were done and the results were statistically treated and accordingly the researcher have arrived at certain conclusions the most important ,using training according to oxygen differential threshold withaltitude Mask has developed the heart metabolic need level and the level of the cortisol and growth hormones . and recommendations a possibility of carrying out a study by using other trainings and altitude mask and other thresholds.*

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

## INTRODUCTION

The world to day is witnessing spectacular developments in the scientific and practical aspect 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 special physiological specifications such as the use of the differential sample Oxogenetic and Latex both, although different in terms of energy production, are associated with the maximum consumption of oxygene, 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. " (441:1985: Brooks). Hence the problem of research which lies in the need of the metabolic heart when training the oxingene 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 in order 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. And Objective 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.

**MATERIALS AND METHODS:**

The researcher used the experimental method "based on direct and factual interaction with the various phenomena, and is based on two fundamental pillars, which are observed facilitation the lord of the species". Abdelmouti: 2002:8). The researcher chose in the intentional manner 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 humoni (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 oxygene metabolism test for the Heart(Haza'a: 1992:97). 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 perform the test. The tribal tests were conducted on Wednesday 12/12/2018. The training programme 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 and the number of weekly training modules was three units, with the number of units (24) units. The time of each training unit is from (50-60) minutes and the intensity of training between (70-80)%. The tests were carried out on a day Sunday 11/2/2019 at 4:00 pm with the same system, sequence and conditions of application of tribal tests.

**RESULT AND DISCUSSION:**

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

T	Variables Search	Tribal		The Friendly		.Diff	Sd err	* T	Sig	The signific ance
		M	± sd	M	± sd					
1	The metabolic need of the oxygene 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
---	----------------	-------	------	------	------	------	------	------	-------	-------

\* Below the level of indication (0.05) and degree of freedom (7)

From table (1) and after looking at the values of the arithmetic and arithmetic communities and the calculated values (T) appeared with values (3.15, 7.28, 4.13) and when comparing the level of significance obtained from the program and the adult (0.000) We find that it is smaller than the level of 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 had an impact on the metabolic need of the oxygene 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. " (Mohamed Tawfik: 2003:28) In addition, it has an effect on the values of the metabolic need 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 Chlorose blood from the liver clockoz after continuing and adjusting to the intensity of exercise, the rate of hormone secretion drops to continue secretion of epinephrine and growth of epinephrine. " Ahmed, Nader: 2001:31).

As for growth hormone, sources indicate that "the relationship with increased growth hormone concentration is related to structural metabolic processes." (Akil: 2013:156).

That is, the increase in this hommon is a continuation of the performance and because of the development of tissue capacity and this is what he pointed out (Bahaa: 2008:367) that "growth hormone increases with training to help maintain plasma chlorose and some of these effects are due to the direct effect of growth hormone on tissues.

The researcher has the effect of assessing the heart and supplying it with oxygen as well as 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 I wastrained to train in accordance with the oxgenetic threshold of oxygen deficiency training methods has an intestinal effect on the oxygenetic need of the heart. The training programme, which is based on the anaerobic threshold of training intensity and the number of training modules, has an impact on research variables. And the effect on cortisol hormone values and growth hormone.

#### REFERENCES:

- Ahmed Heshmat, Nader Hassan, physiology of muscular fatigue (Cairo, 2001).
- Abdelmouti Mohammed Assaf et al., methodological developments and scientific research process, 1st, Amman, Wael Publishing and Distribution House, 2002.
- Aqeel Jassim Hasan, the effect of dynamic lactate exercises on the change in the level of lactic acid concentration and some of the occupational and functional variables and the level of achievement in (200 m - 400 m) Freestyle, PhD thesis, University of Basra, Faculty of Physical Education and science Sports, 2013.
- Mohammad Tawfiq Gharbieh; physiological and morphological responses to the circulatory system before and after two aerobic and anaerobic efforts, PhD thesis, University of Mosul, Faculty of Physical Education.
- Hazza bin Mohammed al-Haza'a, laboratory experiments in bodily physiology, Riyadh, King Saud University, 1992.
- Brooks, G. A and Fahey, T.D. exercise Physiology new your: John Wiley & sins, 1984.