

IMPACT OF TRADITIONAL ORGANIC ENERGY FOOD SUPPLEMENT ALONG WITH ANAEROBIC TRAINING ON ANTHROPOMETRIC VARIABLE OF SPORTSMEN

S. ARUNSANKAR

Part time PhD Research scholar, Madurai Kamaraj University, Madurai.

Dr. J. PAUL JEEVA SINGH

Guide, Director of Physical Education, Ayya Nadar Janaki Ammal College, Sivakasi.

Dr. C. RAMESH

Assistant Professor and Head, Department of Physical Education, Madurai Kamaraj University, Madurai.

Abstract

Enhancing athletic performance is a great desire among athletes, coaches and researchers. The awareness of nutrition plays a key role in sports performance. Many factors can be bearing the performance of a sports person during competition which may be related to different domains. The most commonly encountered nutrition related problem among sports person is their failure to consume sufficient total of food energy the present study is the impact of traditional organic energy food supplement along with anaerobic training on anthropometric variable of sportsmen. To achieve the purpose of the study, 30 sportsmen will be selected from Ayya Nadar Janaki Ammal College, Sivakasi falling in the age group of 18 to 25 years will be selected and randomly divide in to three groups. Sportsmen should have been participated in intercollegiate tournament. Random group design will be adopted in this study as the investigator is particular to make a meticulous analysis to find out whether there is any significant improvement in the mean level of the group in selected Anthropometric variable. They will be divided in to three groups. Experiment group I will take Anaerobic Training with Traditional Organic Energy Food Supplement. Experimental group II will take the Anaerobic Training with Normal Diet. Group III will act as Control Group while they will undergo for their regular training. Thigh girth is chosen as Anthropometric variable. Anaerobic Training with Traditional Organic Energy Food Supplement is more effective than Anaerobic Training with normal diet and Anaerobic Training with normal diet is more effective than Control group in promoting hypertrophy of the muscle.

Keywords: Anaerobic Training, Traditional Organic Energy Food Supplement

INTRODUCTION

Diet is one of the main aspects of athlete's training program. Although exercise and athletic training are considered to increase nutrient needs of some athletes, a balanced diet with adequate calories can potentially provide the necessary nutrients (Maughan et al., 2004). Enhancing athletic performance is a great desire among athletes, coaches and researchers. The awareness of nutrition plays a key role in sports performance. Many factors can be bearing the performance of a sports person during competition which may be related to different domains. The most commonly encountered nutrition related problem among sports person is their failure to consume sufficient total of food energy. Food is composed of six basic substances: carbohydrates, proteins, fats, vitamins, minerals and water. Each one of these has specific

function in providing nourishment for the body. For the sportsman, it is a critical importance to recognize what each does to his body under physical, mental and emotional strains of competition. The duration and the intensity of the exercise involved in a given sport will determine the principal source of energy used in meeting the work demands of that particular sport. The certain nutrition and dietary approaches can enhance the sports performance and also nutrition is essential for an athlete's good performance (Manikandan and Selvam, 2010). Nutrition plays a very important role in attaining high level of achievements in sports. Nutritional status has a direct bearing on the level of physical performance. Hence, physical fitness and training are very much dependent on nutritional status of sports personnel (Beals and Manore, 1998). Nutrition is an important complement of any physical fitness program. The main dietary goal for active supplement information from nutritionists/dietitians and individuals is to obtain adequate nutrition to optimize health and fitness or sports performance (Congeni and Miller, 2002; Berning, 2000). Appropriate nutrition is an essential prerequisite for effective improvement of athletic performance, conditioning and recovery from fatigue after exercise and avoidance of injury. Nutritional supplements containing carbohydrates, proteins, vitamins and minerals have been widely used in various sporting fields to provide a boost to the recommended daily allowance. In addition, several natural food components have been found to show physiological effects, and some of them are considered to be useful for promoting exercise performance or for prevention of injury (Wataru et al., 2006). Anaerobic exercise is a physical exercise intense enough to cause lactate to form. It is used by athletes in non-endurance sports to promote strength, speed and power; and by body builders to build muscle mass. Muscle energy systems trained using anaerobic exercise develop differently compared to aerobic exercise, leading to greater performance in short duration, high intensity activities, which last from mere seconds to up to about 2 minutes.^[1] Any activity lasting longer than about two minutes has a large aerobic metabolic component. Anthropometry refers to the measurement of the human individual. An early tool of physical anthropology, it has been used for identification, for the purposes of understanding human physical variation, in anthropology and in various attempts to correlate physical with racial and psychological traits. Anthropometry involves the systematic measurement of the physical properties of the human body, primarily dimensional descriptors of body size and shape

Statement of the problem is the purpose of the study is to find the impact of Traditional Organic Energy Food Supplement along with Anaerobic Training given to experimental groups on anthropometric variable

RESEARCH METHODOLOGY

To achieve the purpose of the study, 30 sportsmen selected from Ayya Nadar Janaki Ammal College, Sivakasi falling in the age group of 18 to 25 years selected and randomly divided in to three groups. Sportsmen should had been participated in intercollegiate tournament. Random group design was adopted in this study as the investigator is particular to make a meticulous analysis to find out whether there is any significant improvement in the mean level of the group in selected Anthropometric variable. They divided in to three groups. Experiment group I had taken Anaerobic Training with Traditional Organic Energy Food Supplement. Experimental

group II had taken the Anaerobic Training with Normal Diet. Group III will act as Control Group while they undergone for their regular training

Anthropometric variable - Thigh girth

Thigh girth was measured by a Gulick tape, placed around the thigh horizontally with its top edge just under the fold of the buttocks. The subject was stand with body weight equally distributed on both the feet.

Analysis of Data

This table shows that analysis of covariance of three groups

Group	Anaerobic training along with traditional organic energy food supplement	Anaerobic training	Control group	Sum of Squares	DF	Mean sum of squares	F-Ratio
Pre test	19.6	19	19	B: 2.4 W: 60.4	2 27	1.2 2.33	0.53
Post test mean	21.20	20.10	19.67	B: 12.55 W: 68.7	2 27	6.275 2.54	2.47
Adjusted post test mean	21.56	20.28	19.85	B: 6.13 W:3.92	2 26	3.06 0.15	20.4*

Paired Adjusted Final Means and Difference between Means of Three Groups (Thigh Girth)

Anaerobic training along with traditional organic energy food supplement	Anaerobic training	Control group	
21.56	20.28		1.28*
	20.28	19.85	0.43*
21.56		19.85	1.71*

DISCUSSION OF FINDINGS

Anaerobic Training with Traditional Organic Energy Food Supplement and Anaerobic Training with normal diet were more effective in increasing girth measurements of thigh in comparison to control group. This proves that increase in girth measurement was due to increase in lean body mass and subsequent hypertrophy of the muscles. As Amino Acids are constantly liberated in to the blood stream from the muscle fibers as a result of wear and tear of the muscle and also amino acids in right proportion are absorbed by the muscle fibers from the blood stream for repairing the wear and tear and to also add more protein molecules to existing myofibrils if the load on the muscle is gradually increased which results in the hypertrophy of the muscles.

Hypertrophy is the phenomenon where by crosssectional area of the muscle is increased as a result of long term exercise but it is subjected to the limits set by ones' genetic background, living style and above all dietary factors. The study that we have undertaken clearly shows that Anaerobic Training with Traditional Organic Energy Food Supplement is better than Anaerobic

Training with normal diet and Anaerobic Training with normal diet is better than Control group in promoting hypertrophy of the muscle. The muscles leading to increase in its power and bulks very readily absorb the creative content of the nutritional supplement.

CONCLUSION

The detailed and distilled analysis and interpretation of the data has led us to following conclusion:

Anaerobic Training with Traditional Organic Energy Food Supplement is more effective than Anaerobic Training with normal diet and Anaerobic Training with normal diet is more effective than Control group in promoting hypertrophy of the muscle.

References

1. Maughan RJ, King DS and Lea T(2004) Dietary supplements Journal of Sports Sciences 22,(1), 95.113.
2. ManikandanS and SelvamD,(2010), "Nutrition and sports performance",Br J Sports Med;44:i46
3. Beals KA, Manore MM.(1998) Nutritional status of female athletes with subclinical eating disorders. J Am Diet Assoc.98:419–25
4. Congeni J, Miller S. (2002) Supplements and drugs used to enhance athletic performance. Pediat Clin North Am. 49:435–61.
5. Wataru Aoi, Yuji Naito and Toshikazu Yoshikawa,(2006) ,"Exercise and functional food" Nutrition Journal, 5:15
6. https://en.wikipedia.org/wiki/Anaerobic_exercise
7. <https://en.wikipedia.org/wiki/Anthropometry>
8. <http://hdl.handle.net/10603/225489>