



ISSN: 2456-0057
IJPNPE 2019; 4(2): 139-141
© 2019 IJPNPE
www.journalofsports.com
Received: 07-05-2019
Accepted: 11-06-2019

Devendra Kumar
Assistant Professor, SDPG,
College, Math-Laar, Deoria,
Uttar Pradesh, India

Mahesh Yadav
Assistant Professor, Mahatma
Gandhi P.G. College, Gorakhpur,
Uttar Pradesh, India

Dietary status of athletes of track and field from universities in Uttar Pradesh

Devendra Kumar and Mahesh Yadav

Abstract

A survey on dietary pattern was conducted on athletes participated in state level inter University Track and Field competition held at Merut (U.P) in November 2015. The comparison of dietary activity for calories and protein intake is analyzed comparing with Recommended Dietary Allowance (RDA) for 60 male and 40 female athletes. For collecting data researcher constructed a questionnaire and from the diet chart converted it in to numeric form to analyze. Mean, mode, minimum, 25th & 75th percentile and maximum scores explained the dietary status of this group of male and female athletes. A result of this study shows that male and female athletes participating in competition have deficient calories as well as protein intake.

Keywords: Track and field, Nutrition calories, protein

Introduction

Background of the study

When we look at a student athlete child we have to consider that they are using more calories than their friends not involved in sport. According to U.S. Department of Health and Human Services, if athletes are between 14 and 18 they should consume between 2,800 and 3,200 calories. It is also important that the types of calories the athlete consumes are balanced between carbohydrates, proteins, and fats.

Male athletes

For healthy weight maintenance and optimal performance athlete need optimal intake of calories and protein. The University of Missouri estimates that male athletes generally need more than 22.7 calories per pound of body weight each day or more than 3,800 calories per day for a 170 pound man. A study published in a 2010 edition of the "Journal of the International Society of Sports Nutrition" reports that strength athletes who participate in intense training need 50 to 80 calories per kilogram of body weight on a daily basis.

Female athletes

Since women athletes weigh is usually less than male athletes, they generally require fewer calories as well. According to the University of Missouri, female athletes need about 20 to 23 calories per pound of body weight each day. This is equivalent to 2,600 to 2,990 calories a day for a 130 pound woman.

Actual calorie intake

The calorie intake of high performance, Canadian athletes was measured by researchers at the University of Calgary. The study, published in a 2009 edition of the "Clinical Journal of Sport Medicine," reports that the average energy intake of elite Canadian athletes was 2,304 calories for women and 2,918 calories for men. However, researchers also report that both the men and women athletes who participated in the study consumed calorie intakes below recommended levels for athletes

Calorie composition

According to the American Academy of Orthopaedic Surgeons, most athletes should eat 60 to

Correspondence
Devendra Kumar
Assistant Professor, SDPG,
College, Math-Laar, Deoria,
Uttar Pradesh, India

70 percent of their calories from carbohydrates, 12 to 15 percent from protein and 20 to 30 percent of their calories from fat. Therefore, an athlete who eats 3,000 calories per day needs 450 to 525 grams of carbs, 90 to 113 grams of protein and 67 to 100 grams of fats according to a study published in a 2004 edition of "Sports Medicine."

Athletes from Universities of Uttar Pradesh

The inter District Athletics tournament was conducted by Merut Athletics, Merut from 28th November to 1st December 2015. Out of all District from U.P. 18 sent 527 Athletes for track and field competition.

Proper diet influences every athletic performance irrespective of game or gender. It was observed that many athletes have very good potential but could not perform accordingly. One of the researchers of this topic Mr. Ravi Saini is associated with the field of athletics for more than 40 years as National Athlete and coach observed that college athletes neither get proper diet nor guidance for it. Athletes participated in competition were from different rural and urban areas of U.P, hence it was main purpose of this endeavor to study about the status of calorie and protein intake of these athletes.

Methodology

Out of 527 track and field athletes participated in competition 60 males and 40 females were randomly selected for data collection. There were about 30 athletic coaches representing different District teams out of them six coaches were randomly pulled out for interview to verify the information given by athletes.

Data analysis and Discussion

The data collected on dietary pattern was analyzed to study the status of calorie and protein intake among athletes. The dietary data was collected through questionnaire constructed by researchers, the recall method was used. The information on daily consumption of major food items like milk, tea, chapatti, bhakari, rice, vegetables, Dal, eggs, milk, curd, sprouts etc. was recorded either in terms of number or in terms of katories. The calories and protein intake were estimated using table values (Agharkar Research Institute, 1999) [3]. The estimated calories and protein intake were compared with the recommended dilatory allowance (RDA) for Indian adults engaged in moderate activity. The subjective data was converted to numeric data and analyzed the same.

Table 1: Summary of calories and protein intake of male track & field athletes participating in tournament

Sex		Cal. Intake	Protein Intake (gm.)
Male (N=60)	Minimum	605	27.10
	25 th percentile	1212.8	40.82
	50 th percentile	1804.5	67.80
	75 th percentile	2430.7	90.51
	Maximum	5067	241.71
	Mean	1994.56	72.26
	Std. dev.	965.61	39.87

It was observed that mean daily calories intake (Kcal per day) in male was found 1994 kcal. (SD=965) Minimum calorie intake of male athletes was very low i.e. 605 kcal. Only 25 % (15) athletes of the sample have more than 2430 kcal intake. There are few who got very high calorie intake up to 5067 kcal. Out of sixty 50% (30) male athletes have less than 1804 kcal. Intake. This amount of calorie intake is far less than RDA as well as international recommendations. American Academy of Orthopaedic Surgeons has suggested that athletes

should get 90 to 113 gms. of protein from their diet but table 1 suggest that athletes participated in tournament consume average 72.281 gms. of protein. If we study the protein intake of this group it gives us horrible picture as minimum intake is very very less than recommended intake i.e. just 27.1 gms. While there are only 25% athletes who consume more 90.51 Gms. of protein, which is at the lower end of the recommended intake.

Table 2: Summary of calories and protein intake of female track & field athletes participating in tournament

Sex		Cal. Intake	Protein Intake (gm)
Female (N=40)	Minimum	367	12.71
	25 th percentile	862.87	30.32
	50 th percentile	1141.7	43.90
	75 th percentile	1551.5	53.11
	Maximum	3587	140.81
	Mean	1240.213	46.54
	Std. dev.	576.39	22.90

It is observed from table 2 that mean daily calories intake (Kcal per day) in female was found 1240.213 kcal. (SD=576.39). Minimum calorie intake of female athletes was very low and poor i.e. just 367 kcal. Which is even lower than a kid. There are few who got calorie intake up to 3587 kcal. Which is as per RDA as well as international recommendations. Out of forty 50% (20) female athletes have less than 1141.7 kcal. Intake. This amount of calorie intake is far less than RDA as well as international recommendations, it is about half of the recommended amount. It is clear that female athletes participated in tournament consume average 46.54 gms. of protein. If we study the protein intake of this

group it gives us more horrible picture than male athletes as minimum intake is very very less than recommended intake i.e. just 12.71 gms. While there are more than 75% athletes who consume less than just 53.11 gms. Of protein. Which is not even at the lower end of the recommended intake range?

Conclusion and Recommendation

Our findings indicate many areas for research. E.g. importance of nutrition is neglected by most of the athletes which needs to be studied further. Here one more important factor should be taken into consideration about financial background of the athletes. Many athletes may be from

financially weaker section. Also such survey should be carried out at college level. There is a need to introduce dietary intake, health and fitness standard (benchmarks) at college level to guide sports participants. It is concluded from this study that male and female athletes participated at inter University track and field U.P. state level competition are calorie as well as protein deficient according to recommendation given by national and international level research centers.

References

1. Gopalan C, Ramesh wari BV, Balsubhramanian SC. revised by Rao BS, Deosthale YG, Pant KC, *et al.* Nutritive value of India Foods. National Institute of Nutrition Indian Council of Medical Research: Hyderabad, 1995.
2. Research quarterly, 2011, 1(82).
3. Research paper on Current status and future in athletics in Pune by Vasant Gokhale and Dr. Mahesh Deshpande. Agharkar Research Institute, Nutritive Values of Some Indian Food Preparations, Maharashtra Association for the Cultivation of Science, Research Institute: Pune, 1999-2015.