

A Study on Energy Balance among Female & Male Players Engaged in Different Sports Disciplines

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Abstract

The study deals with assessment of energy intake & expenditure of players. Female [N=13] & male [N=46] players, aged 18-22 years, engaged in different sports disciplines were selected. All players were found regularly participating in specific games in which they were involved. Data was collected using questionnaire-cum-interview schedule. Mean \pm SD & R values were calculated. Student's 't' test was used for comparisons. Irrespective of sex & games, all players were found significantly shorter than the respective standard heights for their age [t = 3.75 for females & 9.52 for males]. Majority of female players were not meeting the standards of weight for height. Based on 24 hour's dietary recall method, it was found that all players fell short of meeting the recommended dietary allowances [RDAs] for energy, carbohydrates, protein & fat. Total time spent on routine activities [TTSRA] by female players was computed as 1290 minutes/day & TTSRA by male players was found to range between 1260 – 1320 minutes/day. Energy expenditure [EE] reflected a direct relationship with body weight, time spent & type of activities. Highest values for EE on routine activities & EE on sports activities were found to be 1901 & 892 kcal as well as 2027.88 & 1358.78 kcal for female & male players, respectively. Negative energy balance was observed in all players.

Key Words: Energy Intake, Energy Expenditure, Energy Balance, Recommended Dietary Allowances

Introduction

Good nutrition at all times is essential for effective athletic performance. During adolescence, individuals undergo significant growth & maturation, & unique changes take place in the body, thus, causing an increase of nutritional needs. An adolescent athlete have energy needs that are different from the needs of adult athlete, one should pay attention not only to energetic suitability, but also to the intake of protein & fluids before, during & after the exercise (Fox, 1994; Thompan, 1998).

Nutrition not only plays a role in performance, but it can also help to prevent injuries, enhance recovery from exercise, help maintain body weight, & improve overall health. It is important for all sports person to have a good working knowledge, understanding of exercise science & sports nutrition so that these

can help in their own performance potential (Bakulin & Efimo, 1996; Loucks, 2004).

The need of an athlete in energy & nutritional substances essentially differ depending first of all on the kind of sport & the amount of work performed (Astrand & Rodahl, 1988).

In athletic training performance, carbohydrate & fat are the major sources of energy. The amount of fat used during exercise depends upon the duration & intensity of exercise, degree of prior training & the composition of the diet. Exercise performed under aerobic conditions will promote fat use as a source of energy. There is a good reason to increase body's ability to burn fat as fuel; using fat as a source of energy will spare muscle glycogen (Grodner et al., 1996). How long the activity lasts also determines what substrate is used during