

Micronutrient Status of Male & Female Players Engaged in Different Sports Disciplines

Nande¹, P., Mudafale, V. & Vali², S.

¹Lecturer, Post Graduate Teaching Department of Home Science, Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur, Maharashtra. Email: prajaktanande@yahoo.co.in

²Professor & Head, Post Graduate Teaching Department of Home-Science, Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur, Maharashtra.

Abstract

The present study was undertaken to assess micronutrient status of female & male players engaged in different sports disciplines. For this purpose, university & / state level players aged 19 – 22 years were selected. Total 13 females & 46 males were chosen. 24 hour's dietary recall method was used to collect information on food habits, meal timings & dietary pattern of subjects. Biochemical parameters such as hemoglobin %, blood pressure & pulse rate were examined. The results revealed that irrespective of sex & sports, mean intakes of thiamine, riboflavin, folic acid, calcium & phosphorus were found to be less than their respective recommended dietary allowances (RDAS). In contrast, mean daily intakes of carotene & vitamin c among players were found to be significantly exceeding the rdas ($p < 0.01$). Players met only 50 % of their requirements for iron. Poor micro nutrient intake could possibly be attributed to the skipping of meals & training & college schedule of players. Mean hemoglobin % of majority groups of players were found to be exceeding the cut off level given by world health organization (who). Systolic blood pressure & diastolic blood pressure values were recorded to be closer to the normal values. Majority of groups of players showed mean pulse rate insignificantly above the normal value of 70 beats / minute ($p > 0.05$).

Key words: Micronutrient Status, Thiamine, Riboflavin, Calcium, Phosphorus, Iron, Carotene, Vitamin C, RDA, WHO

Introduction

Nutrition not only plays a role in performance, but it also helps to prevent injuries, enhance recovery from exercise, help maintain body weight, & improve overall health. It is important for all sports persons 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*).

The B vitamins are of special interest to athletes and exercisers because they govern the energy producing reactions of metabolism. Need for these vitamins increase proportionally with energy expenditure. To meet growth needs, athletes require higher intakes of

some vitamins than those for non athletes. The need for riboflavin is higher because of increased energy intake, but intake is frequently low in teens, especially in girls. Folate and vitamin B₁₂ needs are increased because of the high rates of growth. Vitamin B₆ is essential for the protein synthesis that occurs during rapid growth. (*Smolin and Grosvenor, 1997, Houtkooper et al., 1998*).

According to *Manore (2002)*, the athletes most likely to have insufficient vitamin intake are those with low calorie intakes or whose diets consist of highly processed convenience foods that are high in fat and /or sugar. Inadequate vitamin consumption will lead to suboptimal health and, ultimately, poor athletic performance. If athletes are limiting food