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Intake of some immunonutrients and ecoimmunonutrients by young high-level basketball players

G. Santos[1,2], M. A. Buil[2], J. A. Ferrero[2], J. J. Delgado[2], J. Silva[2] and J. M. Soriano[1]
[1]*Laboratory of Nutrition, Faculty of Pharmacy, University of Valencia, Av. Vicent Andrés Estellés s/n 46100, Burjassot Spain and* [2]*Pamesa Valencia Basketball Club, Av. Germans Maristes s/n 46013, Valencia, Spain*

An adequate nutritional intake is essential to preserve the health of basketball players. Several studies have demonstrated a low energy intake by student basketball players on training days, as well as a daily diet with an unbalanced composition of nutrients (too much fat and a low intake of Ca and Fe)[1–3]. A new approach to the nutrition of basketball players is being developed, according to a project of the University of Valencia (Project UV-AE-20070219), that aims to study immunonutrition and ecoimmunonutrition as the key factors in order to enhance physical and athletic performance and to decrease the incidence of physical damage.

The aim of the present study was to determine the consumption of ecoimmunonutritional nutrients (fibre) and some immunonutritional nutrients (Zn, Fe, Mg, vitamins A, C and E) by young basketball players.

The diet of ten male basketball players from Pamesa Valencia's 12–13-year-old team (weight range 47.4–81.5 kg; height range 1.63–1.95 m) and eight male basketball players of Pamesa Valencia's 16–17-year-old team (weight range 75.6–103.0 kg; height range 1.79–1.995 m) was studied. Three 24 h recalls per player (two weekdays and one day of a weekend) were used for data collection. DIAL version 1.01 (Alce Ingeniería, Madrid, Spain) was used to evaluate the dietary intake of the ecoimmunonutrients and immunonutrients investigated.

The youngest basketball players had an intake of Mg, Fe and vitamin C that exceeded the Spanish recommended daily intakes (RDI)[4] by 20.7, 81.6 and 84.3 % respectively. The consumption of vitamin A and vitamin E was lower than the RDI (12.3 and 28 %) and the Zn intake was adequate. The intake of fibre was lower than the Spanish final nutritional objective[5]. The older group of basketball players had an intake of Mg, Fe, Zn, vitamin C and vitamin E that exceeded the RDI by 38.6, 65.3, 29.3, 186.5 and 26.6 % respectively. The consumption of vitamin A was 10.9 % lower than the RDI and the intake of fibre was the adequate.

In view of the inadequate intake for some of the ecoimmunonutrients and immunonutrients, the basketball players, their relatives and their trainers and condition coaches are being educated to improve their knowledge of nutrition.

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