

Micronutrient Deficiency in Athletes and Inefficiency of Supplementation

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EDITORIAL

Most important to focus on for athletes are calcium, iron, zinc, magnesium, the B vitamins, and vitamin D, as well as some antioxidants such as vitamins C and E, beta-carotene, and selenium

It is the joint position of the Academy of Nutrition and Dietetics, Dietitians of Canada, and the American College of Sports Medicine that micronutrient supplements are unnecessary for athletes who consume a diet providing high energy availability (EA) from a variety of nutrient-dense foods, but that vitamin and mineral supplements may be necessary in athletes who consume suboptimal amounts of micronutrients. However, inadequate EA, or macronutrient intake needed for energy expenditure associated with exercise, is commonly reported, especially in the female population and may result in micronutrient deficiencies. Moreover, current literature, although limited, reports that athletes' knowledge is lacking regarding adequate macro- and micronutrient intake and needed supplementation. Correction of deficiencies via supplementation may be needed to restore physiologic processes but may not lead to improved performance. Athletes and coaches should be aware of these issues and work together to improve nutrition knowledge and determine if the athlete is at risk for low EA or nutritional deficiencies.

Vitamins most likely to be deficient in the diet are folate, B6, B12, and E. Biochemical evidence of vitamin deficiencies in some athletes have been reported for thiamine, riboflavin, and B6.

Micronutrient deficiencies form an important global health issue, with malnutrition affecting key development outcomes including poor physical and mental development in children, vulnerability or exacerbation of disease, mental retardation, blindness and general losses in productivity and potential.

Iron supplementation of young children in regions where malaria transmission is intense and infectious... Iron deficiency with its attendant anaemia is the most prevalent micronutrient disorder on a worldwide basis. Poverty, lack of access to a variety of foods, lack of knowledge of optimal dietary practices and high incidence of infectious diseases are some of the factors which lead to Micronutrient malnutrition

Three major intervention strategies are available for the control of micronutrient malnutrition: supplementation of the specific micronutrients; fortification of foods with micronutrients; and horticulture intervention to increase production and nutrition education to ensure regular consumption of micronutrient rich .

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