DIETARY INTAKE AND NUTRITIONAL PRACTICES OF ELITE ATHLETES

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As our knowledge of the physiology of exercise has become more sophisticated, so has our understanding of special nutritional issues arising in sport. There is an extensive body of knowledge covering both the nutritional implications of intensive training (ie. the basic nutritional requirements of an athlete) as well as special dietary practices that may directly enhance exercise performance, particularly in the competition setting (Burke and Read 1989; Devlin and Williams 1991).

While we can be confident that sports nutrition has emerged as a true science, there is some doubt that this is being translated into practice on the sports field. There is a need for well-conducted surveys of the nutritional practices of athletes; much of our present information is drawn from studies of poorly-described design in which the dietary data is often collected as a side-issue. Few dietary studies are conducted with the intent or the sophistication of design that would allow conclusions to be drawn about the effect of diet on sports performance. Rather, the function of most dietary surveys is to gauge the need for nutrition education; that is, to measure the gap between the theoretical "optimum" and the actual dietary patterns of the athletic group, recommending nutrition education where dietary practices fall well outside the guidelines.

Information that would help to describe the nutritional practices of athletes includes:

a. Description of the training and competition schedule of the athlete - and thus an appreciation of basic energy and nutrient requirements, the opportunities for special ergogenic dietary practices, and the lifestyle of the athlete.
b. Anthropometric characteristics, including body composition.
c. Nutrition interests and beliefs, and source of information.
d. Usual daily energy and nutrient intake including, if appropriate, intakes at different parts of the athlete's season - eg off-season versus season.
e. Explanation of d. in terms of food choices and meal patterns
f. Special competition practices - eg making weight, carbohydrate loading, pre-event meal, event fluid/food intake, recovery diet.
g. Use of dietary supplements

Reviews of the present data on dietary intakes of athletes find that single studies do not often provide this depth of information, however by pooling various studies we can build up a picture of typical nutritional practices of athletes (Short 1989; Burke and Read in press). Since the athletic population varies greatly in body size, lifestyle, energy expenditure in training and competition, and in the special physiological/biochemical issues of optimal performance, it is convenient to divide sports into a number of groups: endurance and heavily training sports, team sports, strength-training sports, weight-matched sports and aesthetic sports.

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