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The Role of Dietary Supplements for Physically Active People

January 1966 through April 1996

762 Citations

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THE ROLE OF DIETARY SUPPLEMENTS FOR PHYSICALLY ACTIVE PEOPLE

This bibliography was prepared in support of the National Institutes of Health Technology Assessment Conference on the Role of Dietary Supplements for Physically Active People, held in Bethesda, Maryland, June 3-4, 1996. Co-sponsors of the workshop included the Office of Dietary Supplements (ODS) of the National Institutes of Health (NIH); the American Institute of Nutrition; the American Society for Clinical Nutrition; and eleven other offices and institutes at NIH*. The bibliography provides a list of journals and books which contain information on the use of dietary supplements in humans for physical activity and recreational sports. It has been divided into five sections to include: determining the metabolic basis of supplementation, macronutrients and amino acids, minerals, and other supplements of potential interest for the physically active, and antioxidants.

The first section on determining the metabolic basis of supplementation contains the studies defining the requirements, physiology, metabolism and the delineation of the role of nutrients in the human body under conditions of increased and varied physical activities. In the second section, the functional role and needs of the macronutrients including carbohydrates, fats, medium chain triglycerides, proteins, and select amino acids such as branch chain amino acids and glutamine, are reported for a variety of physically demanding tasks. Also included in this section are studies evaluating water and electrolyte supplementation or replacement in a variety of exercise-heat stress environments. The third section, minerals, focuses on mineral status in physically active people and the effects of supplementation either acutely or chronically on physical performance. Specifically of interest were human studies involving calcium, iron, magnesium, zinc and chromium. The fourth section contains studies on other dietary supplements that have been utilized to define, sustain, or enhance physical activity. Included in this section are the B-vitamins, thiamin, riboflavin and vitamin B6, creatinine monophosphate, carnitine, and choline as well as selected plants, medicinal or herbals such as ginseng. Finally, the fifth section, antioxidants, surveys the literature to define the role of antioxidants in physical activity and health. Articles reviewing many of the classic epidemiological studies are included. The anti-oxidant effects of vitamin C, vitamin E, selenium and the carotenoids are specifically addressed.

Because the literature is large, this bibliography is necessarily selective. Preference was given to references of original journal articles, technical reports, and books identified as of April 1996. The journal articles or publications have been limited to those in English that deal with human subjects.

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*NIH cosponsoring agencies include: National Institute on Aging; National Institute of Arthritis and Musculoskeletal and Skin Diseases; National Institute of Child Health and Human Development; National Institute on Deafness and Other Communication Disorders; National Institute of Dental Research; National Institute of Diabetes and Digestive and Kidney Diseases; National Heart, Lung, and Blood Institute; National Institute of Mental Health; NIH Division of Nutritional Research Coordination; Office of Alternative Medicine; Office of Research on Women's Health

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- SS8: ANTIOXIDANTS(PX) AND EPIDEMIOLOGY&(PX) AND REVIEW
- SS9: CALCIUM AND 1 OR ZINC AND 1 OR CHROMIUM AND 1 OR IRON AND 1
- SS10: EXP VITAMIN B COMPLEX AND 1 OR CREATINE AND 1 OR CARNITINE AND 1 OR CHOLINE AND 1
- SS11: EXP PLANTS, MEDICINAL AND 1 OR EXP HERBS AND 1
- SS12: EXP OBESITY OR EXP DIABETES
- SS13: 2 OR 3 OR 4 OR 5 OR 6 OR 7 OR 8 OR 9 OR 10 OR 11
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