

Chapter 47

Nutraceuticals for Healthy Sporting

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ABSTRACT

Sport nourishment is one of the most promptly and constantly evolving area, these dietary supplements are marketed for muscle building, recovery or to improve athletic performance. Consumers use nutraceuticals as fat burners and to find competitive edge in sports. These supplements may include plant extract, carbohydrates, proteins, etc. For elite sport person, energy expenditure during heavy drill may be enormous thus nutritive supplements or sports drink acts as an ergogenic aid in augmenting performance, recovery and improve rough training adaptations. Apart from regular consumption of nutraceuticals/drugs it is mandatory for a individual to maintain an energy balance through strategic food habit, prudent training and refueling. Apart from health benefits drugs can generate various side effects like hypertension, addiction, dependency on supplements, etc., so it is obligatory for the sport professionals to have through awareness of scientific value of articles and endorsements regarding nutraceuticals and workouts so as to keep themselves isolated from marketing puff.

DOI: 10.4018/978-1-7998-7707-3.ch047

INTRODUCTION

Hippocrates better known as the father of medicines had once said *let food be the medicine*. In this milieu “nutraceuticals” can be considered as a food or portion of a food that provides medical or health benefits including the prevention and/or treatment of a disease. Various words viz., dietary supplements, functional food, multi-functional food, etc. are been used in the context. The concept of “functional food” was first used in Japan when the government approved certain food articles which comprises of certain component with recognized health benefits anticipates improving the health or reduction of the threat of a disease of aging population (Arai, 1996). Since then the impression of nutraceuticals as functional food had been accepted by the world.

Prior to 1994 dietary supplements were regulated in the similar way as food. Food and Drug Administration monitored the process of manufacturing, quality and classification of supplements. After 1994 dietary supplements were categorized as special class of foods which intended to complement or balance the regular diet. Dietary supplements are not drugs, and are not required to be publicized to be safe and active; however, new dietary supplement components introduced subsequent to 1994 must undergo clinical trials review for welfare data before it can be merchandise legally (Burke, 2001). These dietary supplements may include natural/herbal plants extracts, carbohydrates, minerals, vitamins, proteins-Omega 3 or 6, creatine, fats, etc. and are accessible in form of tablets, capsules, powdered materials, liquids, softgels etc.(Chauhan, Kumar, Kalam, & Ansari, 2013; Pandey, Verma, & Saraf, 2010; Gupta, Prakash, & Gupta, 2016; Burke, 2001). The shared ground for dietary supplements, functional foods, nutraceuticals, etc. is that they all are merchandises intended to enhance health and fitness through supply of various bioactive agents to the human diet. This is why nutraceuticals are confused with the other food products. Nutraceuticals can be assumed as dietary stuffs that supplies biologically active ingredients that could be advantageous to the human health in a way to prevent/treat some enduring ailments or may involve in enhancing physiological performance (Arai, 1996; Burke, 2001; Cencic, & Chingwaru, 2010; Rodriguez, DiMarco, & Langley, 2009).

Sport and health nutrition plays a substantial role in optimizing the magnitude of physical activities performed by a professional bodybuilder, athlete or an average person exercising to improve health. No doubt nutrition acts as a key factor in enhancing performance and training, but between these robust training hours an athlete should replenish his/her body through adequate nutrients. In today’s society individuals are much concerned about their health, fitness and physique, hence are joining fitness hubs etc. to discover their fitness goals, howeverless acquaint with right, effective workout and nutrition uptake they are much prone towards injuries and serious muscle or bone damages. However, having better decisions and supervision with apt nutrition uptake along with good exercising pattern can help in remain safe from certain complications (Chauhan et al., 2013; Pandey et al., 2010; Gupta et al., 2016). Nutritionist can offers a range of services to enhance one’s health and meeting sporting goals. The prescribed nutrition can range from a daily food diary, to a comprehensive food and nutrition plan for extensive training and competitions.

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