

## Chapter 7

# Nutrition and Functional Foods: Current Trends and Issues

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### ABSTRACT

*This chapter explains the overview of nutrition and health; food industry and food science; the current issues of functional foods; and the awareness and perception of functional foods. Nutrition is the accumulation of edible material essential for many organisms to stay alive. Effective nutrition ensures that both diseases and problems can be prevented with a healthy diet. Regarding health behaviors, health-conscious consumers explore various functional foods and manage their own health toward well-being. In addition to nutritional value, functional foods have special benefits in terms of the reduction of chronic diseases and the improvement of immune system. The chapter argues that considering both nutrition and functional foods is the lifestyle behavior on health, and has the potential to reduce the risk of various diseases.*

### INTRODUCTION

Nowadays, health care involves the activity or business of providing the medical services (Kasemsap, 2017a). Nutrition is an important component of public health in developed, developing, and underdeveloped countries of the world (Frederico, 2013). Nutritional control aims the pervasive gathering and monitoring of individual's food intake, data management, alarming, and reporting toward health care promotion (Fernandes & Varajão, 2010).

The impact of nutrition on economic development has highlighted the need for evidence-based solutions and has yielded the global momentum (Menon et al., 2014). Translation of the global target into national targets needs to consider nutrition profiles, risk factor trends, demographic changes, experience with developing nutrition policies, and degree of health system development (de Onis et al., 2013). Good nutrition is of crucial importance for the well-being, growth, and development of children (Weichselbaum & Buttriss, 2014).

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Malnutrition contributes to hospital morbidity, mortality, and costs (Kirkland, Kashiwagi, Brantley, Scheurer, & Varkey, 2013) and significantly affects the majority of women of reproductive age in most developing countries (Shrimpton, 2012). The ways in which consumers make judgments about the nutritional quality of food products are a major concern for public policymakers (Gomez, 2013). Policymakers must become the most credible sources of information about healthy eating (Cornish & Moraes, 2015). More information is required before public policymakers can be confident that the integrated nutrition programs are the most effective approach to improving the children's development and nutritional status (Grantham-McGregor, Fernald, Kagawa, & Walker, 2014).

Food provides the essential nutrients and bioactive compounds that help in disease prevention and health enhancement (Jain & Rani, 2017). Nutraceuticals and functional foods give a prospect to reduce the health care costs and improve the human health (Keservani, Sharma, & Kesharwani, 2017). Nutraceuticals are the products that provide health and medicinal benefits, including the prevention and treatment of diseases in addition to the basic nutritional value found in foodstuff (Prakash & Gupta, 2017). The formulations of nutraceuticals, which allow the intake of phytonutrients (generally in low levels in plant food) in concentrations that are enough to achieve the desired outcomes, represent the reasonable alternatives to improve the general health and to prevent the varied diseases (Dias-Souza & Martins dos Santos, 2017).

Healthy eating patterns have attracted the interest of researchers, society, and media (Tsakiridou, Tsiamparli, & Mattas, 2016). Functional foods establish a borderline between food and medicine (Bhardwaj, 2013). Functional foods containing physiologically-active components, have been reported to provide many health benefits (Passi, 2017). Consumption of functional foods on a regular basis not only provides most of nutrients in adequate quantities, but also improve gastrointestinal health, boost immune functions, lower cholesterol, oxidative stress, reduce the risk of cardiovascular diseases, various types of cancers, neurodegenerative diseases, ill-effects of obesity, and metabolic syndrome (Sidhu & Zafar, 2017).

This chapter is based on a literature review of nutrition and functional foods. The extensive literature of nutrition and functional foods provides a contribution to practitioners and researchers by explaining the current trends and issues of nutrition and functional foods.

## **BACKGROUND**

Many international organizations, donors, and governments have become more active in the nutrition efforts and become the potential advocates at the national and global levels for the greater attention to malnutrition (Pelletier et al., 2013). Nutrition is influenced by social, environmental, and economic trends (Herforth et al., 2014). Nutritional support aims to reverse the malnutrition recognized at diagnosis, to prevent malnutrition associated with treatment, and to promote weight gain (Jones, Watling, Wilkins, & Pizer, 2011). Improving the nutritional status of infants and young children in the developing countries depends to a significant extent on the adoption of optimal nutrition-related practices within the context of the household (Aubel, 2012). Health care institutions should develop the quality assurance (QA) programs with the safe practice guidelines for the effective nutrition (Sacks, Rough, & Kudsk, 2009).

Malnutrition can increase the health care costs by delaying patient recovery and increasing the risk of medical complications (de van der Schueren et al., 2014). Malnutrition interferes with patients' ability to benefit from health treatments and affects every domain of their well-being. Many nutritional interventions aim to address the quality of diets, especially the diets of infants and young children (Menon et al.,

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