
Professor T.W. Wickramanayake, *Nutrition Throughout the Life Cycle*

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Nutrition Throughout the Life Cycle is Professor Wickramanayake's latest contribution to the field of nutrition in Sri Lanka. Professor Wickramanayake, an eminent pioneer of nutrition research and education in this country, has written this volume in response to the large amount of new data and scientific discoveries that have been made since he wrote his first book, "*Food and Nutrition*". In this book, the author covers a range of topics in nutrition. As the title suggests, the book comprehensively deals with nutritional state throughout the life cycle of a human being, beginning with pregnancy and fetal growth and spanning through infancy, childhood, adolescence, ageing and ending with nutritional disorders and the nutritional aspects of diseases such as diabetes and cancer.

For the subject material in this volume, Wickramanayake has drawn upon his extensive experience as a biochemist and nutritionist. What makes this meticulously researched book unique among the many books on human nutrition is the fact that it contains a

great deal of information pertaining to Sri Lanka and the Asian region. Thus, this book gives a practical overview of nutrition with special emphasis on the Sri Lankan situation, of particular use to local health professionals. In his book, Wickramanayake has endeavoured to emphasise the importance of proper and adequate nutrition throughout an individual's lifetime by showing that nutritional issues play a major role in many health issues including chronic life style related diseases. The book is an essential read not only for nutritionists but for all health professionals.

The author introduces the subject by describing the major nutritional and health problems faced by humans, especially in developing countries. He uses an analytical mode of writing, with an abundance of scientific data to support his hypotheses and theories. The first section of the book is devoted to nutritional needs during the life cycle while the second part focuses on nutritional disorders. A major proportion of the first part of the book is devoted to a description of maternal and fetal growth

during pregnancy and its associated nutritional issues. This section underscores the vital importance of adequate nutritional status of women before pregnancy, during the period of gestation and during lactation. Practical means of managing common problems faced by mothers and infants during breast feeding and practical suggestions on locally available and low cost recipes of weaning foods and other energy dense foods are some of the features of this section.

The next few chapters concentrate on energy, protein and other nutritional requirements of a growing child, with emphasis on the consequences of infection and effects of nutrients on growth. Wickramanayake draws comparisons between nutrition and growth of children in affluent regions versus those from poorer socioeconomic backgrounds to emphasise his thesis that nutrition has an extensive role in attaining maximum growth. The author evaluates the reasons for undernutrition in Sri Lanka and critically examines the successes and failures of various remedial measures and programs such as micronutrient supplementation, nutrition education to improve quality and bioavailability, and the school feeding programs. He stresses the importance of targeting the underserved, food insecure areas for intervention measures to improve childhood nutrition indicators in the country.

Wickramanayake then goes on to discuss the periods of adolescence and ageing, two other stages of great significance in terms of nutrition. The chapter on adolescents discusses the physiology behind adolescent changes and the reasons for increased need for macro- and micronutrients at this stage of growth. The first part of the book ends with an essential focus in nutrition for Sri Lanka with its rapidly ageing population, namely nutritional needs and changes in body composition occurring with adulthood and ageing, including age related diseases such as osteoporosis and Alzheimer's. This section also discusses the effects that modifications in nutrition and other environmental factors have on increasing life expectancy. Wickramanayake's explanation of the "disposable soma" theory and other hypothesis on ageing make very interesting reading.

In the second part of the book, the author focuses on nutritional disorders such as energy deficiency, anaemia, vitamin A and iodine deficiencies, which are of vital public health importance in Sri Lanka. His analysis

of the various preventive interventions such as fortification, supplementation and other ancillary measures, taking examples from intervention programs done in other parts of the world offer the reader a practical overview of the current situation. The last few chapters of the book describe the role of nutrition in the metabolic syndrome, obesity, diabetes mellitus and cardiovascular disease which are major public health issues. A comprehensive description of the mechanisms of cardiovascular disease, metabolic syndrome and obesity and the causal relationship between genes, nutrition and these conditions make compelling reading.

A particularly useful section is the dietary management of obesity where useful hints on losing weight while controlling hunger, active food restriction and the behavioral treatment of obesity are given. Wickramanayake also offers practical suggestions for prevention of obesity especially among children and is unafraid to suggest controversial measures to combat obesity such as taxation on energy dense foods, and elimination of the advertising of sweet foods and drinks. The dietary management of diabetes mellitus with special emphasis on the action of carbohydrates and glycemic index of different foods is another useful section. The complexities of the food exchange system are explained clearly, with emphasis on local foods and the traditional remedies of diabetes with their scientific evidence or myths are explored.

In the last chapter, Wickramanayake addresses another essential but neglected nutritional issue in Sri Lanka, that of cancer nutrition. He describes the theories of diet related cancers and the importance of phytochemicals in fruits and vegetables and their role in reduction of cancer risk.

This volume captures the extensive vista of nutrition and introduces a comprehensive array of up-to-date scientific and epidemiological data on the aetiology, prevalence, diagnosis and management of nutritional disorders. The emphasis is on practical solutions to nutritional problems. A vital contribution of this book is the identification of directions in which research in nutrition should be heading. In this fascinating and informative volume, Wickramanayake has shown the importance of knowledge on nutrition in all spheres of medicine.

Angela de Silva, Senior Lecturer, Faculty of Medicine, Kynsey Road, Colombo 8. E-mail: <ang2sl@yahoo.com>. Conflict of interests: none declared.