Food and nutritional supplements. Their role in health and disease

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Abstract

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Plant based diets offer advantages in lowering cholesterol concentrations and obesity rates. Fruits and vegetables are protective against cancers and a pattern emerges that fruits are more protective against upper gastrointestinal cancer while vegetables act on the lower parts of the gut. The proposed mechanisms involve the role of micronutrients and phytoprotectants which act primarily at the post-initiation stages of human cancer. Other chapters explore intervention studies in cancer, the fetal origins of disease and the complex interactions between genetics and lifestyle in diabetes. The glycaemic index (GI) is highlighted as an important characteristic of carbohydrates which impacts on glycaemic control as well as risk of heart disease.

A chapter is devoted to the gut flora and another discusses osteoporosis. Again, fruit and vegetables are relevant because they produce a calcium sparing effect by lowering the amount of calcium excreted in the urine.

The issue of health claims is addressed, as are the definition and working models for functional foods. The media too gets a mention and the author cautions the reader to be aware of agendas and potential pitfalls.

Integrating health care delivery in the community is described with examples from the UK. Programs are targeting increased intake of fruit and vegetables, a 5-a-day campaign, work with industry to lower the content of salt, fat and sugar, improving the availability of food in hospitals and action to reduce overweight and obesity. The final chapters are summaries of workshops on long chain polyunsaturated fatty acids and soya foods.

Overall the book covers a very broad range of topics. It is well presented, reasonably up-to-date and will serve as a resource for those interested in a snapshot of the current issues in nutrition.

Associate Professor Samir Samman, Human Nutrition Unit, University of Sydney, NSW 2006.

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The book tackles the difficult area of the evidence behind supplements, covering issues such as market trends and the nutrient requirements for various age and health-related conditions as well as specific scientific evidence on certain supplements. The editors are experts in their field and have also drawn together a number of key contributors from the United Kingdom and European scientific community. It has a methodical and evidence based approach to each area and provides a substantive source of reference materials; however not all popular supplements are covered.

Clearly attempts have been made to simplify explanations, particularly the biochemistry principles behind the efficacy of some supplements. However, it requires the reader to be reasonably familiar with the concepts. As such it is appropriate for the health professionals and science-trained technologists to which it has been slanted. It would undoubtedly enable the reader to develop knowledge in these areas. Tables and diagrams are not prolific throughout the book but are clear and add to the text material.

Overall the book is a well written scientific reference, which could assist those working in the food and health areas trying to grapple with the evidence for supplements. However it may not adequately reflect the current market and research in Australia and the Asia Pacific. For instance, herbal supplements are not really covered, nor is there any reference to specific scientific research in Australia such as the substantive body of work on resistant starch.

The book would certainly benefit from an index to enable quick access to items and for cross-referencing, and this may be addressed in subsequent editions. The book is a quality publication in a handy small size that is easy to read. It will provide a good source of information on the evidence for the efficacy of supplements and does help to fill this need at the present time.

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