

1. Record Nr.	UNINA9910814845303321
Titolo	Phytonutrients // edited by Andrew Salter, Helen Wiseman, Gregory Tucker
Pubbl/distr/stampa	Chichester, West Sussex, UK ; ; Hoboken, : Wiley-Blackwell, 2012
ISBN	9786613616302 9781280586477 1280586478 9781118240922 1118240928 9781118253649 1118253647 9781118253632 1118253639
Edizione	[1st ed.]
Descrizione fisica	1 online resource (318 p.)
Altri autori (Persone)	SalterAndrew M WisemanHelen TuckerG. A (Gregory A.)
Disciplina	572/.2
Soggetti	Phytonutrients Phytochemicals Food - Composition
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Phytonutrients; Contents; Preface; Contributors; Abbreviations; 1 Plant foods and health; Introduction; Historical changes in the plant content of the human diet; Changing composition of dietary constituents in the past 50 years; Plants - nutrients and other constituents; A summary of the evidence linking plant food intake and health; Coronary heart disease and stroke; Fruits and vegetables; Pulses and nuts; Cereals; Antioxidant nutrients; Other bioactive substances; Antioxidant hypothesis; Phytosterols and -stanols; Conclusions for coronary heart disease and stroke; Cancer Fruit and vegetablesLegumes and nuts; Foods containing fibre;

Vitamins; Other plant-derived substances; Conclusions for cancer; Type 2 diabetes; Age-related macular degeneration and cataract; Age-related cognitive decline; Chronic obstructive pulmonary disease; Osteoporosis and bone health; Plant foods and health: overall conclusions; Recommendations and current policy on plant food intake; Fruit and vegetables; Wholegrain foods; Current consumption patterns; Conclusions; Acknowledgement; 2 Carbohydrates and lipids; Introduction; Major carbohydrates; Sugars; Polysaccharides; Starch Cell wall polymers Biosynthesis of cell wall polymers; Cell wall turnover; Nutritional benefits of plant carbohydrates; Major sources of dietary fibre within the diet and recommended intakes; Definition and measurement of dietary fibre; Physiological effects of dietary fibre; Lipids; Synthesis of fatty acids in plants; Synthesis of glycerolipids in plants; Modification of plant lipids; Fatty acid composition of plant foods; Vegetables; Cereals; Fruit; Oil seeds; Dietary lipids and human health; Phytosterols; 3 Carotenoids; Introduction; Structure, biosynthesis and function of plant carotenoids Dietary sources and health benefits Absorption and bioavailability of dietary carotenoids; Carotenoid type; Food matrix; Carotenoid metabolism in humans; Meeting the dietary demand and consequences for imbalance; Acknowledgements; 4 Polyphenols; Introduction; Polyphenol structure; Phenolic acids and stilbenes; Flavonoids; Biosynthetic routes within the plant; Shikimic precursor and benzoic acid biosynthesis; Cinnamic acid biosynthesis; Stilbene biosynthesis; Flavonoid biosynthesis; Major sources within the diet; Phenolic acids and stilbenes; Flavonoids; Flavonols; Flavanones; Flavanols Flavones Anthocyanins; Isoflavones; Metabolic fate of dietary polyphenols; Gastrointestinal tract metabolism; Colonic metabolism; Role in human health; Flavonoids as classical antioxidants; Non-antioxidant activities of flavonoids; Interactions with cell signalling pathways; Other potential mechanisms of action; Conclusion; Summary; Acknowledgements; 5 Vitamins C and E; Introduction; Vitamin C: structure and chemistry; Dietary sources of vitamin C; Vitamin C: biosynthesis and metabolism in plants; Vitamin C functions in plants; Vitamin C manipulation in plants Absorption and transport of vitamin C in mammals

Sommario/riassunto

In many Western diets, the role of plants has been reduced in favour of more animal-based products and this is now being cited more widely as being the cause of increases in the incidence of diseases such as cancer and cardiovascular disease. This important book covers the biochemistry and nutritional importance of a wide range of phytonutrients, including all the major macronutrients as well as the micronutrients and 'non-essential' nutrients. Phytonutrients is divided into three parts. The first deals with the role of plants in the human diet. Part II, representing the major part of