

**Appetite and Body Weight Regulation, Sugar, Fat, and Macronutrient Substitutes.** Edited by J.D. Fernstrom and G.D. Miller, CRC Press Inc., Boca Raton, USA, 1994. 264 pp. Price £70.00. ISBN 2-8493-4466-2.

There is currently much interest, both from the scientific and non-scientific communities in the area of diet. The association between diet and health, and indeed our perception of the stereotype healthy individual, has focused our attention on the relationship between what we eat and what we are. There are currently many scientific research programmes investigating the relationship between appetite and body weight regulation and the effect of dietary fat and sugar substitutes in the control of appetite and body weight but as yet there is no consensus of opinion as to their effect on the management of obesity.

This book '*Appetite and Body Weight Regulation, Sugar, Fat, and Macronutrient Substitutes*' presents a summary of the current research relating to the influence of nutrition on the central nervous system as discussed at a recent meeting organised under the auspices of the Keystone Conferences and sponsored by the International Life Sciences Institute. The book covers the effect of dietary macronutrients on appetite regulation and the influence of macronutrient substitution on this relationship. The first section deals with data from studies on children and adults and the ability of both groups to regulate caloric intake is discussed. The chemical and biochemical neural mechanisms by which the brain may sense the recent ingestion of protein and carbohydrate and induced changes in hepatic carbohydrate related to hepatic ATP production are discussed. A subsequent chapter outlines a mechanism by which glucose metabolism is sensed directly by the brain. The final section reviews caloric balance and the effects macronutrient substitution, carbohydrate or nonabsorbed fat, for example, sucrose ester for fat, have on calorie consumption and body weight. The suitability of dietary fibre, both soluble, for example, pectin, and insoluble, for example, cellulose, as a means of controlling appetite are discussed in the final chapter.

This is a book which is oriented towards the understanding of the control mechanisms for appetite and body weight regulation and it will not only be of interest to those researchers, nutritionalists and dieticians working in the area of appetite regulation and obesity but also to food scientists and carbohydrate chemists

interested in the development of macronutrient substitutes.

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**Cane Sugar Handbook**, 12th Edition, James C.P. Chen & Chung-Chi Chou, John Wiley & Sons, New York, 1993. xvi + 1090 pp. Price £160.50. ISBN 0-471-53037-9.

Sugar cane, its cultivation, and the application of crude sugar can be traced back to ancient times in New Guinea and China. Cane sugar was spread slowly by wars and explorers introducing it to new countries and continents. Egypt discovered sugarcane in A.D. 710, and the Egyptians, being a people skilled in agriculture and chemistry, were the pioneers in clarification, crystallization and refining. Sugarcane then reached many countries and today plantations can be found all over the world. The demand for white sugar both for industrial and domestic purposes has rapidly increased in the last two decades.

This twelfth edition of the *Cane Sugar Handbook* has updated the last edition with new ideas of refining, technical management in the processes, environmentally friendlier policies which comply with the new legislations and also lowering of costs in production.

The book considers four major areas of the cane industry. The first section looks at raw sugar. Next comes refining the sugar, chemical procedures and decolorization, centrifugation and the production of speciality sugars. The production and process controls (third section) examine energy conservation, quality and process control and integration. Section four involves the analytical procedures needed for assurance of purity, determination and analysis of the composition of sugar, for example, use of polarimetry in sugar analysis, determination of pH, analysis of the juice and sugar by the Brix Hydrometer.

A very comprehensive, and informative reference manual, the *Cane Sugar Handbook* thoroughly covers the whole spectrum of the sugar cane industry, from the harvest of the sugar cane to the finest details in the laboratory. An excellent handbook for anyone in the sugar cane industry and also as part of a scientific or university library.

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