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Parkinson's disease: Preclinical and Clinical Medicine -- The Interplay of Thiamine and Cardiovascular Diseases -- Vitamin B7 (Biotin) and Its Role in Hair, Skin, and Nail Health -- Role of Vitamin B12 in Cardiovascular Disease -- Association of Vitamin B12 with Bone Mineral Density -- Mechanistic Effects of Vitamin B6 and B12 on Inflammation and Cancer -- The Inter-weaving of B9- and B12-dependent Reactions and Their Clinical Implications -- The Role of Folic Acid in the Regulation of Homocysteine Levels and Cardiovascular Disease -- Vitamin C in health and disease: From Redox Biology to Clinical Medicine -- The Role of Vitamin C in the Prevention and Treatment of Cancers -- Role of Vitamin C in Tuberculosis.

Sommario/riassunto

More than 100 years ago, Dr Casimir Funk suggested the existence of a family of organic substances that are essential for life and thus introduced the concept of "vital amines" as essential nutrients with a specific action, requiring only minute amount with the power to cure a specific disease. Vitamins essential for human health are grouped according to whether they are soluble in water (hydrophilic) or in non-polar solvents (lipophilic). The hydrophilic vitamins are vitamin C and a series known as the vitamin B complex. Vitamin C is a reducing agent, whereas the vitamin B series are components of coenzymes. For example, riboflavin (vitamin B2) is a precursor of flavin adenine dinucleotide (FAD) and pantothenate (vitamin B5) is a component of coenzyme A. Indeed, several coenzymes contain a vitamin as part of their structure; this relation is undoubtedly responsible for creating an "essential" role for the vitamin. Since vitamins are involved in a wide range of biological processes and cell function, these are considered as essential nutrients. The essential nature of vitamins as well as their unique biochemistry, molecular mechanisms and cellular function in health and disease are emphasized in this book which will serve as a highly useful resource for health professionals, nutritional scientists, medical students, fellows, residents, and graduate students.
