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Nota di contenuto	Intro; Title page; Table of Contents; Copyright; Dedication; Preface; Chapter 1: Gut Microbiota, Early Colonization and Factors in its Development that Influence Health; Abstract; 1.1. Commensal gut microbiota composition and body distribution; 1.2. Early microbial colonization and factors affecting subsequent gut microbiota development; 1.3. Consequences of an infant microbiota colonization and development on health later in life; 1.4. Maternal nutrition during pregnancy and role of pro- and prebiotics in prenatal microbiota development and metabolic programing; 1.5. Conclusions. Chapter 2: Short-Chain Fatty Acid Production and Functional Aspects on Host MetabolismAbstract; 2.1. Introduction; Chapter 3: Gut Microbiota Influence Lipid and Glucose Metabolism, Energy Homeostasis and Inflammation Through Effects on Bile Acid Metabolism; Abstract; 3.1. Bile acid synthesis and conjugation, and their elimination or resorption; 3.2. Regulation of bile acid synthesis; 3.3. Bile acids as signaling molecules that regulate their synthesis,

transport and energy; 3.4. Bile acid signaling influences glucose and lipid, and energy metabolism.
3.5. Bile acid signaling mediates cytokine expression and immune response in inflammation3.6. Conclusions of bile acid chapter; Chapter 4: Role of Gut Microbiota in Immune Homeostasis; Abstract; 4.1 Introduction; 4.2. Types of T cells and their function; 4.3 Gut microbiota influence innate immune homeostasis; 4.4 Gut microbiota and adaptive immune homeostasis; 4.5 Gut microbiota influence systemic threshold of activation of innate and adaptive cells; 4.6 Commensal microbiota control immunity in distal tissues.
Chapter 5: Direct Physiological Effects on Local Gi and Indirect Systemic Effects of Prebiotic Fructan Treatment, and its Role in Disease Prevention and TherapyAbstract; 5.1. Introduction; 5.2. Beneficial effects of prebiotic fructan consumption on the physiology of the lower GI; Chapter 6: Intestinal-Based Diseases and Peripheral Infection Risk Associated with Gut Dysbiosis: Therapeutic use of Pre- and Probiotics and Fecal Microbiota Transplantation; Abstract; 6.1. Introduction.
6.2. Infection risk reduction, including C. difficile, and associated infectious diarrhea: effects of pro- and prebiotic, and fecal microbiota transplantation therapies (also refer to earlier section on effects of these therapeutic approaches in atopy and allergies)6.3. Gastric acid-related disorders [heartburn, gastroesophageal reflux (GERD)] and effects of pro- and/or prebiotic treatment; 6.4. Celiac disease and gluten intolerance: effects of pro- and/or prebiotic therapy; 6.5. Irritable bowel syndrome (IBS) and effects of pro- and prebiotic, and FMT therapies.

Sommario/riassunto

Human Gut Microbiota in Health and Disease: From Pathogenesis to Therapy is a comprehensive discussion of all the aspects associated with gut microbiota early colonization, its development and maintenance, and its symbiotic relationship with the host to promote health. Chapters illustrate the complex mechanisms and metabolic signalling pathways related to how the gut microbiota maintain proper regulation of glucose, lipid and energy homeostasis and immune response, while mediating inflammatory processes involved in the etiology of many chronic disease conditions. Details are provided on the primary etiological factors of chronic disease, the effects of gut dysbiosis and its associated disease conditions, while providing an overview of therapeutic strategies involving dietary fiber and prebiotics, fecal microbiota transplantation therapy and probiotics. Throughout the chapters, a comprehensive review of peer-reviewed animal and human studies is provided as evidence related to the history of human exposure, safety, tolerance, toxicity, nomenclature, and clinical efficacy of utilizing prebiotic fructans, s, as well as probiotic intervention, and dietary modification in the prevention and intervention of chronic disease conditions. With common use today of pharmaceutical medicine in treating symptoms, and frequent overuse of antibiotics in chronic disease within mainstream medical practice, understanding the etiological mechanisms of dysbiosis-induced chronic disease, and natural approaches that offer prevention and potential cures for these diseases is of vital importance to overall human health. -- Provided by publisher.