1. Record Nr. UNINA9911008449103321 Autore Arias Natalia **Titolo** Exercise and Diet As Modulators of Cognitive Function Through Gut Microbiota Pubbl/distr/stampa New York:,: Nova Science Publishers, Incorporated,, 2022 ©2022 **ISBN** 9798886973181 9798886971644 Edizione [1st ed.] Descrizione fisica 1 online resource (232 pages) Gastroenterology Research and Clinical Developments Collana Disciplina 612.3/2 Soggetti Gastrointestinal system - Microbiology Nervous system - Degeneration - Molecular aspects Nervous system - Diseases - Nutritional aspects Nervous system - Diseases - Diet therapy Nervous system - Diseases - Exercise therapy Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Intro -- Contents -- Preface -- Chapter 1 -- The Microbiome-Gut-Nota di contenuto Brain Axis and Neurodegeneration -- Abstract -- 1. Introduction -- 2. The Nervous Pathway -- 2.1. The Enteric Nervous System -- 2.2. The Vagus Nerve -- 3. Humoral Pathway -- 3.1. Hormonal Axes -- 3.2. Gastrointestinal Inflammation -- 3.2.1. Gut Permeability -- 3.2.2. Blood-Brain Barrier Permeability -- 3.2.3. Systemic Inflammation and Mood Disorders -- 4. The Gut Microbiome -- 4.1. Alterations in the Gut Flora -- 4.2. Diet, Microbiota, and Behaviour -- 5. The Contribution of the Axis to Neurodegeneration -- 5.1. Huntington's Disease -- 5.1.1. HD and Dietary Influence -- 5.1.2. Tryptophan Metabolism in HD -- 5.2. Alzheimer's Disease -- 5.2.1. Microbial Metabolites in AD -- 5.2.2. Dietary Regimes and AD -- 5.3. Parkinson's Disease -- 5.3.1. The Enteric Nervous System, Parkinson's and Prion Disease -- 5.3.2. Microbiota and PD -- 5.4. The Western Diet. Inflammation and Neurodegeneration -- Conclusion -- References --

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"In recent years, the study of the human intestinal microbiota and its relationship with the brain has expanded enormously in the scientific field. It has been shown that changes in nutritional habits, apart from producing changes in the host microbiota, can affect the central nervous system, contributing to the development of neurological pathologies such as Parkinson's, Alzheimer's and motor neuron disorders. Several studies have shed light into the role of exercise as a preventive factor against various diseases; however, exercise can also produce stress on the body. This book discusses the relevance of an individual's health state, type and duration of exercise, and diet as contributing factors to the microbiota-gut-brain axis. Also, this book presents findings regarding the relationships between epigenetic modifications and the gut microbiota as well as between epigenetics and cognitive function"--