

Nutraceuticals in Lifestyle and Disorders: Opportunities and Challenges

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Abstract: *Nutraceuticals—bioactive compounds derived from food sources—are gaining increasing attention for their role in promoting health and preventing lifestyle-related disorders. As the global burden of chronic diseases such as obesity, diabetes, cardiovascular conditions, and neurodegenerative disorders continues to rise, nutraceuticals offer promising adjuncts to conventional therapies. They provide therapeutic benefits beyond basic nutrition, including antioxidant, anti-inflammatory, immunomodulatory, and metabolic effects. This review explores the growing potential of nutraceuticals in the management and prevention of lifestyle disorders, examining their mechanisms of action, efficacy, and safety profiles. It also highlights the current challenges such as regulatory issues, standardization, bioavailability, and clinical validation, which limit their widespread adoption. Bridging the gap between food and medicine, nutraceuticals represent a compelling frontier in personalized nutrition and integrative healthcare. However, robust scientific evidence and regulatory frameworks are essential to fully realize their potential in disease prevention and health promotion.*

Keywords: Nutraceuticals, Lifestyle Disorders, Chronic Diseases, Functional Foods, Bioactive Compounds, Prevention, Antioxidants, Inflammation, Personalized Nutrition, Regulatory Challenges

