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Navigating the frontiers of mineral absorption in the human body: Exploring the impact of probiotic innovations

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Essential minerals play a crucial role in diverse physiological processes, and their deficiencies can give rise to significant health challenges. Probiotics, residing as beneficial microorganisms in the gut, have recently garnered attention for their potential in modulating mineral absorption and alleviating deficiencies. However, the difficulties arise from the variability of probiotic strains, varying dosages, and the distinct composition of individuals' gut microbiota, rendering it challenging to establish universal guidelines. A more nuanced understanding of these mechanisms holds the key to developing targeted probiotic interventions, ultimately optimizing mineral absorption and fostering human health. This review explores the complex relationship between probiotics and the assimilation of essential minerals such as iron, calcium, selenium, zinc, magnesium, and potassium, decoding how probiotics influence the absorption of these minerals. Further research on the role of probiotics in mineral absorption is necessary for optimizing nutrient uptake and informing personalized interventions to support overall health.

Keywords: Essential minerals, Gut microbiota