

Abstract

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Zinc and micronutrient combinations to combat gastrointestinal inflammation.

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PURPOSE OF REVIEW: To examine current evidence for dietary supplementation with zinc and other micronutrients for primary prevention of multiple micronutrient deficiencies that are known to result from therapies used in the treatment of gastrointestinal inflammatory disorders.

RECENT FINDINGS: Epidemiological observations and clinical findings have strengthened the concept that both nutritional deficiencies and nutritional excesses impair the gastrointestinal response(s) and alter susceptibility to inflammation and other diseases. The interaction of micronutrient intake, biochemical indicators of nutritional status, and four specific gastrointestinal inflammation states are reviewed. These conditions include celiac disease and concomitant micronutrient deficiencies resulting from the sustained adherence to a gluten-free diet; micronutrient nutrition as an important determinant of immunity for two major types of inflammatory bowel disease: ulcerative colitis and Crohn's disease; and HIV/AIDS-related diarrhea and concomitant micronutrient deficiencies which may be exacerbated by the initiation of highly active antiretroviral therapy.

SUMMARY: For each inflammation 'state', enhancement of micronutrient status can improve immunocompetance and minimize therapeutic side-effects. The impact of single-micronutrient deficiencies on immune responses, and the possible impact of uncorrected micronutrient status are discussed.

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