

Abstract

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The mechanisms of action of nicotinamide and zinc in inflammatory skin disease.

Fivenson DP.

BACKGROUND: Nicotinamide (niacinamide), a physiologically active form of niacin (nicotinic acid), in combination with zinc is being assessed in clinical studies for the treatment of inflammatory skin diseases such as acne vulgaris and bullous pemphigoid.

DISCUSSION AND FINDINGS: The basis for these investigations is the variety of potential mechanisms of action of nicotinamide and zinc, including an anti-inflammatory effect via inhibition of leukocyte chemotaxis, lysosomal enzyme release, lymphocytic transformation, mast cell degranulation, bacteriostatic effect against *Propionibacterium acnes*, inhibition of vasoactive amines, preservation of intracellular coenzyme homeostasis, and decreased sebum production. Other possible mechanisms involve suppression of vascular permeability and inflammatory cell accumulation, as well as protection against DNA damage.

SUMMARY: The goal of this paper is to review the pathophysiology of inflammatory skin diseases and discuss the role, mechanisms of action, and safety of nicotinamide and zinc as therapeutic options for these disorders.

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