

Serum Biotin Levels in Women Complaining of Hair Loss.

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Abstract

Biotin is a coenzyme for carboxylase enzymes that assist various metabolic reactions involved in fatty acid synthesis, branched-chain amino acid catabolism, and gluconeogenesis important for maintenance of healthy skin and hair. Due to its availability, affordability, and effective marketing for this purpose, biotin is a popular nutritional supplement for treatment of hair loss. However, there are little data on the frequency of biotin deficiency in patients complaining of hair loss and on the value of oral biotin for treatment of hair loss that is not due to an inborn error of biotin metabolism or deficiency. The aim of this study was to determine the frequency and significance of biotin deficiency in women complaining of hair loss. Biotin deficiency was found in 38% of women complaining of hair loss. Of those showing diffuse telogen effluvium in trichograms (24%), 35% had evidence of associated seborrheic-like dermatitis. About 11% of patients with biotin deficiency had a positive personal history for risk factors for biotin deficiency. The custom of treating women complaining of hair loss in an indiscriminate manner with oral biotin supplementation is to be rejected, unless biotin deficiency and its significance for the complaint of hair loss in an individual has been demonstrated on the basis of a careful patient history, clinical examination, determination of serum biotin levels, and exclusion of alternative factors responsible for hair loss.

KEYWORDS: Biotin; deficiency disorder; diagnosis; supplementation in hair loss; treatment

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