Evidence-based Biotin Usage

Name(s): Vitamin H, coenzyme R, or vitamin Bw

Description: Biotin is a water-soluble, B-complex vitamin that is necessary for the synthesis of fatty acids and nucleic acids (RNA & DNA). If biotin is absent in the body, the production of fat is impaired. The synthesis of niacin is dependent upon biotin.[1]

Absorption/Storage: Bacteria synthesise biotin in the intestinal tract. A small amount of this water-soluble vitamin is absorbed: however, the quantity that is not used is excreted through the urine.[1]

Recommended Dietary Allowance/Dietary Reference Intake[2]: The Adequate Intake levels for biotin are as follows:

Persons	U.S. (mcg)
Birth to 3 years of age	5-8
4 to 8 years of age	12
9 to 13 years of age	20
Adolescent and adult males	25-30
Adolescent and adult females	25-30
Pregnant females	30
Breast-feeding females	35

Optimum Daily Allowance (Adult): 400-800 mcg.[3]

Tolerable Upper Intake Levels: None available.

Principal Uses: Brittle nails,[4-6] and diabetes.[7-12]

Proposed Uses: None.

Traditional Uses: Cradle cap/seborrhoeic dermatitis.[13]

Healthy Sources:
High (40%+ US RI): Brewer's yeast, soy flour, soybeans, rice bran, rice germ and rice polishings.[14]

Medium (25-39% US RI): Barley, peanut butter, roasted peanuts, pecans and walnuts.[14]

Contraindications: If you are taking this dietary supplement without a prescription, carefully read and follow any precautions on the label. For biotin, the following should be considered:

Allergies--Tell your health care professional if you have ever had any unusual or allergic reaction to biotin. Also tell your health care professional if you are allergic to any other substances, such as foods, preservatives, or dyes.

Pregnancy--It is especially important that you are receiving enough vitamins and minerals when you become pregnant and that you continue to receive the right amount of vitamins and minerals throughout your pregnancy. The healthy growth and development of the foetus depend on a steady supply of nutrients from the mother. However, taking large amounts of a dietary supplement in pregnancy may be harmful to the mother and/or foetus and should be avoided.

Breast-feeding--It is especially important that you receive the right amounts of vitamins so that your baby will also get the vitamins needed to grow properly. However, taking large amounts of a dietary supplement while breast-feeding may be harmful to the mother and/or baby and should be avoided.

Children--Problems in children have not been reported with intake of normal daily-recommended amounts.

Older adults--Problems in older adults have not been reported with intake of normal daily-recommended amounts.[15]

Interactions:

Decreases Vitamin Availability:	Charcoal, egg white (raw),[13] and anticonvulsants.[13,16]
Is Increased By Vitamin Availability:	Glyburide, topical corticosteroids,[13] and insulin.[13,16]

Deficiency: The skin and hair mainly affected by a biotin deficiency causing baldness, dermatitis, and rashes around the mouth and nose. The locations that are commonly deficient in biotin are the male genitalia, bone marrow, liver, and the kidneys. Other symptoms of the deficiency are sleeplessness, poor appetite, and dry skin.[1]

Toxicity/Side Effects: No side effects have been reported for biotin in amounts up to 10 milligrams a day.[15]

Treatment for Overdose: None.

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Storage: To store this dietary supplement:

- Keep out of the reach of children.
- Store away from heat and direct light.
- Do not store in the bathroom, near the kitchen sink, or in other damp places. Heat or moisture may cause the dietary supplement to break down.
- Keep the dietary supplement from freezing. Do not refrigerate.
- Do not keep outdated dietary supplements or those no longer needed. Be sure that any discarded dietary supplement is out of the reach of children.[15]

References:

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