



BIOTIN 250 mcg

UPC CODE 0 646420 2258 5

NPN # 00437522

NATURAL HEALTH PRODUCTS DIRECTORATE (NHPD) CLAIMS:

Jamieson Biotin 250 mg is approved for the following NHPD claims:

- Assists in the metabolism of dietary carbohydrates, fats, and protein

GENERAL INFORMATION

Biotin is a water-soluble vitamin that is a member of the B complex family of vitamins. It is found in very small amounts in every living cell. In food, biotin is bound to proteins and must be cleaved by the enzyme biotinidase; free biotin is then absorbed via facilitated diffusion in the intestine. The human body can only absorb biotin in this free form, called d-biotin. Jamieson's Biotin 250 mcg provides d-biotin, the only known metabolically active form of this vitamin.

A number of enzymes require biotin as a coenzyme in order to function properly in various metabolic activities, including gluconeogenesis (endogenous glucose production), the citric acid cycle (part of the energy-producing process within cells), and the synthesis of fatty acids. Biotin-containing enzymes, known as *carboxylases*, play a vital role in energy production from the metabolism of carbohydrates, fat, and proteins. Biotin has also been found to stimulate glucokinase, a liver enzyme responsible for increasing the synthesis of glycogen, which is the storage form of glucose that acts as an energy reserve in the muscles. In addition, biotin assists with the proper functioning of other vitamins in the B complex family, particularly folic acid, pantothenic acid, and vitamin B₁₂.

Biotin provides nutritional support for brittle fingernails, as supplementation with this vitamin can improve nail strength, thickness, and hardness. It is an important nutrient for healthy hair, as it improves the metabolism of oils in the scalp, and it can prevent hair loss caused by

biotin deficiency. In addition, because it is involved in fat metabolism, biotin can improve the condition of the skin, by helping to constantly replenish new skin cells as old ones are shed on a daily basis. This B vitamin also helps maintain healthy sweat glands, nerves, bone marrow, and normal bone growth.

There is some research to indicate that biotin can improve the body's use of insulin, thereby helping to reduce fasting blood glucose levels and improve overall blood glucose control. This effect is beneficial for individuals with Type II diabetes who are having difficulty keeping their blood sugar levels within a normal range, and biotin does not have any of the side effects associated with commonly prescribed anti-hyperglycemic agents. Supplementation with biotin has also been shown to play a role in the prevention of diabetic neuropathy (nerve damage).

Primary storage of biotin is in the liver and kidneys, and any biotin the body does not use is eliminated. Therefore, this vitamin requires constant replenishing in the body via a continuous supply from food or supplements. Although biotin deficiency is rare, the body's biotin requirements increase in certain situations. This includes prolonged intravenous feeding without biotin supplementation; consumption of raw egg white for a prolonged period of time (a glycoprotein in raw egg whites called *avidin* binds biotin and prevents its absorption); and during pregnancy, as the growing fetus places an increased demand for nutrients upon the mother. A biotin deficiency can result in hair loss and scaly dermatitis, as well as fatigue, depression, muscle pain, anemia, increased blood cholesterol levels, and cardiovascular problems. If there is a deficiency of biotin, the body's fat production is impaired. Fat production is critical for the body, since the membranes of all cells must contain the correct fat components to function correctly.

Jamieson's Biotin 250 mcg is formulated from natural sources and is pharmaceutically tested to guarantee full potency and absolute clinical purity.

What makes Biotin 250 mcg from Jamieson Laboratories different...and why does that difference mean better?

- 1) Contains a high quality source of biotin that is processed without heat or solvents to ensure the integrity and effectiveness of this important nutrient.

For Accidental Overdose (such as child ingesting formula)

Dial 911, 0 for operator assistance or call your nearest Poison Control Centre.

For Professional Use Only

The information contained here has been accumulated from many sources.

Indications are not intended as cures, they are simply a guideline to be used at your professional discretion.

For more information please visit www.jamiesonvitamins.com or call 1-800-265-5088 to speak to a Consumer Affairs representative.



- 2) Our premium formulations are manufactured using the 360 Pure process - a minimum of 360 quality tests that guarantee traceability and reliability of raw material, product safety, full potency and absolute clinical purity.

INGREDIENT INFORMATION

Available as 100 tablets.

Each tablet contains:

Biotin (Biotin, synthetic)250 mcg

EXCIPIENTS

Dicalcium Phosphate, Cellulose, Modified Cellulose Gum, Vegetable Magnesium Stearate, Silica.

DIRECTIONS

Adults: Take 2 tablets daily. Store between 15°C-25°C, away from children.

INDICATED BENEFITS

- Assists in the metabolism of dietary carbohydrates, fats, and protein.
- Maintains healthy nails and hair.
- Improves the body's use of insulin to help maintain normal blood glucose levels.
- Treatment for biotin deficiency.

NUTRIENT INTERACTIONS

Drug Interactions

Biotin may alter the required dosage of insulin or oral hypoglycemic agents.

Nutrient Depletions

Biotin levels may be depleted by long-term use of antibiotics (sulfa drugs in particular) and anti-seizure medications. Prolonged consumption of raw egg whites can also cause a biotin deficiency.

Supportive Interactions

None known when taken as directed.

WARNINGS AND PRECAUTIONS

Consult a physician prior to use if you are pregnant or nursing. If you are taking any medication for diabetes, discuss the use of this product with a healthcare practitioner, as biotin may alter the required dosage of insulin or oral hypoglycemic agents.

TOXICITY, ADVERSE REACTIONS, AND SIDE EFFECTS

None known when taken as directed.

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