NUTRIENTS

Vitamins: Biotin

What is it?

Biotin is a water-soluble vitamin.

Functions - what does it do?

Biotin functions as a coenzyme for reactions involving the addition or removal of carbon dioxide to or from active compounds. It promotes the production of glucose, fatty acids, and DNA, and it helps to break down amino acids.

Requirements - How much do we need?

	Adequate Intake* (µg/day)	
Life-Stage (years)	**Males**	**Females**
0 - 0.5 (0 - 6 months)	5	5
0.5 - 1 (7 - 12 months)	6	6
1 - 3	8	8
4 - 8	12	12
9 - 13	20	20
14 - 18	25	25
Ages 19+	30	30
Life-Stage (years)	**Pregnancy**	**Lactation**
18 and younger	30	35
19 - 30	30	35
Ages 31 - 50	30	35

*Adequate Intakes (AI) are used as no RDA is established. The AI is a recommended daily intake level based on observed or experimentally determined approximations of nutrient intake by a group of healthy people who are assumed to be maintaining an adequate nutritional state.

Sources - Where is it found?

A considerable amount of biotin is made by intestinal bacteria and absorbed by the body.

Food Sources	Nutrient Density		
	High	Medium	Low
Good sources	Kidney, Liver, Egg yolk, Soybeans, Yeast		
Moderate sources	Fish, Nuts, Oatmeal		
Poor sources	Meat, Vegetables, Fruits, Cow's Milk		

Deficiency - When you have too little

Deficiencies of biotin are rare but have been reported in adults that are fed artificially by vein without biotin supplementation. Long-term alcohol abuse may also cause a biotin deficiency.
Biotin deficiency can be induced in humans by feeding them raw egg whites, which contain a protein that binds biotin and prevents its absorption.

Symptoms. Symptoms of a biotin deficiency include hair loss, a dry, scaly rash around the eyes, nose, mouth, and genital area, decreased appetite, nausea and vomiting and failure to thrive in children.

Toxicity - When you have too much

	Upper LimitSUP+ (µg/day)	
Life-Stage (years)	**Males**	**Females**
All ages	ND	ND
Life-Stage (years)	**Pregnancy**	**Lactation**
All ages	ND	ND

+Upper Limits (UL) = The maximum level of daily nutrient intake that is likely to pose no risk of adverse effects. Unless otherwise specified, the UL represents total intake from food, water, and supplements.

ND = Not determinable due to lack of data of adverse effects in this age group and concern with regard to lack of ability to handle excess amounts. Source of intake should be from food only to prevent high levels of intake.

For further, personalized and more detailed information, please contact a dietitian registered with the Health Professions Council of South Africa.*References from the scientific literature used to compile this document are available on request.*

Human Nutrition | Menslike Voeding
Fakulteit Geneeskunde en Gesondheidswetenskappe /
Faculty of Medicine and Health Sciences
Universiteit Stellenbosch University
Francie van Zijl Rylaan / Drive; Tygerberg; Kaapstad / Cape Town
Posbus / PO Box 241; Kaapstad / Cape Town; 8000
Suid-Afrika / South Africa
Tel: +27 21 938-9259
e-pos / e-mail: irene@sun.ac.za
www.sun.ac.za