



# Biotin

## Did You Know?

Eggs are a great food source of biotin (13-25 mcg per egg) with most of the biotin being in the yolk.

Eating *cooked* eggs is recommended not only for optimal biotin absorption, but also to minimize the risk of foodborne illness from Salmonella.



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Biotin is a water-soluble vitamin and part of the B-complex group. It is an important element that helps release energy from foods by breaking down carbohydrates, fats, and proteins. In addition, biotin helps with the growth of cells in our body and is often used to strengthen hair and nails.

## How much do I need?

- Men and women need 30 micrograms per day.
- For recommendations for infants, children, teens, and lactating women, check out the chart in CSU Extension's Fact Sheet: [Water-Soluble Vitamins: B-Complex and Vitamin C](#).

## Food sources

Biotin occurs naturally in many foods, and is also made by our intestinal bacteria. Good sources of biotin include yeast, whole-grain cereals and breads, nuts, dairy products, legumes, organ meats, salmon, and egg yolks.

## What happens if I don't get enough?

A diet low in biotin is very rare, especially in the United States, since it is found in so many commonly eaten foods. Deficiency symptoms can include fatigue, loss of appetite, nausea, vomiting, depression, muscle pains, heart problems and anemia. Some people may also experience hair loss and brittle fingernails.

Even though deficiency of biotin is very rare, consuming raw egg whites for a prolonged period of time (many weeks to years) has been shown to result in deficiency. Because raw egg whites contain a protein called avidin that prevents the absorption of biotin, eating *cooked* eggs is recommended for optimal biotin absorption.

## Can I get too much?

Biotin is not known to be toxic and no tolerable upper level of intake (UL) has been determined.