



# From the Inside Out: Vitamins, Nutrients, and Your Skin

*Key nutrients play a vital role in the health of your skin.*

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**Y**ou've heard the news, read the stories, and seen the reports: nutrition is important to our health. As a part of an overall wellness plan that includes physical activity, getting enough sleep, and keeping stress levels in check, eating a balanced diet that includes a variety of valuable nutrients is a key element of a long and healthy life. In addition to helping our bodies maintain critical internal functions, these nutrients play an important role in our skin, hair, and nail health.

Read on to learn which vitamins and

minerals are most important to the skin, hair, and nails; how they work; and how to make sure you are getting enough of what you need through food. For the most part, supplements are not needed if you consume a healthy diet, but they can be helpful in certain situations. Luckily, once identified, most deficiencies are easily corrected.

## Iron

Hair loss can be a common manifestation of iron deficiency. While controversial, the majority of studies support a connection between low iron and hair loss, especially

in women. Additional signs of iron deficiency include tiredness, irritability, and paleness. Low iron can also affect the nails by making them curl, and it can also result in a rash at the corners of the mouth or inflammation of the tongue.

Iron, measured in milligrams (mg), is lost from the body by excretion from the gut (1.5 mg), menses (25 mg per month), and through pregnancy, delivery, and nursing (700 to 1,000 mg). Food replaces only 1.5 mg daily in a typical diet. The preferred way to detect iron deficiency is by measuring the amount of ferritin, a protein found in cells, circulating in the



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bloodstream. Ferritin stores iron and releases it in a controlled way. Ferritin should measure 70 to 100 micrograms (mcg) per liter. Low ferritin may indicate the need to look for causes of iron loss. Iron replacement therapy comes in several forms and should be monitored by a physician for maximum safety.

## Vitamin D

Vitamin D is an important component of our overall health. It is synthesized in the skin in response to ultraviolet light and is also found in such foods as salmon, mackerel, sardines, and fortified dairy products and orange juice. Recent research has linked low vitamin D levels to a higher risk of breast and colon cancer, and vitamin D has been shown to play a crucial role in the activation of immune cells needed to fight threats like infection. Increasing awareness of the health risks associated with exposing our skin to the sun, as well as the increase in the number of indoor jobs, however, have led to lower vitamin D levels in the population.

Supplements are often used to replenish vitamin D levels in doses from 200 to 2,000 international units. The notion of getting sunlight for vitamin D is not supported by the majority of the literature, as the concerns about skin cancer outweigh the benefits of vitamin D synthesis. One way to find out if you have adequate vitamin D levels is to have them tested. From the result, your doctor can help you determine how to get the recommended amount of vitamin D through a combination of diet and supplements.

## Biotin

Biotin is a B vitamin that plays an important role in energy metabolism. Biotin helps essential enzymes break down carbohydrates, fats, and proteins. Biotin deficiency, which can result in brittle nails and hair loss, is not common but may be caused by consuming large amounts of raw egg whites or by taking antacids for heartburn, acid reflux, or gastroesophageal reflux disease.

Biotin can be found in such foods as brewer's yeast, green peas, oats, soybeans, walnuts, sunflower seeds, green peas, bulgur, and brown rice. Biotin supplements may be purchased over the counter in moderate doses or through your doctor in higher doses. When used with care and according to standard dosage levels, dietary supplements are a safe and efficient means of maintaining the necessary daily biotin levels. In fact, for vegetarians a dietary supplement containing biotin is probably a very smart choice.

## Zinc

Zinc is a mineral that the body requires for the formation of collagen. Essential for immune function, vision, taste, appetite, and fertility, this mineral is also vital for skin, hair, and nails. Zinc fosters the regeneration of skin cells and is therefore used to heal cuts, scrapes, and wounds. Interestingly, there is evidence that it has benefit in treating acne, psoriasis, and certain types of dermatitis, such as eczema. Zinc is also important in the health of hair, with deficiency leaving hair dull, thin, and subject to early graying.

Zinc can be found in red meat, poultry, fish, seafood, dairy products, and whole-grain cereals. Other sources include almonds, pumpkin seeds, peanuts, and yogurt. Zinc is best consumed in smaller quantities throughout the day as opposed to all at once. Especially at risk for zinc deficiency are vegetarians because zinc found in vegetables is more difficult for the body to access. For those who may be concerned that their zinc level is low, a blood test can provide the answer. The recommended daily intake for zinc is 11 mg per day for men and 9 mg per day for women. Consuming more than 40 mg per day may result in toxicity.

## Selenium

Selenium is another mineral that plays an important role in our health. Selenium binds with proteins to make antioxidant compounds that prevent damage to cells from the effects of naturally occurring but damaging free radicals. It is primarily applied topically in shampoos and creams to help with skin conditions such as dandruff or psoriasis.

Selenium can be found in such foods as Brazil nuts, tuna, beef, and vegetables grown in selenium-rich soil. According to a report published in *Cancer Epidemiology Biomarkers and Prevention* in 2009,<sup>1</sup> selenium was linked to a 60 percent reduction in skin cancer. Deficiency in selenium is rare, usually limited to individuals with gastrointestinal (GI) disease or those being fed through a tube to bypass a nonfunctioning GI system. The recommended daily allowance for selenium ranges by age from 20 mcg per day for young children to 55 mcg per day for adults. The tolerable upper-limit intake is 400 mcg per day for adults. ✨

### REFERENCE

1. van der Pols JC, Heinen MM, Hughes MC, Ibiebele TI, Marks GC, Green AC. Serum antioxidants and skin cancer risk: an 8-year community-based follow-up study. *Cancer Epidemiology, Biomarkers and Prevention*. 2009;18:1167.