



# Diet's Impact on Hormones and Hair Loss

By Neal Barnard, MD, FACC  
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*Editor's Note: Neal Barnard's [Your Body in Balance](#), which debuted on Feb. 4, 2020, offers a comprehensive look at how hormones influence a range of health issues in men and women, from menstrual cramps to prostate cancer. In this excerpt, Dr. Barnard examines the role hormones play in hair health.*

Can foods help you keep a healthy head of hair? It is a fascinating area of research—and one that is by no means finished. Let me share what we know.

## What Causes Hair Loss?

Common age-related hair loss is influenced by genes, of course. In some families, baldness runs up and down the family tree. But the process is entirely dependent on hormones, as was dramatically demonstrated by Yale University's James B. Hamilton [in 1942](#). Hamilton showed that men who, for whatever reason, had been castrated before puberty never lost their hair. Even if every last male in their family had gone bald, it did not happen to them. Without testosterone, the genes for hair loss did not express themselves.

Hamilton also found that when men who were losing their hair were castrated (for medical reasons having nothing to do with hair loss), their hair loss suddenly stopped. If castrated men were then given supplemental testosterone, hair loss kicked in. If the testosterone treatments were stopped, hair loss stopped, too.

Here is what is going on: In the hair follicles, testosterone is converted to dihydrotestosterone (DHT). DHT is the baldness trigger. In genetically susceptible individuals, it causes hair follicles to gradually shrink the size (length and diameter) of the hairs they produce until finally they stop producing hair altogether.

Some parts of the scalp—especially the front and crown—are particularly sensitive to DHT, while others—the sides and back of the head—resist it. And on the face and chest, DHT has the opposite effect. It stimulates follicles to produce thick, curly hair.

The conversion of testosterone to DHT can be blocked by finasteride, a drug marketed under the brand name

Propecia. Rogaine (minoxidil) works differently. It is used topically to keep follicles functioning normally.

## Foods and Hair Retention

So, how do foods fit into this? For starters, researchers noticed that baldness was [less common among Asians](#) than in whites. But as Asian countries began to Westernize their diets, baldness was one of the conditions that appeared to be increasingly common. Japan is a case in point. As its diet became Westernized in the latter half of the 20th century, many aspects of health changed. Although most of the attention went to the massive rise in breast cancer, diabetes, and heart disease, dermatologists also noted that baldness became more common. The same phenomenon was [observed in Korea](#). Doctors in a dermatology clinic found that baldness seemed to be striking earlier and more often.

A traditional Asian diet is based mainly on plant-based foods, rather than meats and dairy products, and tends to be very modest in fat. A low-fat, plant-based diet encourages your body to build more [SHBG](#)—sex hormone-binding globulin. SHBG reins in testosterone and keeps it inactive until it is needed. That's good. You will have more than enough testosterone for your daily needs, without the excesses that could affect your scalp.

One more thing: In 2009, researchers compared 80 young men with progressive hair loss to 80 men without hair loss. The balding men were more likely to have insulin resistance. Other studies found the same thing: Insulin resistance is linked to hair loss in both [men](#) and [women](#). This means that the cells of the body (especially the muscles and liver) have become unresponsive to insulin, as a result of the buildup of fat inside the cells. In turn, insulin resistance causes metabolic changes that affect your whole body. It can impair blood circulation to the follicles and contribute to the loss of the follicles' ability to produce hair.

This can happen to women, too. Women with [polycystic ovary syndrome](#), in particular, have higher levels of testosterone than usual and often have insulin resistance. Many have thinning hair.

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There are other causes of hair loss, too. Thyroid disease and various medications can cause hair loss.

## Keeping Healthy Skin and Hair

To maintain healthy skin and hair, I would encourage you to:

1. Avoid animal products.
2. Avoid adding oils in cooking, and favor oil-free foods at restaurants.
3. Avoid oily foods (e.g., peanut butter, avocados) until you know how they affect you.
4. Avoid added sugars. In anecdotal reports, for whatever reason, sugary foods seem to make hair lifeless.
5. Have adequate protein from plant sources.  
Beans and bean products, such as tofu, tempeh, and soymilk, give you plenty of protein without the negatives of dairy products or meat.  
Anecdotally, some people have found that having extra plant protein helps keep their hair fuller.
6. Have plenty of vegetables and fruits. Their antioxidants will help protect your skin.
7. Protect your skin from excess sun exposure.
8. Although hormone shifts can have profound effects on your skin and hair, a healthful diet can be powerful, too. See what [healthful foods](#) can do for how you look, in addition to how you feel.

*Excerpted from the book YOUR BODY IN BALANCE: THE NEW SCIENCE OF FOOD, HORMONES, AND HEALTH by Neal D. Barnard, MD, FACC with Menus and Recipes by Lindsay S. Nixon. Copyright © 2020 by Neal Barnard, MD. Recipes text copyright © 2020 by Lindsay S. Nixon. Reprinted with permission of Grand Central Publishing. All rights reserved.*