

Do Hair, Skin and Nail Supplements Work?

Analysis by [Dr. Joseph Mercola](#)

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STORY AT-A-GLANCE

- › Healthy hair, skin and nails depend on three main structural proteins: solubilized keratin, collagen peptides and elastin, but there are other plant-based supplements that benefit these areas for more vibrant health
- › Other integrative interventions include extracts from the herb Polypodium leucotomos, a plant-based supplement for sensitive skin, nicotinamide (aka niacinamide) for skin cancer protection and phytoceramides (plant-derived lipids)
- › Factors that cause problems for your hair, skin and nails fall into two categories: intrinsic factors, such as the aging process, and fluctuating hormone levels
- › Extrinsic factors include ultraviolet (UV) radiation from sun exposure, free radical damage and increased enzyme activity that breaks down collagen and elastin; air pollution and smoking are also “outside” forces that cause skin damage
- › A combination of specific supplements, such as collagen, biotin, vitamin D and iron, can help strengthen your hair, skin and nails from the inside out

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Strong, shiny hair and fingernails (and toenails) that are smooth and uniform in color, and soft, glowing skin are typically viewed as some of the more visible signs of health. Most children have all of the above, but often with factors like stress hormones, oxidative stress and a less-than-healthy diet, your hair and nails can become dry and brittle, and your skin rough and blemished.

If you've ever roamed the aisles where supplements are stocked, no doubt you've noticed – and possibly even tried – vitamins or minerals advertising help for your hair, skin and nails. You also may have noticed that there are dozens of products to wade through. It's hard to know what will work and which will be a waste of money.

How possible is it for something in a capsule to make a difference? Can something that's good for your hair also help your skin, and vice versa? One thing that may make such questions even more complicated is the fact that the U.S. Food and Drug Administration doesn't have the authority to regulate dietary supplements before they hit the market.¹

While dermatologists may say they aren't in the habit of recommending supplements to healthy people, that doesn't mean they won't be beneficial. In fact, here's where they make themselves useful: Besides lifestyle changes, knowing the nutritional and supplemental choices you need to make can make all the difference.

Factors That Can Compromise the Health of Your Hair, Skin and Nails

Healthy hair, skin and nails depend on three main structural proteins: solubilized keratin, collagen peptides and elastin.² Other integrative interventions include the herb *Polypodium leucotomos* extract, a plant-based supplement for sensitive skin,³ nicotinamide (aka niacinamide) for skin cancer protection⁴ and phytoceramides (plant-derived lipids).⁵ Factors that cause problems fall into two categories:

- Intrinsic factors such as the aging process affect the levels of all three proteins, as well as your hormone levels, while inflammation and high blood sugar damages both the integrity of collagen and its production.
- Extrinsic factors such as ultraviolet (UV) radiation from **sun exposure** can cause free radical damage and increase enzyme activity that breaks down collagen and elastin; air pollution and smoking are examples of “outside” forces that cause skin damage.

Is There Help for 'Bad' Hair, Sad Hair and Hair Loss?

While the prescription drug finasteride is touted by the medical industry as the "gold standard"⁶ for hair loss, particularly male pattern baldness, clinical studies note that it is also prescribed for an enlarged prostate, and the side effects are hair-raising. One of the most notorious is that it can suppress sexual function. Says Harvard Health:

"In April 2012, the FDA issued a warning on finasteride. It stated that sexual side effects could persist even after stopping the medication. Those side effects include decreased sex drive and ejaculation problems. The warning was based on about 100 reports the FDA received over nearly 20 years.

*Before taking finasteride, men should consider the risk of sexual symptoms and other, more serious side effects. For example, some studies have shown that men who use finasteride for extended periods and develop prostate cancer tend to have a more aggressive and faster-growing form of the disease."*⁷

While the caveat says finasteride may not have been at fault, and the sexual side effects are "probably rare," such problems occurred in 4% to 6% of the men who took the drug, and the effects were "usually" reversible. It's safe to say that among those numbers, none of the men who experienced them would say it was worth it.

Other problems involving hair include those resulting from vitamin and/or mineral deficiencies, such as low levels of vitamin D and iron, as well as hypothyroidism and alopecia.

Androgenetic alopecia is a type of hair loss that, for men, starts with a receding hairline; for women it's usually all-over thinning hair.⁸ Alopecia areata produces unexpected balding in circular patches or all over.⁹ Traction alopecia results from hairstyles like tight ponytails or "corn rows," which is often reversible.¹⁰ A 2017 study suggested that "efficacious therapies are possible in the foreseeable future."¹¹

Supplements for Hair Loss

Weill Cornell Medical College clinical instructor Dr. Michelle Henry says for those wanting to avoid taking the pharmaceutical route, a combination of specific supplements can help, including the following:

- **Biotin** — According to Henry, studies on biotin (vitamin B7) once concentrated on nail growth, but because hair and nails are similar systems, supplementing with biotin will work for both. She recommends taking 2,500 to 5,000 micrograms a day, as it's a type of vitamin B that's "essential for nail growth, and potentially hair growth as well."¹²

Sunflower seeds, walnuts, pecans and avocados are all good plant-derived sources of biotin, while protein-based sources of biotin include organic pastured egg yolks as well as milk, butter and cheese made with organic raw milk from grass fed cows, grass fed organ meats such as liver and kidneys, and wild-caught Alaskan salmon.

- **Collagen** — Found in many beauty supplements, **collagen** can help your hair as well as your skin, Henry says, noting a marine collagen supplement may be useful for vegetarians or vegans with hair loss, as, "It does provide a source [of] additional protein for them, which is critical for hair growth."¹³

Your body cannot produce the essential amino acids that make up collagen, so you must obtain them through either your diet or supplements. One industry-funded study showed that women taking 50 milliliters of a collagen-based product daily for 60 days had fewer wrinkles and less skin dryness after 12 weeks.¹⁴

- **Vitamin D** — Another common cause of hair loss is a **vitamin D deficiency**, which in some cases leads to alopecia. Vitamin D stimulates hair follicles to grow, so when you don't get enough, your hair can be affected.¹⁵

You should **maintain a vitamin D level** between 60 and 80 ng/mL (150 to 200 nmol/L),¹⁶ in spite of the fact that health officials sometimes suggest much less is sufficient. That said, checking your levels regularly is important, and getting vitamin D via sensible sun exposure is ideal.

- **Saw Palmetto** — An abundance of research shows why men and women alike reach for this supplement to treat thinning hair. Derived from a palm tree and used by Native Americans for centuries, it inhibits an enzyme called 5-alpha reductase.

This enzyme converts testosterone to the powerful androgen hormone DHT. Henry says saw palmetto is for people with androgenetic alopecia, "which is basically alopecia due to sensitivity to their own testosterone."¹⁷

According to the American Academy of Dermatology, "Alopecia areata also can affect your fingernails and toenails. Nails can have tiny pinpoint dents (pitting). They also can have white spots or lines, be rough, lose their shine, or become thin and split."¹⁸

Saving Your Skin: 'Minimally Invasive' Remedies or Diet and Lifestyle Changes?

Some doctors recommend "minimally invasive" cosmetic interventions such as laser skin resurfacing, dermabrasion, chemical peels, radiofrequency treatments, injections of botox, vitamin A derivatives, topical estrogen or other treatments to accomplish three of the most-desired outcomes: improved skin elasticity and decreased wrinkles and pore size.

They also may recommend applying sunscreen before going outside, but that comes with its own problems. The FDA admits that of the [sunscreen ingredients](#) used in the U.S., 14 of the 16 are unsafe, and research on 12 of them has never been clinically proven.¹⁹ Oxybenzone, found in many sunscreens, is an endocrine disruptor shown to reduce male fertility,²⁰ and that's just one problem among many.

But although diet and lifestyle changes may seem tedious to some, they cost little and will improve innumerable aspects of your health, not just those concerning your hair, skin and nails.

One of the most effective strategies involves eating a diet that curtails both processed foods and sugar, focusing on healthy fats instead. The other is getting adequate sleep,

which is a minimum of **seven hours every night** and up to nine hours, according to the National Sleep Foundation.²¹

One study found poor sleep quality even accelerates intrinsic aging and diminishes the skin's ability to recover from external stressors, like excessive exposure to UV light.^{22,23}

Other natural substances are beneficial for your skin and hair. Ashwagandha also stimulates your DHEA levels, which triggers the production of collagen. Your skin benefits by maintaining a youthful glow due to the production of natural oils. It also fights off free radicals that cause wrinkles, dark spots and blemishes.²⁴

And a small study in Italy showed that a synthetic derivative of sandalwood oil can help regrow scalp hair, and is shown to treat baldness by increasing growth hormone and keratin levels, noted for both hair growth and signaling skin regeneration.²⁵

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