

# Treating Androgenetic Alopecia: A Review of Nonsurgical Options

Concern over thinning hair drives both men and women to seek a variety of treatments. Dermatologists weigh in on some of the options for nonsurgical hair loss therapies.

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Androgenetic alopecia (AGA) is a common form of hair loss that affects an estimated 80 million Americans.<sup>1</sup> In men, it can begin as early as the teen years and follows a characteristic pattern, and in women, AGA tends to occur after menopause, causing overall thinning. For both, loss of hair can lead to embarrassment and the pursuit of treatments to stop its loss, promote its growth, or camouflage its effects. That pursuit often includes at least a consultation with a dermatologist.

Dermatologists, by definition, are doctors of the skin, hair, and nails, said Omer Ibrahim, MD, of Chicago Cosmetic Surgery and Dermatology in Chicago, IL, and one of nine dermatologists interviewed recently about how they treat AGA. “Therefore, the duty is upon the dermatologist to treat diseases of the hair and scalp; however, the fact of the matter is diseases of the hair do not interest very many dermatologists.”

For some dermatologists, that means the majority or all of their practice is devoted to treating hair loss. For most dermatologists, hair loss patients make up at least a portion of their practice.

## Treatment Goals and Choices

Regardless of how much of their practice is devoted to hair loss, dermatologists said patient satisfaction—either in terms of slowed loss of hair or regrowth of new hair—is their main goal. But in most cases, slowed loss is a more realistic expectation to convey. “We have to set expectations outright and say, ‘You know what? Our first goal is to prevent further hair loss, if not slow it down significantly where it’s almost unnoticeable,’” said Dr Ibrahim.

“The goal is to number one, try to slow down the progression, try to slow down the loss of hair,” said Marc Glashofer, MD, a board-certified dermatologist practicing in northern New Jersey.

“I think our goal is to just keep the patient’s hair on their head, what they currently have on their head,” agreed Amy McMichael, MD, professor and chair of the department of dermatology at Wake Forest Baptist Medical Center in Winston-Salem, NC. “That is the goal because we know that this a progressive, albeit potentially slowly progressive, disease. And so, our goal is to keep the patient’s current hair on their head if we possibly can, and if we get improvement, then that is cherries on top and we’ll take it.”

While treatment typically includes some type of medication (either oral or topical, prescription or over the counter [OTC], antihypertensives or 5-alpha reductase inhibitors), many patients visit dermatologists seeking surgical and nonsurgical techniques or advice on using hormones, supplements, or other complementary therapies for AGA. The first of this two-part series focuses on the dermatologists’ opinions on and use of these nonsurgical treatments for AGA. The second article will discuss medication treatments.

## Corticosteroid Injections

Injections of corticosteroids may be useful for alopecia areata, an autoimmune form of hair loss characterized by inflammation at the root of the hair, but for AGA, the respondents agreed, the injections do not have a role.

“The corticosteroid injections don’t do anything for androgenetic alopecia and that is important to correctly guide our patients who come in asking for these injections, thinking that this will be of benefit to them,” said Dr Glashofer.

“Intralesional Kenalog injections are not standard of care for [AGA],” said Dr McMichael. “I would not recommend this for men or women with this diagnosis.”

“In terms of corticosteroid injections, none,” explained Maria K. Hordinsky, MD, professor and chair of the department of dermatology, the University of Minnesota in Twin Cities, on how many patients she has used this treatment. “Because [AGA] is not alopecia areata.”

### Exogenous Estrogen

Although hair growth can be a side effect of exogenous estrogen in women prescribed hormone replacement for severe menopausal symptoms, none of the dermatologists interviewed used exogenous estrogen to treat AGA or were even aware of others who did.

“Not in my practice,” said Dr Ibrahim. “Not at any hair loss talk I’ve gone to. I don’t think it’s used anymore because of the risks of exogenous estrogen.”

“Not by anyone I know,” echoed Dr McMichael.

“I would say that right now in this day and age, we don’t use it,” said Dr Hordinsky.

### Plasma Rich Protein (PRP)

PRP uses a person’s own blood plasma to slow hair loss and promote new growth. The plasma, which contains growth factors and proteins that promote the repair of tissues, is extracted from a sample of patient’s blood with a centrifuge and then injected back in the patient’s scalp.

All of the dermatologists interviewed said they believed PRP could be beneficial. “Injections are very efficacious,” said Shani Francis, MD, chief wellness officer at Ashira Dermatology in Evanston, IL. “PRP is a great option for those seeking a more

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natural approach. There is a growing body of research data suggesting efficacy for several types of hair loss.”

“What they’ve shown with [PRP] specifically is it reduces shedding,” said Wilma Bergfeld, MD, associate clinical professor in the department of dermatology at Cleveland Clinic in Cleveland, OH. “Regrowth is somewhat debatable. However, there are papers out there saying it does have regrowth capabilities.”

The dermatologists differed in how widely they prescribed PRP, with Dr Ibrahim using in about a third of his patients and Dr Bergfeld just 5%.

For patients who did not receive it, cost was often a factor. “People who don’t do the PRP is because it’s costly,” said Dr Ibrahim.

### Low-level Laser/Light therapy (LLLT)

LLLT, typically administered by a cap or helmet, has been increasingly used for promoting hair regrowth in AGA. Although the exact mechanism by which LLLT works is not known, possible explanations include the stimulation of stem cells responsible for the regeneration of the hair follicles and increasing blood flow to targeted regions of the scalp to bring nutrients to the hair follicles.

All of the dermatologists interviewed said they believed LLLT is an effective treatment for AGA, at least as an adjunctive to medical treatments.

“There’s strong evidence for both men and women that low-level laser therapy is efficacious,” said Dr Francis.

“They do work,” said Dr Ibrahim. “However, the studies have shown that you really have to use them. Studies and anecdotal reports have shown that you need to be super consistent with them.”

“I think it has a role as an adjunctive treatment. I don’t use it first line or as a single agent” said Paradi Mirmirani, MD, of Kaiser Permanente, Vallejo Medical Center in Vallejo, CA.

“I don’t think LLLT works better than finasteride or minoxidil, but it is one more thing that patients can add and can do in the privacy of their own home,” said Nicole Rogers, MD, of Hair Restoration of the South in Metairie, LA. “Plus, it is noninvasive.”

### Biotin

Also known as vitamin H, biotin is one of the B complex vitamins crucial to health of the skin and hair. Hair loss is a symptom of biotin deficiency. But biotin deficiencies are rare, and for those without deficiencies, biotin supplements have not been shown to promote hair growth—and may have potential risks. For these reasons, the dermatologists interviewed did not recommend biotin supplements.

“I stopped recommending high-dose biotin just because it doesn’t do much for the hair,” said Dr Ibrahim. “It doesn’t do much for regrowth and it can affect cardiac and thyroid testing.”

“The problem with biotin is obviously, number one, there’s really no data showing that it helped with male or female pattern hair loss,” said Dr Rogers. “And then number two, there was this warning by the FDA that showed how it could mask a heart attack.”

### Omega-3

Omega-3 fatty acids have been touted by some for their ability to promote hair growth, with even Prince Harry, Duke of Sussex, reportedly using omega-3 supplements to fight male pattern baldness.<sup>2</sup> But the dermatologists interviewed were divided about omega-3’s benefits on AGA. When asked *Is there*

*any truth to the benefits of taking omega-3 supplements for skin and hair?, most answered they were not aware of any.*

“No, not for hair,” Dr McMichael said.

“For hair loss, no,” said Marc Avram, MD, a hair transplant specialist and cosmetic dermatologist in New York City, NY. “I would say no, [there is] not enough evidence to recommend it.”

“There’s no harm, but I don’t personally have good data to support fantastic benefits,” said Dr Hordinsky.

But others expressed more hope with omega-3 supplements. “There is some evidence published about overall hair health and scalp hair density,” said Dr Francis.

“It looks like that that’s going to be important in androgen-pushed alopecia,” said Dr Bergfeld. “The omega-3s can act like a lipid-lowering drug, and so that is very important. Plus, it’s a very strong antioxidant reducing inflammation of the skin. We’re not particularly using it yet, but very interested in using it.”

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### Other Supplements

Other supplements might have a role in treating hair loss, at least as an adjunct to other treatments. The one most frequently mentioned by the dermatologists interviewed was saw palmetto, possibly as an alternative to finasteride.

“Saw palmetto is an herbal supplement, which has shown an identical mechanism of action to finasteride. So, I occasionally offer that,” said Dr Francis. “The medical literature has numerous studies establishing saw palmetto as a [dihydrotestosterone] reduction agent, albeit no clinical trial data for AGA. It is likely helpful and with proper dosing, not harmful for adults to try.”

“For some men who are worried about sexual side effects or maybe they’ve already had sexual side effects with the prescription finasteride, they can always try the saw palmetto,” said Dr Rogers.

Dr Rogers also mentioned the potential of pumpkin seed. “There was another study looking at pumpkin seed oil,” she said, “and that actually was a little bit better data with a little bit better study. Pumpkin seed oil is also a plant-based 5-alpha reductase inhibitor.”

Dr Avram noted that two products, Nutrafol and Viviscal, both containing proprietary blends of natural ingredients, have some evidence to support their use for hair loss and could be useful in conjunction with medications. “If someone said to me, ‘I’m going to do minoxidil and Nutrafol,’ I’m

like ‘Okay,’” he said. “If someone says ‘I’m going to use just Nutrafol and nothing else for pure pattern hair loss,’ I’m not as optimistic it’s going to work alone as the treatment.”

Not all dermatologists are quick to recommend supplements to their patients, interviews revealed. “I’m a minimalist when it comes to supplements,” said Dr Mirmirani.

### Surgery, Wigs, and Cosmesis

For extensive hair loss, patients may opt for surgery or the use of wigs. For milder hair loss, people tend to choose cosmesis, in this case, the use of hairstyling, teasing, and hairspray to camouflage hair loss, the dermatologists said.

“Hairstyling, oh, that’s like 100% of women,” said Dr Ibrahim. “Everyone styles their hair a little bit differently to sort of camouflage their thinning.”

“The majority are doing cosmesis,” said Dr Bergfeld. “So, I would say 100% are doing that.”

Less commonly, women (and some men) use wigs, the experts said. But the least common treatment the dermatologists mentioned was hair transplants.

“Hair transplantation, I’ve had maybe 5% of patients,” said Dr Ibrahim.

“I’d say 10% wigs,” said Dr Mirmirani. “Hair transplantation, mini grafts 1%, larger plugs...zero really. I haven’t seen that in a long time.”

“The mini grafts are really low. Maybe 2% or 5%,” said Dr Bergfeld.

### Cost Considerations

Patients who choose OTC preparations, injectable medications, PRP, and LLLT will most likely find that their treatments are not covered by insurance, the respondents agreed.

Dr Rogers noted that coverage varies by insurance company. “None seem to cover PRP or LLLT or hair surgery,” she said. “Some insurance companies won’t even cover a hair loss visit with the doctor!”

Experts estimate the threshold of what patients would pay for treatment varies widely. “Some of my patients can afford \$8000 for surgical hair restoration or \$500 for a low-level laser light, but others have a hard time paying \$50 for four boxes of topical minoxidil. I see the full gamut,” said Dr McMichael.

### Future Treatments

Overall, the dermatologists expressed general satisfaction with current treatments, while acknowledging there could be better options. They expressed hope that in the future there will be advances, genetic and otherwise, to help patients who struggle with hair loss. ■

### References

1. US National Library of Medicine. Androgenetic alopecia. National Institutes of Health. June 9, 2020. Accessed June 22, 2020. <https://ghr.nlm.nih.gov/condition/androgenetic-alopecia#>
2. Tanner C. Exclusive: Prince Harry gets special deliveries of hair-loss-fighting omega 3 pills made from caviar (sourced from the Norwegian fjords). *The Daily Mail*. May 3, 2017. <https://www.dailymail.co.uk/health/article-4466918/Has-Prince-Harry-turned-CAVIAR-pills-cure-baldness.html>