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Hair Loss and Your Thyroid

DR. IZABELLA WENTZ / APRIL 5, 2018

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For many of us women, hair loss can be a distressing symptom that we experience with Hashimoto's. In many ways, our hair represents our femininity. When we experience hair loss, we feel that we are losing some of our sense of self. Every time we brush our hair or look in the mirror, we are met with a constant reminder that something is off in our bodies and we are not well.

Hair loss was one of the symptoms I experienced on my journey with Hashimoto's, and one of the early clues I had that something was not right inside my body. I know first-hand how distressing it can be to wash your hair in the shower and watch huge clumps of hair clog the drain!

The good news is that there are many different strategies that have worked for me and many of the people I have worked with to overcome hair loss, by addressing the following questions:

- What causes hair loss?
- How can adjusting thyroid medications improve hair loss?
- What supplements are helpful for hair growth?
- Can hair growth be promoted by dietary changes?
- Can topical treatments be beneficial to reduce hair loss?

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In the case of Hashimoto's, hair loss usually occurs when the body is shunting resources, such as nutrients, to be used elsewhere in the body.

But, just as there are many triggers, or root causes, for Hashimoto's in the first place, there could be many different reasons why you are experiencing hair loss.

What Causes Hair Loss?

There are several types of hair loss, with a wide variety of causes, from inheritance, to stress, to autoimmune disease.



Androgenetic alopecia is the most common type of hair loss. Usually, we see this as “male pattern baldness or even “female pattern baldness”, with thinning primarily at the front and top of the scalp. This type of hair loss affects an estimated 50 million men and 30 million women in the United States. Many patients with androgenetic alopecia have a family history of this condition. It can begin as early as during a person's teen years, though risk does increase with age. In women, most hair loss of this form begins after menopause.

Alopecia areata is acute, patchy hair loss that is thought to occur when the immune system mistakenly attacks hair follicles. It occurs in about 2.1 percent of the population and affects both men and women alike. Its cause is likely autoimmune, and it can have a single episode or remission and recurrence.

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Telogen effluvium is the most common type of hair loss we see with Hashimoto's. Its primary causes include high fevers, childbirth, severe infections, chronic illness, severe mental stress, surgery, an over or under active thyroid gland, protein deficiency, nutritional deficiencies, and some medications. It's characterized by large clumps of hair falling out, usually while showering or brushing. It usually causes hair loss in a diffuse pattern, over the entire scalp.

Is Your Hair Thinning?

Have you experienced hair loss on your journey with Hashimoto's? If so, there are so many things we can address to stop the hair loss and restore a sense of confidence and femininity. Sometimes, just one of these solutions will be effective in restoring hair growth; for others, it may be a multi-faceted approach. But be assured that there are options and hope for you. You can get your hair back!

Adaptive physiology is a concept that suggests that our bodies develop autoimmune conditions as a protective measure to conserve energy when resources are low. One example would be the body not getting the nutrition it needs, either from a compromised digestive tract or restricted calorie or nutrient intake, causing the thyroid gland to sense danger and down regulate the body's metabolism to conserve resources.

You can read more about my [safety theory in this article](#), but I think it's a reasonable conclusion that addressing the nutrient deficiencies in the body and restoring a sense of "safety" that the body has all the resources it needs can have a huge effect on preventing hair loss.

1. Adjust Your Thyroid Medication

A primary root cause of hair loss is a deficiency in thyroid hormone. This could be because you're not getting a high enough dose of thyroid medications, or because you're not getting the right kind of thyroid medication.

When your TSH is on the outskirts of the normal range, you can continue to lose hair, and your hair may lack luster and shine. If your hair tangles easily, this is a sign that you may not be getting enough thyroid hormone.

In 2015, I conducted a [survey](#) of 2232 people with Hashimoto's that resulted in as many as 36 percent of patients reporting that optimizing their TSH helped with improving their hair. Optimizing the *type* of thyroid medications they were taking also helped many people restore hair growth. As many as 38 percent of people surveyed reported that Nature-Thyroid helped to improve their hair; however, it is important that you find the thyroid medication that is right for you.

If you're on thyroid medications and experiencing hair loss, the general rule of thumb is to check that you are on a T3 containing medication like WP Thyroid, Nature-Throid or Armour Thyroid* and that your TSH is between 0.5 and 2 $\mu\text{IU/mL}$. While most thyroid medications contain the T4 hormone, it's the abundance and availability of T3 hormones that help your hair grow and keep it from falling out. On paper, T4 medications convert to T3, but this doesn't always happen effectively in the body. Many people have reported finally getting their hair back after T3 levels were optimized.

*Note: While Armour Thyroid does not have any gluten-containing ingredients, it is not tested for gluten content, and cannot be certified as gluten-free. Armour does contain sodium starch glycolate, which can be derived from wheat or corn.

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2. Consider Nutrient Depletions

A nutritional deficiency is often at the root of thyroid related hair loss. One of the most common culprits is a lack of iron, but a few other supplements may also prove effective in restoring hair growth.

Iron

Iron deficiency is the primary cause of hair loss in premenopausal women and is often the reason women with Hashimoto's continue to lose hair despite taking thyroid medications. A study conducted in Iran of adolescent girls studied the effect of low iron on young women by collecting urine and serum samples of iron deficient girls. The results concluded that there was a significant correlation between the T4, TSH and

ferritin levels studied in the subjects and an indication that iron deficiency may affect thyroid hormone status in adolescent girls.

In our survey of people with Hashimoto's, 21 percent saw improvement in their hair condition by increasing their intake of iron or ferritin, so it's definitely worth investigating.

Your doctor may test for anemia (low iron levels) by running a panel for red blood cells, hemoglobin, hematocrit, and iron levels, and all of them may come up normal. However, you may still be low in iron. If not enough iron is available, the body may pull the iron from less important physiological processes, such as hair growth, to keep enough iron circulating in the blood.

Ferritin, the name given to the body's iron reserve protein, is required for the transport of T3 to cell nuclei and the utilization of the T3 hormone. A decrease in ferritin can present as increased hair loss during shampooing and brushing, as well as overall thinning of hair without a specific pattern or bald spots.

Ferritin levels can also be measured and will be a better predictor of how much iron you have stored in your body and that are available for use. Ferritin should be checked in all women with Hashimoto's and for anyone experiencing hair loss.

Normal ferritin levels for women are between 20 and 200 ng/mL. According to some experts, ferritin levels of at least 40 ng/ml are required to stop hair loss, while levels of at least 70 ng/ml are needed for hair regrowth. The optimal ferritin level for thyroid function is between 90-110 ng/ml.

You can check your ferritin levels easily with [Ultra Lab Tests](#).

What causes iron depletion?

In addition to poor intake of dietary iron rich foods and a lack of hydrochloric acid which helps us absorb iron from foods, pregnancy (due to an increased need for iron) and heavy menstruation increase the risk of iron/ferritin deficiency. During each menstruation, a woman will lose 1-6 mg of iron while a pregnancy may cause a loss of 600-1000 mg of iron! Any bleeding, such as that present in nosebleeds, bleeding from the gut, as well as gut infections could also cause iron loss. Furthermore, malabsorption of iron can occur due to certain medications, dietary factors, [SIBO](#), Celiac disease and food sensitivities.

A [gluten free diet](#) or [elimination diet](#) can help with addressing your iron levels and resolving many symptoms.

As iron needs an acid present to be absorbed, antacids and calcium supplements that are taken around mealtimes may reduce the absorption of iron from foods and supplements. Anyone with hair loss and taking PPI's or acid-suppressing medications should immediately get their ferritin levels checked.

Dietary factors can also impact iron levels. Tannins in tea and coffee can inhibit iron absorption and should be spaced out by an hour from iron-containing meals. Phytic acid found in nuts, legumes, and grains, is known to be a food inhibitor and can prevent micronutrients, such as iron, from being absorbed by the human body. Even egg whites may also affect iron absorption.

Sometimes the simple act of eliminating these problematic foods can help restore iron levels, and thereby hair growth!

So, how can I increase iron levels?

If you are mildly iron deficient, or not consuming enough iron rich foods, food as medicine may be a key to increasing your iron levels.

Iron is present in both heme and non-heme versions in different foods. The heme version is the better-absorbed version and is found primarily in animal products.

The highest levels of iron are found in organ meats. I know what you may be thinking: Mmmm, liver! Beef, turkey, and chicken are the next best choices. In contrast, non-heme iron is found in nuts, beans, and spinach and is not usually absorbed as well.

To restore your iron and ferritin levels with food you can:

- Eat cooked liver twice per week
- Eat beef a few times per week

What if food isn't enough?

If you continue to struggle with low ferritin levels, despite eating adequate red meat and liver, or if you just can't look at liver without wanting to cry, supplements may help.

Here are some options for getting your iron levels up:

1. Digestive Enzymes and High-Dose Probiotics

We are what we absorb... absorption is dependent on digestion. Iron is best absorbed in an acidic environment, and if you're not making enough stomach acid, you can boost your iron absorption by doing one of the following along with eating an iron-rich

food: taking a vitamin C tablet, eating a vitamin C rich food such as cooked broccoli, or creating an acidic stomach environment by taking a **Betaine with Pepsin** supplement with meals. Here's a comprehensive [article on Betaine with Pepsin](#) and low stomach acid, which commonly co-occurs with thyroid disease.

We often absorb nutrients from our food because of the type of bacteria we have within our digestive tract. Probiotics can increase our absorption of iron from foods. *Lactobacillus Plantarum* can help to increase iron absorption by 50 percent! **Probiotic 50B** contains *L. Plantarum*. For more information on probiotics, you can read this [article on the best probiotics](#) for Hashimoto's.

2. "Liver Pills"

Taking encapsulated liver can be a fantastic option for boosting ferritin levels in people who are not liver lovers. 😊 **Paleovalley** makes an encapsulated liver supplement that can help. Please note, liver is also high in other nutrients such as copper, so people with copper toxicity should avoid liver supplements.

3. Iron Supplements

Most iron supplements are in the non-heme form and may not be absorbed as well. Additionally, many people find that they get terrible stomach aches from the supplements, and they find them extremely constipating! Here are a few more gentle and effective ferritin boosting options to consider:

OptiFerin C contains ferritin and has helped numerous of my clients boost their ferritin levels. Ester-C, a natural, water soluble version of Vitamin C, is added to increase intestinal absorption.

Thorne Iron Bisglycinate is an iron supplement that is more gentle on the stomach and less likely to cause constipation.

If choosing to take iron supplements, do so with much caution as they are one of the leading causes of overdose for children and adults. An iron overdose can be deadly, so make sure you keep the iron out of reach of children and speak to your physician or pharmacist about a dose appropriate for you. Please note, I don't recommend supplementing with iron unless you test positive for iron deficiency.

4. IV Iron

Another option, especially for those who have tried EVERYTHING, is to work with a functional medicine practitioner to obtain intravenous iron. Intravenous iron can restore your ferritin levels with a few IV's that can be done in two weeks time, won't give you constipation, and won't require you to take a daily pill.

This is a great option for people who are not absorbing iron orally. While any doctors can prescribe or order iron IV's, most clinics are not set up to offer it. The iron is usually infused over time in saline. Look for integrative, functional and naturopathic clinics that offer this service, or a medical specialist that is known as a hematologist.

Additional Nutrient Deficiencies

If you don't have an iron deficiency or if you're already addressing it, there are additional nutrient deficiencies that can lead to hair loss that you may consider testing for. While I always recommend testing for iron deficiency, most people can take the remaining supplements safely.

Biotin

Hashimoto's always co-occurs with inflammation in the body. The inflammation puts the adrenals on overdrive, depleting our biotin stores. Biotin is an important vitamin for many bodily functions, and deficiencies have been found to cause hair loss.

Supplementing with **Biotin** at a dose of 5000 mcg-10,000 mcg (5-10mg per day) per day can help with hair loss. Biotin can also help with adrenal fatigue and Candida.

Please note, new reports are surfacing that 5-10 mg of Biotin per day can interfere with some thyroid labs, making it appear as though the person has Graves' disease and hyperthyroidism, when they do not. Case reports of people taking Biotin and having a low TSH test, high T4, high T3 and elevated TSH-receptor antibodies (in the absence of hyperthyroid or Graves' symptoms) have been reported. The lab values do normalize after 7 days of being off Biotin. While Biotin doesn't actually cause *hyperthyroidism*, it interacts with the lab reporting in a way that can cause a false appearance of hyperthyroidism. *If you're going in for a thyroid lab draw, please be sure to skip the Biotin for 1-7 days before your lab test to ensure that the supplement doesn't interfere with the results.*

Zinc

Zinc is an essential element to our well-being. It acts as a catalyst in about 100 different enzyme reactions required by our body, and is involved in DNA synthesis, immune function, protein synthesis, and cell division. It is required for proper sense of taste and smell, detoxification, wound healing, and thyroid function. And it's critical for hair growth!

An analysis by the World Health Organization concluded that an estimated 17.4 percent of the world's population may be zinc deficient, and most people with hypothyroidism are in fact zinc deficient. Thyroid hormones are essential for zinc to be absorbed, and a deficiency of thyroid hormones can result in zinc deficiency.

Zinc deficiency prevents the conversion of T4 into the active T3 version. This results in a slowed metabolism of proteins. Zinc is also needed to form TSH, and may become depleted in those with hypothyroidism who are constantly producing more TSH.

Where does zinc come from?

Zinc is not stored in the body, so a daily intake of zinc is required to maintain sufficient levels. Unfortunately, there are many problems with relying on food sources to give us the proper intake of zinc.

Oysters have the highest concentration of zinc, but they are not practical for most of us to eat every day. Beef, liver, pork, lobster, and chicken are the next best sources of zinc, as it is easiest to extract zinc from meat compared with non-meat sources. This means that vegetarians are also at an increased risk of developing a zinc deficiency.

Absorption of zinc may be impaired by damage from intestinal disease such as celiac disease and other malabsorption syndromes – common conditions for those with thyroid disorders. Additionally, phytates found in grains, legumes, nuts and seeds can bind zinc and prevent its absorption when eaten alongside zinc containing foods.

What about zinc supplements?

Zinc supplementation is often the best way to address a deficiency. In my survey of people with Hashimoto's, 18 percent did report that adding a **zinc supplement** to their diet improved their hair growth. The recommended dose is no more than 30 mg per day. A word of caution: zinc doses over 40 mg may cause a depletion of copper, necessitating the use of a copper supplement.

Gelatin/Collagen

Hair grows out of follicles, which are essentially tiny sheaths formed out of collagen. The papilla, also made of collagen, is what links the follicle to the rest of the body.

Collagen is a protein that consists primarily of the amino acids glycine and proline. Gelatin is formed when collagen has been boiled-down, dried and pulverized into a powder.

People used to naturally eat a lot more collagen by consuming the bones and other parts of animals that are rich in collagen. These days, we mostly just eat muscle meat, which is high in amino acids, but low in collagen. This is not only bad news for our hair, but for our health in general.

By increasing the amount of collagen in your diet, you can support your hair follicles and papilla – the longer the and stronger they are, the healthier your hair will be!

There are many collagen and gelatin supplements on the market today. You can try the [Pure Prescriptions Perfect Collagen](#) or [Bulletproof Collagen](#). Or, you can make your own cheap and easy [bone broth](#) that is also delicious! You can find a video with simple instructions for making your own bone broth [HERE](#).

Biosil

[Biosil](#) is a supplement designed to improve hair, skin, nail and joint strength. Its primary ingredients are choline and silicon. Choline likely improves the appearance of hair by improving fat absorption into the body. A higher silicon content in the hair results in a lower rate of hair loss and increased brightness. Studies have suggested that silicon has an effect on the tensile strength of hair, making it more resistant to breakage.

3. Use Food to Boost Hair Growth

Blood Sugar

Blood sugar swings brought on by eating too many carbohydrates and not enough quality proteins and fats can wreak havoc on your health and hair! Blood sugar swings encourage the conversion of T4 to reverse T3. Reverse T3 is an inactive hormone that blocks the body's utilization of T3, resulting in increased hair shedding.

For some, a [Paleo style diet](#) that emphasizes high quality proteins and fats and limits grains, processed sugar and starchy carbohydrates can keep blood sugars lowered and stable. My Hashimoto's survey resulted in 27 percent reporting an increase in hair growth when following a Paleo diet, with 32.6 percent noticing improvement with a strict autoimmune Paleo diet! But any diet that reduces sugar and keeps carbohydrates at a moderate level can help bring blood sugar back into balance and reduce the likelihood of hair loss.

Healthy Fats

I first noticed the role of fats in hair when I was studying the effects of low fat and high fat diets on lab rats (this volunteer research assistant position sounded much better on paper). I'll spare you the lab rat research stories for another time, but you should know that the rats fed a high fat diet had beautiful long and shiny rat hair. The low fat diet ones, not so much. This is because fatty acid deficiencies result in dry, dull, lifeless hair.

Another six-month long study conducted on 120 healthy women evaluated the changes in hair density after being given Omega-3 and -6 supplements. At the end of the treatment, superior hair growth improvement was demonstrated in the supplemented group, with 89.9 percent reporting a reduction in hair loss, 86.1 percent an improvement in hair diameter, and 87.3 percent an improvement in hair density.

Eating Omega-3 containing fish or taking a **supplement** can also help bring back the shine to your hair. As many as 26 percent of the people with Hashimoto's that I surveyed concluded that adding an Omega-3 fatty acid supplement brought noticeable improvement to their hair!

Green Vegetables

There is some indication that increasing the amount of green vegetables in your diet could lead to improvements in hair growth. My survey indicated that 19 percent of participants reported increased hair growth by adding green smoothies into their diets, while further improvements were seen by adding in green juices and increasing vegetable intake. While I don't recommend a vegan or vegetarian diet to people with Hashimoto's disease, upping the number of vegetables, particularly greens, in your diet can certainly improve hair growth and lustre.

4. Explore Topical Treatments

If you've addressed your thyroid medication, adjusted your supplement intake and looked for any deficiencies in your diet but you're still experiencing hair loss, there are several topical treatment options that you may find effective. Although I believe that healthy hair comes from within, external factors, such as the shampoo that you are using, might be exacerbating your hair loss.

Hair Products

Shampoos that contain toxic chemicals and gluten can be detrimental to your scalp, resulting in inflamed hair follicles. There are also a host of endocrine disrupting chemicals in most commercial hair care products that can wreak havoc on your thyroid. Opt instead for an organic shampoo and conditioner that are free of toxic chemicals. I use the **Acure Organics** line, which I've found to be both safe and effective in giving me beautiful and shiny hair.

For people with tangled hair (often a first symptom of an underactive thyroid), I recommend **Acure Leave In Conditioner** and the **Tangle Teezer** brush. These two together did wonders for me when my hair was tangled, and I still like to keep my brush with me at all times, especially when I travel.

Because fatty acids are so important for healthy hair growth, another topical treatment option is to massage olive oil into the scalp itself. The rich fat will nourish the hair right at the roots and can help to stimulate hair growth in dormant hair follicles.

Scalp Mites

Demodex hair mites – sounds gross right? But there are tiny mites that live in the hair follicles of 96 to 98 percent of people that may be responsible for your hair loss, and

could cause your hair to be more greasy. You can wash your hair with a sulfur and tea tree oil containing shampoo like **Ovante's Demodex** to kill the mites – just remember to let the shampoo sit on your scalp for 3-5 minutes to effectively kill the mites.

Growth Lasers

Recently, the use of low-level laser therapy (LLLT) has shown promise as a treatment for hair loss and to stimulate hair regrowth. Laser combs and laser helmets, such as the **Theradome**, emit a low level of laser light that can stimulate hair growth. They can be purchased without a prescription and used in the comfort of your own home.

PRP

The latest in hair growth research is focused on stem cell therapies and platelet-rich plasma (PRP) therapy. Some dermatologists and anti-aging doctors are using PRP to inject a concentration of the patient's own blood platelets into the scalp to help retain and regrow hair.

In a recent study, eleven patients suffering from androgenic alopecia hair loss who hadn't responded to drug treatments were injected in the scalp with PRP four times over a period of 3 months. Results showed a significant reduction in hair loss, and their hair count increased from 71 hair follicular units to 93 hair follicular units.

A Final Word About Hair Loss...

Stress can make you shed hair like crazy. I'm speaking from personal experience, as well as the experiences of hundreds of my clients. What can you do to reduce the stress in your own life that might be contributing to hair loss? Taking time to care for yourself with yoga, meditation, journaling, or light exercise are all great options to help reduce your stress load. Here are some of my favorite strategies, that you can save or print for easy reference:



You might also consider supporting your stress hormones with adaptogenic herbs, such as those in [Rootcology Adrenal Support](#).

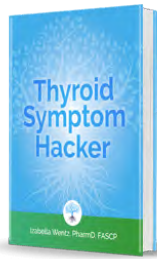
I want you to know that there is help for your hair loss! I know how crushing it can be to deal with a symptom as difficult to disguise as hair loss, but there are so many avenues for you to explore that can lead to a huge shift in your current hair growth. As I began to get to the root cause of my own thyroid condition and make changes that restored health and balance to my body, the hair loss I was experiencing stopped. Start with the solutions that resonate the most with you and are easiest to implement, and note that it may take several weeks to see noticeable changes with any supplement, medication, dietary, or topical changes that you make.

I wish you all the best on your journey toward recovering a healthy head of hair!

P.S. Be sure to sign up to receive my [Thyroid Symptom Hacker](#) for more tips on overcoming hair loss!

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Note: Originally published in February 2015, this article has been revised and updated for accuracy and thoroughness.



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Comments



Christina Lachner says
[July 6, 2013 at 10:53 PM](#)

Hashimotos patient. Unsuccessfully been ttc now for 24 months w/my husband.

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Dr. Izabella Wentz says
[December 18, 2016 at 2:09 PM](#)

Christina- Thyroid tissue can regenerate, but the rate at which it does is not always predictable. Thus, some are able to stop the autoimmune attack on their thyroid and regain normal thyroid function. Others can reduce the dose of medications, and others will need to stay on the medications indefinitely. I'm currently working on some protocols to help with tissue regeneration.