

Getting Down to the Root Cause of Hives

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STORY AT-A-GLANCE

- › Hives are allergic skin reactions caused by immune system activation, creating raised red bumps when mast cells release histamine and other inflammatory mediators
- › Common triggers include medications, pet dander, tight clothing, stress, infections, weather changes, and surprisingly, high-oxalate foods like spinach and almonds
- › Oxalates in superfoods can cause chronic skin conditions. Reducing oxalate intake and applying topical calcium-magnesium creams help provide relief
- › Prevention strategies involve avoiding known triggers, maintaining good hygiene around pets, managing stress levels, and implementing dietary changes to reduce oxalate load
- › Natural treatments for hives include kaempferol from whole foods, vitamin C, curcumin from turmeric, and quercetin from apple skins to reduce histamine

Are you regularly experiencing hives after being exposed to a particular environment or chemical? While they generally go away after a few hours, they can hamper your quality of life, especially when they become chronic. If you've been struggling to manage your hives properly, these strategies will help you mitigate this condition.

What Are Hives?

Hives (also known as urticaria) are an allergic reaction that manifests on your skin. When your immune system encounters an allergen, your skin produces raised red bumps.

- **The process of how hives develop** – The biological process behind the appearance of hives involves your immune system and histamine production. Here's a detailed explanation:¹

"Urticaria and angioedema result from the activation of mast cells and basophils. Mast cell degranulation leads to the release of immune mediators. The primary mediator is histamine, which binds to H-receptors located on endothelial cells and sensory nerves.

However, prostaglandin, leukotrienes, and a variety of cytokines and chemokines are also involved. Ultimately, this induces vasodilatation – increased permeability of vessels – and in turn, dermal edema and recruitment of inflammatory cells."

- **Symptoms** – Hives commonly present as raised itchy bumps that are either red or skin-colored. Red hives also turn white when pressed as the center.²
- **Demographics** – In a study published in Biomedicines, researchers estimate that 0.23% of adults in America have hives. Moreover, women are twice as more likely to have it than men. Among children, the prevalence is believed to be around 0.7% to 1.38%.³
- **Diagnosis** – To accurately figure out if you have hives, your doctor will order an allergy test. Usually, you'll be exposed to small amounts of common allergens in a medical setting. Blood tests are also done to check for specific antibodies.⁴

Different Causes of Hives

One notable characteristic of hives is that they can be caused by a multitude of sources. The Hearty Soul provides a list of common allergens and triggers:⁵

- **Medications** – If you're currently taking a drug for an illness or chronic condition, there's a chance for hives to occur. In fact, a report by New York University (NYU) Langone Health noted that hives are the most common side effects from taking drugs.⁶
- **Pets** – Dander from your beloved pets could be a common, recurring trigger for your hives. Essentially, dander is the remnants of skin cells shed by animals with fur or feathers. It is also microscopic and sticks to furniture, making regular cleaning an important routine in your home.
- **Clothes** – The very fabric of your clothes can be causing hives, so take note of any reactions to specific fabrics. If it's not your attire, the way you wear them is a contributing factor. According to the American Academy of Dermatology, examples include tight-fitting clothes, sitting, or pressure from a bag's strap.⁷
- **Stress** – While stress mainly affects your mental well-being, it also stealthily affects your physical health. And sometimes, stress reaches a point where it manifests as hives. According to The Hearty Soul, anxiety causes your body to produce histamines, causing hives to flare up during important events.⁸
- **Infections** – Contracting common infections like colds or flu result in hives. Moreover, bacterial or fungal infections can cause the same symptoms. In any case, hives appear because your immune system suddenly becomes hyperactive from the influx of microbes into your body. Once you're starting to feel better, hives go away.
- **Weather** – Sudden changes in temperature around you, such as exposure to cold air or warm weather can trigger hives. Even activities that have no relation to the weather outdoors, such as stepping out of a warm shower or drinking ice-cold drinks, can cause hives.

Oxalates – Another Hives Trigger Not Often Considered

Oxalates are natural compounds found in many foods. They're essentially naturally occurring toxic acids (oxalic acid) and become oxalates when they bind to minerals. Chemically speaking, they're classified as salts, and like other salts, they crystallize once your body can no longer expel them fast enough. [In my interview with Sally Norton](#), an expert on this topic, she notes that they can't be removed from your food, so you'll need to adjust your diet if you're at risk.

- **Superfoods that cause oxalate buildup** – Superfoods help boost your health, but ironically, some of them are also very high in oxalates. The three biggest culprits are spinach, Swiss chard, and beet greens. Dark chocolate and almonds are also high in oxalates.
- **My own experience with oxalates** – For 15 years, I have struggled with a rash that couldn't be diagnosed by multiple dermatologists. Eventually, my research made sense of what I was experiencing – prurigo nodularis (PN).

Through a stroke of luck, I discovered that the source was oxalates in my food, and my condition dramatically improved once I lowered my intake. I also had a mercury dental amalgam removed by a biological dentist, which helped improve my condition further.

- **Discovering the ideal way to remove oxalates** – Ultimately, I achieved complete resolution of my PN by implementing a strict low-oxalate diet and twice-daily application of a homemade magnesium/potassium/calcium citrate cream. I experienced near-instant itch relief and >80% lesion flattening with the topical treatment, and nearly all nodules cleared within three months of dietary oxalate elimination.

Notably, PN lesions and pruritus recrudesced upon inadvertent high-oxalate intake, only to remit again with resumption of oxalate restriction, strongly implicating oxalate as the pathogenic driver.

Strategies to Minimize Oxalate Complications

Norton provides a wealth of knowledge on how you can deal with oxalates properly.

[Here's a summary of her recommendations:](#)

- **Limit high-oxalate foods** — This is of course a no-brainer. Reducing your intake of foods known to be high in oxalates such as spinach, almonds, and peanut butter will decrease your overall oxalate load.
- **Increase your calcium intake** — Consuming foods high in calcium or using calcium supplements can bind to oxalates in the gut, preventing their absorption and facilitating their excretion through the stool. Foods rich in calcium include dairy products and leafy greens.
- **Hydrate adequately** — Drinking sufficient water is crucial as it helps to flush out oxalates through the urine and prevents kidney stones from forming.
- **Balance your collagen intake** — While collagen is extremely beneficial, it's important to moderate its intake if you are sensitive to oxalates, given that collagen breakdown can lead to oxalate production. So, do consume sources of collagen like bone broth, but do so in moderation.
- **Optimize your gut health** — Promoting a healthy gut microbiome by consuming probiotic-rich foods like yogurt, kefir, and fermented vegetables can support the growth of beneficial bacteria, including those that can degrade oxalates like *Oxalobacter*.
- **Citrate consumption** — Citrate, found in citrus fruits like lemons and oranges, can help by binding with calcium and oxalate, thereby reducing the formation of kidney stones. Avoid over-supplementation with ascorbic acid, however, as high doses can convert into oxalate. Ascorbic acid is the most common form of vitamin C used in dietary supplements.
- **Cook high-oxalate foods well** — Cooking methods that involve boiling can help reduce oxalate content in foods as the oxalates will leach into the cooking water.

- **Topical calcium for oxalate-related skin irritations** – If oxalates are causing skin irritations, applying topical calcium can alleviate symptoms by precipitating oxalates at the site.

How to Minimize Your Allergic Reactions

In addition to the helpful strategies outlined above, here are other ways you can minimize your allergic reactions and manage hives:

1. **Avoid triggers** – In relation to avoiding high-oxalate foods (if you're sensitive to them), it's also important to keep track of whatever triggers your hives and avoid them as much as possible. For example, if you have pets, make sure that the dander is regularly cleaned. If you have certain medications that are causing skin problems, try to address the underlying condition through natural means.

Alternatively, improving your overall health can reduce your reliance in medications.

Managing stress also improves your health because you're lowering your cortisol levels, which contributes to advanced aging.

2. **Kaempferol** – A flavonoid found in whole foods, such as broccoli, spinach, and cabbage, research shows that kaempferol has anti-inflammatory benefits that boost RALDH2 expression:⁹

"In the intestines, specialized dendritic cells (DCs) produce an enzyme called RALDH2 (retinaldehyde dehydrogenase 2) which converts retinal, a chemical derived from vitamin A, to retinoic acid. This retinoic acid then promotes the development of regulatory T-cells, a type of immune cell that can suppress the immune response observed in allergies."

3. **Vitamin C** – This nutrient has been found to be helpful in various biological functions, such as tissue growth and repair, collagen synthesis, and immune function.¹⁰ But did you know that it also helps with allergies, too?

In one study, a daily dose of vitamin C between 300 and 500 milligrams (mg) "enhanced histamine degradation and inhibited mast cell degranulation."¹¹ Another study noted that test animals affected with bronchoconstriction experienced relief after vitamin C was given.¹²

How does vitamin C possess antiallergenic capabilities? According to a different study, this nutrient breaks down the imidazole ring, which is a chemical component of histamine.¹³ That said, what are the best sources of vitamin C? Whole foods are my recommendations, which includes red bell peppers, broccoli, parsley, kiwi, strawberries, tomato, and all citrus fruits.

4. Curcumin – Turmeric is a root crop belonging to the ginger family, and is the main ingredient used in curry. While beloved in culinary circles, research shows that curcumin, the bioactive compound, can be used to your advantage.

Curcumin has anti-inflammatory, antiseptic, antitumor, and antioxidant properties, and as you can imagine, it also has antihistamine capabilities, which was documented in a study published in the International Journal of Research in Medical Sciences.¹⁴ Here, a 24-year-old man diagnosed with hay fever was given a 500 mg tablet twice daily for two months. After trials were complete, he had better symptoms to the point of drastically reducing any medication he had been taking prior.

5. Quercetin – In the video below, Dr. Jin Sung explains how quercetin helps with relieving symptoms of allergies. Based on his research, he believes that quercetin has the greatest antiallergy properties compared to other molecules. He notes that quercetin controls the release of histamine from basophils and mast cells. These findings are also reinforced in a study published in 2022.¹⁵

Interestingly, quercetin is found in whole foods that also contain vitamin C and kaempferol, which means you're getting well-rounded antiallergenic protection once you incorporate them into your diet. Examples include green leafy veggies, broccoli,

apples, onions, green tea, and dark cherries. Out of all the examples mentioned, the highest amount of quercetin is found in apple skins.¹⁶

Frequently Asked Questions (FAQs) About Managing Hives

Q: What are hives and how do they develop?

A: Hives, or urticaria, are red, itchy welts that appear when the immune system releases histamine and other chemicals, causing swelling and redness in the skin. They are more common in women and affect 0.7% to 1.38% of children.

Q: What can trigger hives?

A: Hives are caused by medications, pet dander, certain fabrics, stress, infections, or changes in temperature. These triggers stimulate histamine release, which leads to skin flare-ups.

Q: How do oxalates contribute to hives and skin conditions?

A: Oxalates, found in foods like spinach, almonds, and beet greens, can worsen certain skin conditions such as prurigo nodularis. Reducing oxalate intake and using mineral-based creams greatly improve symptoms.

Q: What strategies help reduce oxalate-related issues?

A: Limiting high-oxalate foods, boosting calcium intake, staying hydrated, and supporting gut health can lower oxalate buildup.

Q: What natural remedies can help manage allergic reactions and hives?

A: Kaempferol, vitamin C, curcumin, and quercetin – found in various fruits, vegetables, and herbs – have anti-inflammatory and antihistamine effects that may reduce allergic skin reactions.

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