

Tips to Remember: Allergic skin conditions

Red, bumpy, scaly, itchy, swollen skin-any of these symptoms can signify an allergic skin condition. These skin problems are often caused by an immune system reaction, signifying an allergy. Allergic skin conditions can take several forms and are due to various causes.

Hives and angioedema

Hives or *urticaria* are red, itchy, swollen areas of the skin that can range in size and appear anywhere on the body. Approximately 25% of the U.S. population will experience an episode of hives at least once in their lives. Most common are *acute* cases of hives, where the cause is identifiable-often a viral infection, drug, food or latex. These hives usually go away spontaneously. Some people have *chronic* hives that occur almost daily for months to years. For these individuals, various circumstances or events, such as scratching, pressure or "nerves," may aggravate their hives. However, eliminating these triggers often has little effect on this condition.

Angioedema, a swelling of the deeper layers of the skin, sometimes occurs with hives. Angioedema is not red or itchy, and most often occurs in soft tissue such as the eyelids, mouth or genitals. Hives and angioedema may appear together or separately on the body. Hives are the result of a chemical called *histamine* -responsible for many of the symptoms of allergic reactions-in the upper layers of the skin. Angioedema results from the actions of these chemicals in the deeper layers of the skin. These chemicals are usually stored in our bodies' *mast cells*, which are cells heavily involved in allergic reactions. There are several identifiable triggers that release histamine and other chemicals from the mast cells, causing hives.

In adults, reactions to medicines are a common cause of acute hives. Medications known to cause hives or angioedema include aspirin and other non-steroidal anti-inflammatory drugs (NSAIDs) such as ibuprofen, high blood pressure medicines known as ACE-inhibitors, or pain-killers containing codeine or codeine-like drugs. Like all drug-induced hives, these reactions occur within only minutes to an hour of taking the drug. Adults can also develop hives after eating certain foods, including nuts, eggs, shellfish, soy, wheat or milk-the culprits in more than 90% of proven food-induced hives. In children, foods or viral infections such as a cold can trigger acute hives. *Physical urticaria* are hives resulting from an outside source: rubbing of the skin, cold, heat, physical exertion or exercise, pressure or direct exposure to sunlight. Patients with chronic urticaria often report that at least one of these triggers induces their hives.

Whenever there is an identifiable trigger of hives, it should be eliminated. In patients with acute hives, some drugs or foods may take days to be eliminated from the body. For these individuals, an allergist may prescribe antihistamines to relieve symptoms until the culprit is eliminated. For patients with chronic hives, treatment cannot control the eruptions; these hives will eventually disappear on their own, with or without treatment. For 50% of these patients, the hives will clear in three to 12 months; 40% will clear in one to five years. Up to 1.5% of these patients may experience these hives for more than 20 years.

Forty percent of patients with chronic hives will have at least one more episode of chronic hives in their lifetime. For these patients, the treatment objective is to provide comfort. If you experience chronic hives, your allergist will prescribe antihistamines, and will combine medications and adjust your dosages as needed for your individual symptoms. In rare cases, if antihistamines do not provide appropriate comfort, the allergist will prescribe an oral corticosteroid.

Contact dermatitis

When some substances come into contact with skin, they may cause a rash called contact dermatitis. Some of these reactions are the result of an allergic reaction that involves the immune system, but many are the result of a non-allergic, or irritant, reaction. Often, it is difficult to tell the difference between these two types of reactions. The hallmark of allergic contact dermatitis is that it occurs almost exclusively where the offending agent-such as a plant or chemical-comes in contact with the skin.

Irritant contact dermatitis is often more painful than itchy, and is the result of an offending agent that actually damages the skin with which it comes into contact. The longer the skin is in contact-or the more concentrated the agent-the more severe the reaction. Water with added soaps and detergents is the most common cause. Thus, it is not surprising that these reactions appear most often on the hands, and are frequently work-related. Individuals with other skin diseases, especially *eczema (ex-zeh-ma)*, are most susceptible.

Allergic contact dermatitis is best exemplified by the itchy, red, blistered reaction that almost everyone experiences after touching a plant in the "rhus" family-poison ivy, poison oak or poison sumac. This allergic reaction is caused by a chemical in the plant called *urushiol*. You can have a reaction from touching other items with which the plant has come into contact, including yard tools or the family dog. However, once your skin has been washed, you cannot get another reaction from touching the rash or blisters. Unlike irritant contact dermatitis, which occurs within minutes of coming into contact with

an offending agent, allergic contact dermatitis reactions can occur 24-48 hours after contact. Once a reaction starts, it takes 14-28 days to resolve, even with treatment.

Other agents that frequently cause allergic contact dermatitis include nickel, perfumes and fragrances, dyes, rubber (latex) products and cosmetics. Some ingredients in medications applied to the skin also can cause an allergic reaction, most commonly neomycin, an ingredient in antibiotic creams. To avoid reactions, any cream that ends in "caine" should never be applied to damaged skin.

Treatment of irritant contact dermatitis requires that the skin be kept from contact with the agent that is causing the reaction, and that every precaution is taken to avoid spilling caustic chemicals on the skin. Gloves can sometimes be helpful. Since these reactions are non-allergic in nature, treatment is directed toward relieving symptoms and preventing any permanent damage to the affected skin.

Treatment for allergic contact dermatitis depends on the severity of the symptoms. Cold soaks and compresses can offer relief for the acute, early, itchy blistered stage of the rash. When the rash is limited to small areas of the skin, topical corticosteroid creams may be prescribed to offer relief. When large areas of the body are involved, oral corticosteroids may be prescribed. If prescribed, it is important to continue to take oral medications for the entire duration of the reaction (14-28 days). To prevent the reaction from recurring, make sure to avoid contact with the offending substance. If the patient and allergist cannot determine the substance that caused the reaction based on the patient's history, the allergist may conduct a series of patch tests to help identify it.

Atopic dermatitis/eczema

A common allergic reaction often affecting the face, elbows and knees is *atopic dermatitis*, also known as *eczema*. This red, scaly, itchy rash is usually seen in young infants, but can occur later in life in individuals with personal or family histories of *atopy*, meaning asthma or allergic rhinitis ("hay fever"). Eczema may at times ooze, or at times may look very dry. A physician will rarely have difficulty diagnosing atopic dermatitis, based on three factors: an 1) itchy, 2) "eczematous" or bubbly rash in an 3) atopic individual. If one of these three features is missing, your physician should consider other causes.

Identifying the cause of the itch is essential in managing symptoms. Common triggers include overheating or sweating, and contact with irritants such as wool, pets or soaps. In older individuals, emotional stress can cause a flare-up. For some patients, usually children, food can also trigger eczema. Secondary staph infections also can cause a flare-up in children. These patients usually have very dry skin and "allergic shiners"-an

extra crease, called a Dennie's line, across their lower eyelids. They are also more susceptible to other skin infections.

Preventing the eczema itch is the primary goal of treatment. The patient must stop scratching and rubbing the rash. Applying cold compresses is helpful, and lubricating the dry skin with cream or ointment, especially during dry seasons, is essential. Patients should remove all "irritants" that aggravate the condition from their environments. If a food is identified as the culprit, it must be eliminated from the diet.

Topical corticosteroid cream medications are most effective in treating the rash once all preventative measures are taken. Rarely, antihistamines or oral corticosteroids are also prescribed, and if a secondary infection has been introduced by scratching, antibiotics are required.

When to see an allergy/asthma specialist

Whenever you have an unusual rash, make sure to contact your allergist, who will work with you to determine its cause-whether allergies, irritants, or another trigger. Most importantly, your physician and other health care providers can offer a support system and assist you in managing your skin condition.

The AAAAI's *How the Allergist/Immunologist Can Help: Consultation and Referral Guidelines Citing the Evidence* provide information to assist patients and health care professionals in determining when a patient may need consultation or ongoing specialty care by the allergist/immunologist. Patients should see an allergist/immunologist if they:

- Need to confirm the diagnosis of atopic dermatitis or contact dermatitis in a patient with dermatitis.
- Need to identify the origin of contact dermatitis.
- Have atopic dermatitis that responds poorly to treatment.
- Need to identify the role of mite allergy in patients with atopic dermatitis.
- Need to identify the role of food allergy in patients with atopic dermatitis.

Your allergist/immunologist can provide you with more information on allergic skin conditions. *Tips to Remember* are created by the Public Education Committee of the American Academy of Allergy, Asthma and Immunology.

The content of this article is for informational purposes only. It is not intended to replace evaluation by a physician. If you have questions or medical concerns, please contact your allergist/immunologist.

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