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# Allergic Contact Dermatitis

## What does allergic contact dermatitis look like?

Usually the skin gets red, swollen, and **very itchy**. Blisters may form and break, ooze, and crust. A hive-like reaction can also occur. The rash can affect almost any part of your body, especially where your skin is thin, such as on your face. A rash develops less often on the soles of your feet and palms of your hands, where the skin is thicker.

## What causes it?

Something usually comes in contact with the skin that the person is allergic to, such as poison ivy, skin lotions, soaps, creams, medications, antibiotic ointments, clothes, jewelry, laundry detergent, fabric softeners and many other things can cause allergic contact dermatitis. People with allergic contact dermatitis should try and figure out what it may be that they are allergic to. Dr. McCauliffe and his staff will ask questions about possible materials that you may have come in contact with at work and home to try to identify the cause. The location of the rash is sometimes helpful in figuring out the cause. If the cause is uncertain, a skin biopsy can be helpful to confirm the suspicion of a contact dermatitis. If confirmed, allergy skin patch testing can sometimes help identify the cause. Patch tests are a safe and easy way to diagnose contact allergies. Small amounts of the possible allergic chemicals are applied to the skin on strips of tape and then removed after two days. An allergy shows up as a small red spot at the site of the patch. Patch testing doesn't always reveal the cause, as the tests don't include all possible causes of contact dermatitis. The following are some of the more common causes of allergic skin rashes.

**Nickel** - is found in many metal products, including jewelry, buckles, zippers, and buttons. Many chrome-plated objects contain enough nickel to produce a reaction in sensitive people. Stainless steel also contains nickel, but it is bound so tightly that it is safe for most nickel-sensitive individuals.

**Rubber** - Rubber and chemical additives in rubber can cause a skin reaction. Elastic in clothing and materials in shoes can cause itchy rashes.

**Hair Dyes** - Most people can color their hair without difficulty. However, some are sensitive to paraphenylenediamine (PPD). This ingredient is found in permanent hair dyes that are mixed with another chemical, such as peroxide, before application. People allergic to PPD should not use any permanent hair dyes. About one-fourth of the people allergic to PPD are also allergic to ingredients in semi-permanent dyes. Follow the package instructions for a patch test before using hair dye.

**Neomycin** - Neomycin is a common allergen found in both prescription and non-prescription topical antibiotic creams, ointments, lotions, ear drops, and eye drops. It is also used in combination with other topical antibiotics, topical steroids and in first aid creams. Bacitracin, another ingredient in antibiotic ointments can also cause allergic rashes.

**Skin Care Products** - Perfumes, lotions, and cosmetics may cause allergic contact dermatitis. Some people are sensitive to the fragrance chemicals used in skin care products. Others are sensitive to the preservative chemicals needed to prevent skin care products from spoiling. People with a fragrance allergy can use fragrance-free products, but "unscented" products may still have a fragrance added to cover up the smell of the chemicals. There are very few truly preservative-free products, but persons may be sensitive to only one preservative chemical and not others.

**Chromates** - are commonly responsible for allergic contact dermatitis from cement, leather, some matches, paints, and anti-rust products. Contact with chromium is common in jobs in the automobile, welding, foundry, cement, railroad, and building repair industries. Chromates are used to tan leather for shoes and clothing. "Shoe dermatitis" may result from leather containing chromates.

**Poison Ivy** - This plant family includes poison ivy, poison oak, and poison sumac. In the U.S. these plants produce many cases of allergic contact dermatitis. The reaction looks the same from all of them. Often patients develop lines of small blisters on the skin where the plant brushed against them. The rash appears as a line within 12-48 hours after exposure to the plant oil that contains the allergic chemical urushiol. Redness and swelling are followed by blisters and severe itching; within a few days the blisters become crusted and scaly. The rash will heal in about ten to twenty days. Scratching poison ivy blisters will not spread the rash. You can get the rash from:

- 1) Direct contact with the plant - touching the sap of the toxic plant.,
- 2) Indirect contact - touching something that has touched the plant (The plant oil can stick to the fur of animals, to garden tools or sports equipment, or to any objects that have come into contact with a crushed or broken plant.
- 3) Airborne particles, such as mowing or from burning plants.

<http://www.aad.org/pamphlets/PoisonIvy.html> <http://poisonivy.aesir.com/view/pictures.html>



poison ivy



poison sumac

If you think you've come in contact with poison ivy or poison sumac, wash all exposed areas as soon as possible (within minutes) with water (and soap, if possible). Wash contaminated clothing with detergent. If you bring the clothes into your house, be careful not to transfer the urushiol onto your skin or household items. Urushiol can remain active for months, so wash contaminated tools, balls and pets with soap and water.

## Work-up and treatment for allergic contact dermatitis

People with allergic contact dermatitis should make every effort to identify the item that they are allergic to, so that they can avoid any further contact with this item. It can take weeks, and sometimes months, to determine what is causing the rash, and this can be frustrating for both you and your health care providers. If you are not sure what you are allergic to, it is often beneficial to do the following:

- 1) Examine the location of the rash. This may provide clues to what may be causing the problem. A rash on the eyelids might be from eye makeup, eye drops, shampoo, facial skin cleansers or airborne allergens. A rash on the trunk, arms and legs might be from laundry detergent or fabric softener. A rash on the earlobes might be from a nickel allergy from earrings.
- 2) If the rash keeps coming back, try to identify what you may have come in contact with during the prior 12 hours or so, as once you are sensitized, the rash usually develops within hours of contact.
- 3) If the cause is uncertain, another approach is to eliminate all skin care products and shower with water only (or unscented Dove soap). If the problem resolves, then resume use of one skin care product each week, until you identify what product is causing the rash. Please be aware that even a product you have used for years could suddenly cause a problem, if you become sensitive to an ingredient in it, and sometimes manufactures add new ingredients such as preservatives, without changing the product's label or packaging.
- 4) Wash your clothing in water only, or with hypoallergenic & fragrance free laundry detergent (e.g., *All Free Clear*). Avoid using fabric softener and anti-static cling, dryer sheets.
- 5) If you identify a product that you are allergic to, provide Dr. McCauliffe's staff with the ingredient list so that we can better identify the chemical that you are allergic to, so he can advise you to avoid purchasing other products that contain the same chemical.
- 6) When the cause of the itchy rash can't be determined with the above measures, a skin biopsy of the rash is usually performed to verify that the rash appears allergic in nature, on microscopic exam. If so, patch testing is sometimes performed in an attempt to determine the chemical that may be causing the rash. We typically apply 28 chemicals that commonly cause contact dermatitis. You wear the patches for 2 days and the sites are examined after 2 and 3 days. This requires three separate appointments (e.g., Tue, Thurs and Fri).
- 7) There are other causes of itchy rashes that can mimic allergic contact dermatitis. These causes include reactions to pills, dietary supplements, herbs, and food ingredients. Less common skin diseases, such as dermatitis herpetiformis and bullous pemphigoid, can also mimic allergic contact dermatitis. Additional testing may be required to rule out other causes.
- 8) Relieve your itching with cool compresses (an ice cube wrapped in a wash cloth), oral antihistamines (e.g., Benadryl pills), or over the counter anti-itch creams and lotions. In more active cases, prescription strength cortisone creams can help, and in more severe cases, oral prednisone pills are sometimes prescribed. If you receive treatment with a cortisone-like drug, you should take it for at least two weeks, otherwise the rash may return, and it sometimes takes four weeks for the rash to completely clear (provided you don't keep coming in contact with the item you are allergic to).

Learn more at: <http://www.webmd.com/skin-problems-and-treatments/contact-dermatitis>