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Poison Ivy, Oak & Sumac

The American Academy of Dermatology claims that toxic plants containing the chemical urushiol (pronounced oo-roo-shee-ohl), are the most common cause of allergic reactions in our country. Urushiol is an oily substance found in the leaves of poison ivy, poison oak and poison sumac. Various sources report that 85 to 90 percent of the general populace is allergic to urushiol, though other data suggests that continued exposure to plants containing the chemical can cause virtually anyone to experience a reaction. The body's response to urushiol-related reactions can sometimes be severe (even life-threatening). It's important therefore, that campers, hikers, gardeners, and others who enjoy the great outdoors know how to identify the problem plants.

Poison ivy, poison oak, and poison sumac can be found almost everywhere in the mainland United States, with the exception of some desert regions and very high elevations. Strangely, all three plants are in the same genus as the cashew, with poison sumac even resembling the nut-bearing plant.

Poison ivy can appear as either a vine or a small shrub. It grows almost anywhere that has moderate moisture, but especially thrives around lakes and streams. It usually has three leaflets - groups of leaves all on the same small stem, shooting from a larger main stem. The leaves are shiny green



Poison Ivy – photo by Tony Glenn, Blue Ridge HealthCare

in the summer and red in the fall. Yellow or green flowers and white berries can also be seen on poison ivy plants. The white, waxy berries can help to identify the plant during its leafless winter stage, when it can still cause a nasty rash.

Poison oak grows as a low shrub, sometimes in 6-foot-tall clumps, or vines that can reach upwards of 30 feet long. It has lobed and leathery oak-like leaves (hence the name) usually in clusters of three. The undersides of the leaves are covered with short, fine tiny hairs. It may also yield yellow berries. One of the problems with identifying poison oak is that the leaves change color (and sometimes even shape) throughout the growing season. In early spring, the leaves are light, bright green with whitish green flowers along the stems. In summer, when most people will come in contact with the plant, the leaves are yellow-green, pink, or reddish, and the berries (in a young stage) can appear whitish or tan. In the fall the berries darken to yellow, and the leaves become a handsome burnished red - sometimes collected by novice floral arrangers who later regret their decision. In winter the seeds fall and the plant looks like a bare climbing vine or shrub with stick-like stems.

Poison sumac can appear as a small shrub or tree, sometimes growing up to over ten feet tall. Its growth is mostly limited to moist swampy and low wet areas, like bogs, and stream and river banks. Branches of poison sumac generally have 7 to 13 leaflets somewhat resembling those of ash trees. The leaves line up in pairs nearly opposite one another along the stem. It can also have small, white berries that hang in loose clusters.

So how does one get poisoned by one of these plants? The allergic reaction happens after your skin comes in contact with the urushiol. This usually occurs when you walk through or brush up against a patch of the plants. The urushiol is contained within the leaves of the plants - not on the exterior - but since poison ivy, oak and sumac are all such tender plants, the oil is quite easily released by bending or breaking the leaves with minimal contact. In the winter, leafless roots and stems of all three plants can release a particularly potent dose of urushiol. Some of the severest cases of allergic reaction can occur when gardeners pull up roots with bare hands.



Atlantic Poison Oak – photo by Ted Bodner, Southern Weed Science Society



Poison Sumac – photo by Ted Bodner, Southern Weed Science Society

Many people develop rashes after petting a dog or cat that has come into contact with a poison plant. Also, when any of the three plants are burned, urushiol can become airborne in smoke, and enter the lungs. Some studies estimate that as many as one-third of firefighters who battle blazes in the American northwest will have to be treated for inhaled urushiol reactions at some point in their career.

The oily chemical can also be trapped in clothing, gloves, tools, and other surfaces that come into contact with an offending plant.

The symptoms of an allergic reaction to poison ivy, sumac, or oak are familiar to most of us. On the less serious side they include: itching, red blotches on skin that may be raised, blisters, fever and headache. In people who experience a severe reaction symptoms may include: swelling of the throat, eyes, overall body swelling, general feelings of discomfort, stomach cramps, nausea, vomiting, and diarrhea.

The severity of the reaction often depends on the thickness of a person's skin, how allergic a person naturally is to the plant, and how much contact a person has had with the plant's oil. Contrary to popular belief, the human body does not build up immunity to poison ivy and other urushiol-containing plants. Indeed the opposite is true. A person may come into contact with the plants several times before they become allergic, so repeated exposure can cause reactions to be more likely. On the other hand, as a person reaches a more advanced age their skin may be more resistant to penetration by the oil, and allergic reaction may become less likely.

Matthew K. Schwarz, MD, an emergency department physician at Blue Ridge HealthCare's Grace Hospital described how the body's tolerance to urushiol can lesson.

"The first time your body may react appropriately and cause a little redness," Schwarz said. "The second time it may be a bit worse. In some later instances your body may overreact. The allergy could go throughout your body, close up your airway and cause massive itching all over your body instead of just in a small area."

Though this kind of reaction is not overly common, Schwarz stated that a person should be brought to the emergency department if the allergy becomes "symptomatic."

"If it doesn't stay localized - if it starts spreading all over your body, you might have a problem," Schwarz said. "If you have shortness of breath, nausea, headache or any other

symptom that would make you think it's not staying localized in the area where contact with the plant was made - then you should get to a doctor."

Perhaps the best way to avoid or minimize the affects of an urushiol reaction is to wash as soon as possible after contact with one of the plants - but this requires some technique. Most medical sources agree that washing with warm or hot water opens up the pores and lets the chemical pass easily into the skin.

The general consensus is that washing should occur if possible within ten minutes of exposure, first by dousing with a generous amount of isopropyl (rubbing) alcohol. Next wash the skin with cool water - straight out of a garden hose is ideal. This will flush away most of the urushiol, which is very sticky, but loosened easily by the solvent properties of the alcohol. Lastly, take a regular shower with soap and water. Most professionals agree that soap should not be used until the primary flushing of the urushiol. Soap will tend to just move the chemical around on the skin unless the alcohol and water washing occurs first.

Any clothes, tools, shoes or other implements that come in contact with the poison plants should be handled carefully until they can be fully laundered.

If you have a common reaction to poison ivy, oak or sumac the rash and blisters will normally last for about two weeks without any treatment, but most people seek some kind of over-the-counter relief.

The FDA has approved a number of topical treatments and oral antihistamines. It's best to consult with your pharmacist to learn which treatments are most effective for your level of reaction.

Severe reactions can be treated with oral corticosteroids, prednisone or other medications that must be prescribed by a doctor.

In 1997 the FDA approved a poison ivy blocking topical lotion called Bantoquatam or IvyBlock. To this day, the cream is only widely used by people who are required to work near poisonous plants.

For now, a good way for outdoor enthusiasts to avoid problems is to keep skin covered when heading into thick foliage - and stay on the lookout for these unfriendly plants.

The very best advice we've heard came from Grace Hospital emergency department physician Jeff Roller, MD. "Poison ivy, oak and sumac - you don't want to touch that stuff!"

Myths about Poison Ivy, Oak and Sumac

- 1) Scratching or bursting poison ivy/oak/sumac blisters will spread the rash. The fluid in the blisters doesn't contain urushiol, so it won't spread the rash, but opening up the blisters could expose you to bacteria that could cause a bad infection.
- 2) Poison ivy/oak/sumac is contagious. The rash is always a reaction to urushiol. It can't be passed from one person to another unless the oil is present in abundance on the skin and then contact is made. By the time the reaction has reached blister or wheel stage it can't be passed to another person.
- 3) Once allergic or immune, always allergic or immune. A person's reaction to urushiol can change over the course of their life, depending on the age and consistency of their skin, or due to repeated exposure to the chemical.
- 4) Dead or dried up poison plants are no longer toxic. Urushiol can cause allergic reactions even after it has set untouched for several years. Dried roots, stems, stalks and other parts can release a very concentrated amount of oil that can cause serious skin irritation.
- 5) A person can get the poison ivy rash by getting too close to the plants, but not touching them. Unless urushiol is released into the air by burning, contact with the plant must be made to transfer the oil. One possible exception would be if a person is in close proximity to a person who is weed-whacking poison ivy plants on a windy day. Consequently, the great majority of serious poison ivy/oak/sumac reactions involve individuals who have used a string trimmer on the plants – one of the surest ways to sling urushiol in its most potent quantities.