FACT SHEET

# Poisonous Plants: Exposure Avoidance and Response

*Many types of plants cause an allergic reaction when ingested, touched or inhaled as smoke from burning dried matter. Depending on where you live, the most common exposures are to urushiol, the sap oil contained in poison ivy, poison oak and poison sumac. These plants are poisonous year round.*

## Plant Recognition

Leaf forms and growth patterns are variable among plants and even among leaves on the same plant. For example, the saying "Leaves of three, let it be" is a helpful reminder for identifying poison ivy and poison oak, but depending on the variety, season and type of growth, it may not be an accurate description.

*Poison Ivy*

## Poison Ivy

A woody plant, Eastern poison ivy typically grows as a rope-like vine; the western version is usually found as a low shrub. Leaves in groups of three have serrated, smooth or lobed edges. Leaves emerge with a shiny reddish tinge in the spring, transition from shiny to dull green as they age, and eventually turn shades of yellow, red or purple in the fall before dropping. Leaf undersides may have a hairy texture. Poison ivy produces yellow or green flowers and clusters of round, waxy berries that may be white, green-to-yellow or amber in color. It grows throughout much of North America, except in Alaska, Oregon, Hawaii and California.

*Poison Oak*

## Poison Oak

Poison oak typically grows as a shrub and is sometimes found as a climbing vine, especially in shaded forest areas. Poison oak leaves have scalloped edges and a glossy green surface typically grouped in threes. The underside may have a velvety texture. The plant may have yellow or green flowers and/or clusters of green-yellow or white berries. Leaves turn yellow, red or brown in the fall before dropping. It thrives in California, Oregon and Washington, and along the Atlantic Coast.

*Poison Sumac*

## Poison Sumac

Poison sumac grows as a woody shrub or tree typically 5-20 feet tall. It has rough, gray bark. Reddish stems contain seven to 13 smooth-edged leaves arranged in pairs. While a new plant has upright growth, branches may appear to sag or tilt downward on mature trees. Light green leaves turn red in the fall before shedding. Poison sumac produces clusters of glossy, pale yellow or cream-colored berries. It grows in wetland areas and is predominantly found on the Eastern seaboard, in Southern states and in parts of the Midwest around the Great Lakes.




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## Exposure Risk

Sap oil is released when leaves, twigs or other plant parts are bruised, damaged or burned. When skin is exposed to even just 50 micrograms of urushiol (less than a grain of table salt), 80 to 90 percent of adults will develop a rash (contact dermatitis).

People who work outdoors or who like to camp, hike, rock climb or hunt have increased exposure risk. Construction, farming, landscaping and grounds maintenance are among at-risk occupations. Forestry crews and firefighters have increased risk because they could potentially develop both a rash and lung irritation from contact with damaged and burning poisonous plants.

Urushiol can be passed to other people by touching hands or clothing, the fur of animals or tools with sap oil on them.

## Signs & Symptoms

A red skin rash with bumps or blisters typically erupts within a few days of contact with sap oil. The fluid in blisters is not contagious. Itchiness, swelling and broad spreading of the rash can cause extreme discomfort and make it difficult to work. Inhalation can cause severe lung irritation.

## Treatment

Following inhalation, emergency care is required for difficulty breathing. A medical evaluation should be immediately sought for swelling and rash on the face or genitals, and for anyone who has had a severe reaction in the past.

The following are first-aid recommendations for milder cases:

- Apply a wet compress, calamine lotion or non-prescription hydrocortisone cream to the skin to reduce itching and blistering. Some people find an oatmeal bath is soothing.
- An over-the-counter antihistamine may help relieve itching. However, it is important to follow instructions and be certain it will not cause drowsiness or otherwise affect the ability to work safely. If unsure about medication effects, ask a clinician or pharmacist.

Most rashes will heal in five to 12 days, but in some cases can last for weeks.



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## Prevention

When working outdoors, wear a long-sleeved shirt, pants, boots, a hat and gloves. Over-the-counter barrier skin creams may provide some protection; use only as directed.

When working or recreating outdoors, as feasible, avoid areas where poisonous plants proliferate. After coming into contact with a poisonous plant:

1. Immediately clean skin with rubbing alcohol, an over-the-counter poison plant skin cleanser (applied to dry skin), or soap and water. When rinsing, use cold water; warm water promotes penetration of sap oil. Do not allow wash solutions to dry on the skin. Isopropyl alcohol and soap remove protective oils on the skin; if plant re-exposure could occur within six hours, wash only with water. Using only a small amount of water or disposable hand wipes may spread sap oil rather than remove it.
2. Scrub under fingernails with a brush. Cleanse the brush and use it only for that purpose.
3. Wash exposed clothing separately.
4. Clean tools with rubbing alcohol or soap and water. Urushiol can remain active on the surface of objects for an extended period.
5. Wear protective gloves and clothing when bathing pets that have been exposed.
6. Do not burn plants or brush piles that may contain poison plants. According to the National Institute for Occupational Safety and Health, when exposure to smoke is unavoidable, workers should wear a NIOSH-certified half-face piece particulate respirator rated R–95, P–95 or better. This recommendation does not apply to wildland firefighters, who may require a higher level of protection. Respirators must be used in the context of a written protection program per OSHA Respiratory Protection Standard 29 CFR 1910.134.
7. The primary ways of managing poison oak are wearing protective clothing while removing plants by hand, which is not recommended for individuals who are sensitive, and treatment with herbicides. Experts advise removing plants in early spring or late fall when the soil is moist and it is easier to dislodge rootstocks. Maintaining a healthy cover of desirable vegetation helps reduce potential invasion in inhabited areas.