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# Plants That Cause Skin Irritation

Many plants are known to cause skin irritation in humans. People can respond to these plants in a variety of ways and not every single person may react in the same way. These plants can be broken up into five different categories:

**1. Poison plants** include poison ivy, poison oak, and poison sumac.

- They all contain a toxin called urushiol oil.
- This toxin is present in the sap of the plant. Touching this type of plant can cause skin rashes and blisters. Puss from blisters does not spread the infection to others.

**Common and Western Poison Ivy** (*Toxicodendron radicans* and *rydbergii*): The main identification characteristic of poison ivy is the trifoliate leaves. The two opposite leaflets will have very little or no petiole and the terminal leaflet will be extended from the two opposite leaflets. Common Poison ivy can grow as a vine or low shrub while Western Poison Ivy grows as a nonclimbing shrub. Both produce greenish-white drupes which birds eat, spreading the seed. Distribution: Common throughout Illinois. Habitat: Fields, woods, bluffs, and disturbed areas.



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Source: USDA

**Poison Oak** (*Toxicodendron pubescens*): Poison oak can also be identified by its trifoliate leaves. However, poison oak is a shrub with hairy leaves that have an oak-like appearance. It also produces greenish-white drupes which birds eat, spreading the seed. Distribution: This species is not native to Illinois and is only known from a single location in Pope County.

**Poison Sumac** (*Toxicodendron vernix*): A shrub or small tree, poison sumac can grow from 6 to 20 feet tall. The compound leaves have 7 to 13 leaflets that are elliptic to oblong. There are other non-poisonous sumacs in the Illinois landscape with a similar number of leaflets. One way to help identify between the toxic and nontoxic sumacs is that the drupes of poison sumac are hairless, drooping, and are green when immature, but then turn grey-white as they mature. The drupes of other non-toxic sumacs often have hairs on the drupes and are red to crimson. Poison sumac leaflets have smooth margins and do not have a winged main stem, while non-toxic sumacs may have serrations on the margins and will have a winged main



Source: Alabama Cooperative Extension

stem. Distribution: Uncommon in Illinois, mostly northeast Illinois, Coles and Woodford Counties. Habitat: Mostly bogs and marshes.

**2. Skin irritant plants** include, among others, spurge, poinsettias, pencil cactus, daffodils, hyacinths, buttercups, and trumpet creeper.

- These plants can cause skin irritations. Varies from person to person.

**Spurge (*Euphorbia* spp. or *Chamaesyce* spp.):** These plants often have a milky sap that is a mild skin irritant, but is also poisonous and considered to be carcinogenic. Like cow parsnip and giant hogweed below, exposure to the sun induces irritation. There are many plants that belong to this group. They include such notables as poinsettia, prostrate spurge, spotted spurge, and leafy spurge.



**3. Photo dermatitis plants** include mainly members of the Carrot family, like wild parsnip, and giant hogweed. The rue family, Rutaceae and the mulberry family, Moraceae, also have a few culprits including garden rue, gas plant, and fig trees.

- The reaction is caused by furocoumarin chemicals (psoralens) present in plants in combination with Ultraviolet A (UVA) light.
- After exposure to the plants sap and sunlight, blisters form in a few hours.
- When the blisters resolve, there is dark, streaky hyperpigmentation that can last for months.

**Giant Hogweed and Cow Parsnip (*Heracleum mantegazzianum* and *maximum*):** Although Giant Hogweed is rare in Illinois (found in Lake County, Illinois in 2006), this giant weed is important to be aware of. Giant hogweed can reach a height of 15 feet, its stems can be up to 4 inches in diameter, its leaves can be 5 feet broad, and the inflorescences can get up to 2.5 feet broad. Giant Hogweed typically grows along roadsides and edges of wetlands. Cow parsnip, which is a native species found throughout much of North America, grows in mesic to moist forests, most common in the northern 2/3 of Illinois (rare to uncommon in the southern 1/3 of the state). Cow parsnip has lobed leaves which are not as deeply lobed as giant hogweed's.

The stems of cow parsnip are green or light purple and have fine hairs giving it a fuzzy appearance, while giant hogweed has coarse hairs and purple blotches.



Giant Hogweed  
Source: USDA APHIS PPQ Archive



Cow Parsnip  
Source: USDA Plant Database

The reaction from giant hogweed is more severe than cow parsnip, resulting in large blisters and red to purple rashes that can scar.



Source: Illinois Department of Natural Resources

**Wild Parsnip** (*Pastinaca sativa*): The stem of wild parsnip is somewhat hairy, grooved, and 2 to 5 feet tall. Leaves are coarse, with saw-toothed edges. Flowers are yellow and arranged in an umbrella shape similar to other members of the Carrot family. If the juice from broken stalks, leaves or flowers contacts your skin and then is exposed to sunlight, a skin rash can result 24-48 hours later. Wild parsnip is easier to identify from the other photo dermatitis causing plants because of the yellow flower color. Distribution: Throughout Illinois, however, more common in the northern 2/3 of the state. Habitat: Fields, roadsides, pastures, prairie.

**Poison Hemlock** (*Conium maculatum*): This member of the Carrot family resembles wild carrot or an abnormally large parsley having the characteristic umbel inflorescence of small white flowers and leaves that extend at the bases sheathing the stem. You can tell poison hemlock apart by the presence of purple blotches on the stem. The leaves of poison hemlock are also more dissected compared to wild carrot and the plant reaches 3 to 7 feet tall. Although poison hemlock is more known for poisonings as a result of ingesting, the plant's natural oils may absorb through the skin.



Source: University of Illinois Extension

#### 4. Stinging plants have nettles.

- Touching a nettle can cause a toxic reaction. However, the initial/immediate reaction does not last long and has no lasting effect.

**Stinging nettle** (*Urtica dioica*): Touching stinging nettle can produce itching and welting. This plant is armed with small hairs that, when touched, can inject a cocktail of histamine, serotonin, acetylcholine, and formic acid. Histamine causes an immune reaction in the body, serotonin and acetylcholine are neural transmitters and formic acid is the same compound involved in bee stings and fire ant bites. Stinging nettle often grows in patches and can become quite tall, growing about 2.5 to 6.5 feet tall, but usually remaining about 3.5 to 4 feet tall. Stems are unbranched and leaves are opposite, egg shaped and with serrated margins. Wood nettle (*Laportea canadensis*) is more common in Illinois and is the only nettle with alternate leaves. To identify nettles, look carefully at the stems to see if the obvious stinging hairs are present.



Source: Purdue Cooperative Extension Service

5. **Prickly plants** include, among others, thistles, roses, gooseberry, blackberry and raspberry bushes, and black locust and honey locust trees.

- Infection can result from an embedded thorn.
- A scratch can also cause an infection especially if dirt gets into the scratch.

**Musk Thistle** (*Carduus nutans*): Musk thistle, sometimes called nodding thistle because of the way its flowers often bend over or 'nod' toward the ground, is a biennial, living for only two years, and propagating through seed production only. Its leaves are alternate, lance shaped, and deeply lobed. Spines occur along the margins of each lobe. The stems of musk thistle are spiny and branched. The flower heads are terminal, nearly round, 3/8 – 2 3/4 inches wide, usually nodding and occur singly or in a cluster of a few heads blooming in late spring to early summer.



Source: University of Illinois Extension

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