

RECOGNITION AND AVOIDANCE OF TOXIC PLANTS

Toxic plants can cause mild to severe dermatitis or other reactions when plant sap, fluids, or thorns come into contact with exposed skin or other tissues.

Poison Ivy

Symptoms of dermatitis typically develop within 24 to 48 hours after exposure to poison ivy, and include redness, blistering, swelling, and aggravated itching of skin exposed to toxic plants. Reactions to toxic plant secretions or thorns depend on the individual's sensitivity, degree of exposure, and where on the body the toxic exposure occurs. For example, toxic plant exposures to sensitive eye tissue usually cause relatively more severe reactions than exposures to other body areas.



David Ballard

Poison Ivy

Wild Parsnip

Wild parsnip is a lesser known toxic plant. It is opportunistic and non-native, and is often encountered in roadsides and open un-mowed areas. The plant grows 2-5 feet high on a grooved stalk, and has clusters of small mustard-yellow flowers by early summer.

To have a reaction, you must have physical contact with the plant oils (i.e., from broken leaves, stems, etc) on areas of the skin exposed to sunlight. The plant can be safely touched in many cases. Broken leaves, stems, etc. transmit the oil.

Wild parsnip oil reacts with sunlight to create severe “burns” on the skin. Often poison ivy is blamed for its reaction, but it is a chemical, and not an allergic, reaction (everyone is sensitive). Only skin exposed to sunlight and the oil will react. Within 24 hours, the exposed area will redden and blister. Blisters can be severe and give a “burning” feeling. After blisters fade, exposed skin may remain reddish or brownish for up to two years. The fair skinned are more sensitive to the oil.

Stinging Nettle and Itchweed

Stinging nettle and itchweed are bottom land plants that can grow from 6 inches to 6feet. Stinging nettle has opposite leaves and itchweed (wood nettle) leaves are alternate.

The stems of stinging nettles and itchweed are covered with stinging hairs. Each tiny hair on the stems and leaves is hollow with a jagged point at the end. A bump against the stiff hair squeezes an irritating chemical through the hair and onto a passing person's skin, much like a hypodermic needle.



David Ballard

Wild Parsnip



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Stinging Nettle

The acid in the hairs is formic acid, the same substance that ants secrete to protect themselves from predators. The acid is pressurized so it bursts out the instant the sharp hairs touch your skin. The reaction is almost immediate as a short-lived intense burning or itching sensation which lasts up to no more than a few hours.

To Reduce The Risk Coming Into Contact With Toxic Plants:

- ✓ THE BEST DEFENSE against acquiring dermatitis or other reactions from toxic plants is not to come into contact with them. Accordingly, it is prudent practice to be able to readily recognize and thereby avoid, toxic plants that may occur in the fieldwork area.
- ✓ LEARN TO RECOGNIZE toxic plants in the fieldwork area by studying a plant field guide or other similar plant identification materials.
- ✓ WEAR a long-sleeved shirt and long pants with boots in the field. Tucking your pants into your boots or socks helps prevent toxic plant contact with your skin.
- ✓ LOOK for toxic plants before touching objects such as rock outcrops or trees or picking up objects from the ground (i.e. rocks, plants, leaves, remote monitoring equipment, etc.).
- ✓ THOROUGHLY INSPECT the area where you intend to sit.
- ✓ IF YOU DEVELOP DERMATITIS from a toxic plant, treat the affected area by: washing with soap and water; rinsing with large amounts of water; and drying with a clean cloth.
- ✓ PROMPTLY CHANGE CLOTHING that has been exposed to toxic plants. Handle contaminated clothing carefully. Wash contaminated clothing several times in unmixed laundry loads.
- ✓ SEEK PROFESSIONAL MEDICAL HELP if dermatitis induced by contact with a toxic plant does not improve or worsens.
- X NEVER scratch an area of skin affected by dermatitis.**

PROTECTING YOURSELF FROM BITING AND STINGING INSECTS

Information available from the National Institutes of Allergy and Infectious Diseases indicates more than 40 fatalities annually can be attributed to severe venom allergic reactions from insect bites or stings. Common Iowa biting and stinging insects include ticks, chiggers, mosquitoes, flies, spiders, bees, wasps, and hornets.

Aside from allergic reactions, biting and stinging insects cause nuisance bites and stings that can result in tissue swelling, infections of bite and sting sites, skin lesions, itching, dermatitis, and pain or burning sensations.



University of Minnesota Extension Service

Symptoms of a severe venom allergic reaction include large areas of itching and hives, difficulty breathing, dizziness, excess sweating, nausea, swelling of the tongue or throat, and possibly a rapid decrease in blood pressure resulting in loss of consciousness.

To Reduce The Risk Of Being Bitten or Stung:

- ✓ The BEST DEFENSE against biting and stinging insects is to not be bitten by one. Therefore, avoid conducting fieldwork during peak biting or stinging insect activity times (usually early morning and evening hours) and in favorable biting or stinging insect habitat such as wetlands, along streams, lakes, or oceans, and moist shaded portions of wooded, brush-covered, or grassy areas. Also, avoid contact with insect nests, swarming insects, and ant mounds.
- ✓ WEAR a long-sleeved shirt and long pants with boots in the field. Tucking your pants into your boots or socks helps prevent biting and stinging insect access to your skin.
- ✓ USE insect repellants containing compounds such as DEET.

References: *Fieldwork Safety: Biting and Stinging Insects*, University of California Agriculture and Natural Resources Environmental Health and Safety

PROTECTING YOURSELF FROM LYME DISEASE

Ticks Transmit Lyme Disease

The Lyme disease bacterium normally lives in mice, squirrels and other small animals. It is transmitted among these animals—and to humans—through the bites of certain species of ticks. In the northeastern and north central United States, the **BLACKLEGGED TICK (DEER TICK)** transmits Lyme disease.

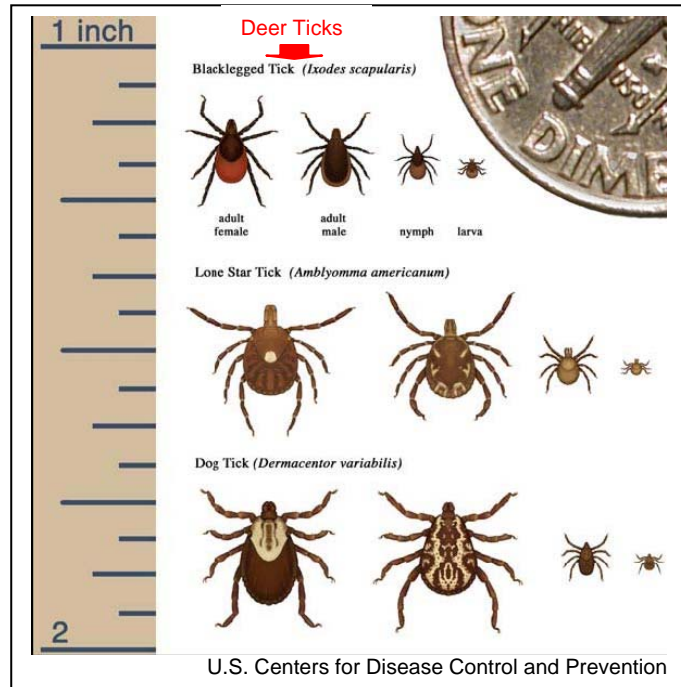
Blacklegged ticks live for two years and have three feeding stages: larvae, nymph, and adult. When a young tick feeds on an

infected animal, the tick takes the bacterium into its body along with the blood meal. The bacterium then lives in the gut of the tick. If the tick feeds again, it can transmit the bacterium to its new host. Usually the new host is another small rodent, but sometimes the new host is a human. Most cases of human illness occur in the late spring and summer when the tiny nymphs are most active and human outdoor activity is greatest.

Although adult ticks often feed on deer, these animals do not become infected. Deer are nevertheless important in transporting ticks and maintaining tick populations.

To Reduce the Risk of Contracting Lyme Disease

- ✓ AVOID conducting fieldwork in favorable tick habitat such as moist shaded portions of woody, brushy, or grassy areas when feasible.
- ✓ WEAR a long-sleeved shirt and long pants with boots in the field. Tucking your pants into your boots or socks helps prevent



- tick access to your skin. Light-colored clothing is preferable since dark-bodied ticks are easier to spot against a light-colored background.
- ✓ USE insect repellants containing compounds such as DEET (repels ticks) on exposed skin and permethrin (kills ticks on contact) on clothing only.
 - ✓ FREQUENTLY CHECK yourself and help check field colleagues for ticks. Ticks may attach to humans almost anywhere on the body, but those that bite fully-clothed persons commonly attach to such sites as the scalp, behind the ears, or on a limb. Therefore, pay particular attention to these areas while checking yourself or others for ticks.
 - ✓ Remove attached ticks as soon as they are found by using fine-tipped tweezers to grab the tick's mouthparts against the skin and steadily pulling to remove the tick. Do not jerk or twist the tick. After removal, wash the bite site, apply an antiseptic, and cover the site with a band aid.
 - ✓ Promptly seek professional medical attention if you suspect you are experiencing Lyme disease symptoms such as muscle aches, joint pain, fatigue, chills fever, swollen lymph nodes, heart palpitations, and/or an expanding "bulls eye" rash.
 - ✗ Do not apply alcohol, fingernail polish, heat (e.g. with a lit match) or petroleum jelly to the tick; these methods have proven ineffective for tick removal.

For additional information Lyme disease refer to the Lyme disease webpage of the Centers for Disease Control and Prevention (<http://www.cdc.gov>). Lyme disease is listed in the topical index on the CDC homepage.

References: *Lyme Disease Symptoms, Lyme Disease Transmission, Lyme Disease Treatment and Prognosis* and *Lyme Disease Statistics*, United States Centers for Disease Control and Prevention; *Epidemiology Notes: Iowa Lyme Disease Surveillance Project - Summary for 2003*, Center for Acute Disease Epidemiology, Iowa Department of Public Health; *Lyme Disease*, National Institute of Allergy and Infectious Diseases (NIAID); and *Fieldwork Safety: Lyme Disease*, University of California Agriculture and Natural Resources Environmental Health and Safety.

PROTECTING YOURSELF FROM SHARP OBJECTS

- Be alert for sharp objects, broken glassware, used syringes.
- Do not pickup broken glass—use brush or broom and dustpan.
- If there are large quantities of glass, contact Facilities Planning & Management at (515)294-5100.
- If a syringe is found, contact Environmental Health & Safety at (515)294-5359 immediately.