

# Community Roadside Clean Up Program

## A Plan for Voluntary Litter Control of Sonoma County Roads



### Sonoma County Transportation and Public Works Department

Integrated Waste • Road & Bridge Operations • Sonoma County Airport • Sonoma County Transit

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# ABOUT THE PROGRAM

## Program Description

The Community Roadside Clean Up Program encourages organizations, corporations, groups, and individuals to participate by providing volunteers to maintain and enhance Sonoma County roadsides.

## Program Goals

- Designed to promote civic responsibility, community spirit and pride, and to provide an opportunity to accomplish something worthwhile.
- Designed to save taxpayer dollars.
- Designed to allow participants to work responsibly at their own convenience.
- Designed for volunteers 13 years and older with appropriate supervision under age 18.

## Litter Removal

Litter removal is a way in which individuals or groups can participate in the Community Roadside Clean Up Program. Volunteer efforts on County roadways increase public awareness as well as appeal to community values and pride. Additionally, volunteer efforts supplement County resources, save taxpayer dollars and allow County workers to deal with higher priority maintenance of pavement, drainage, and safety facilities. The following are more details regarding the program:

- Participants will be issued completion report forms to record cleanup efforts.
- Sonoma County Transportation & Public Works Department will provide free trash bags, trash grabbers, vests, signs, and barricades.

## Eligible Roads

The Community Roadside Clean Up Program applies to all types of County roadways.

However, some sections of roadway may be unacceptable for clean-up for the following reasons:

- Heavy traffic
- Dense vegetation
- Narrow road shoulders
- Restricted visibility
- Poor road alignment
- Rugged terrain, steep slopes

The Transportation & Public Works Department will advise whether a certain section of roadway is acceptable for cleaning by volunteers.

# FIELD SAFETY



## The Program

The Community Roadside Clean Up Program is designed to have safety as most important. Sections of roadway are selected for safety and appropriateness of the work involved. Participants bear individual responsibility for personal safety and appropriate behavior within the County right of way.

Insurance is not required. However, participants must sign a Participation Agreement and individual volunteers must sign a release of liability.

Participants work without direct Transportation & Public Works supervision and without traffic control. **Groups are required to provide one adult supervisor for every five minors (children between the ages of 13 and 17) on the roadside.**

Group leaders are responsible for conducting safety briefings for all participants according to the attached safety requirements and to assure all participants follow the safety requirements.

## Protecting Yourself and Others

Field Work means that you get to spend a good portion of your time working outdoors. But the longer you spend outdoors, the greater exposure you have to hazards such as temperature extremes and sun exposure, flora (poison ivy and oak), and fauna (bugs and critters). Be aware of the potential hazards involved with field work and take the steps to protect yourself.

- Wear safety vests at all times.
- Walk facing the direction of oncoming traffic; be alert and keep an eye on traffic.
- Do not work within the boundaries of the traveled way of the roadway.
- Do not conduct any form of traffic control or disrupt the free flow of traffic, cyclists or pedestrians.
- Park off of the traveled roadway.
- Use caution when crossing roadways; use crosswalks and signalized intersections where available.
- Do not trespass on private property.
- Wear long pants and substantial shoes or boots with ankle support. Stay off steep slopes, drainage facilities, or places which pose a fall risk. Light colored clothing, long sleeve shirts, gloves, and sunscreen is recommended.
- Do not run, throw objects, or engage in horseplay or any other activity which may distract drivers.
- Avoid overexertion and drink plenty of water, especially on hot days.
- Be alert for wildlife, insects and poisonous plants, including snakes, ticks, bees, and poison oak.
- Do not smoke or consume alcoholic beverages or drugs.
- Do not touch or attempt to remove materials that may be toxic or hazardous. Items to avoid include: powders, chemicals, smelly substances, suspicious packages, chemical drums or containers, weapons, syringes, dead animals, and broken glass. If you discover any of the above mentioned items, notify the Sonoma County Department of Transportation & Public Works. Report weapons immediately to the police by calling 911.
- Leave pets at home, with the exception of service animals.



**Report toxic or hazardous materials to Transportation & Public Works at 707-565-5100.**

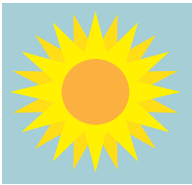
# TEMPERATURES

## Temperature Extremes and Sun Exposure



### Be Prepared in Cold Weather

Wear proper cold-weather clothing and gear. Dress comfortably and in layers. Wear a hat. You can lose heat through the top of your head, so put a winter hat on if you're feeling chilly.



### Heat Stress

People at greater risk of heat stress include those who are 65 years of age or older, are overweight, have heart disease or high blood pressure, or take medications that may be affected by extreme heat.

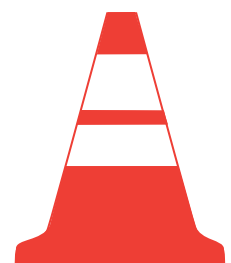
## Sunlight

Sunlight contains ultraviolet (UV) radiation, which causes premature aging of the skin, wrinkles, cataracts, and skin cancer. There are no safe UV rays or safe suntans. Be especially careful in the sun if you burn easily, spend a lot of time outdoors, or have any of the following physical features: numerous, irregular or large moles; freckles; fair skin; or blond, red or light brown hair. Block harmful sun rays!

- **COVER UP.** Wear tightly woven clothing that you can't see through.
- **USE SUNSCREEN.** A sun protection factor (SPF) of at least 15 blocks 93% of UV rays. Follow application directions on the bottle. Sun block does not mean that you can stay in the sun indefinitely.
- **WEAR A HAT.** A wide brim hat, not a baseball cap, works best because it protects the neck, ears, eyes, forehead, nose and scalp.
- **WEAR UV-ABSORBANT SHADES.** Sunglasses don't have to be expensive, but they should block 99 to 100 percent of UVA and UVB radiation. Before you buy, read the product tag or label.
- **LIMIT EXPOSURE.** UV rays are most intense between 10am and 4pm.



**While working along the roadside, remember SAFETY FIRST!**



## Poison Ivy and Poison Oak

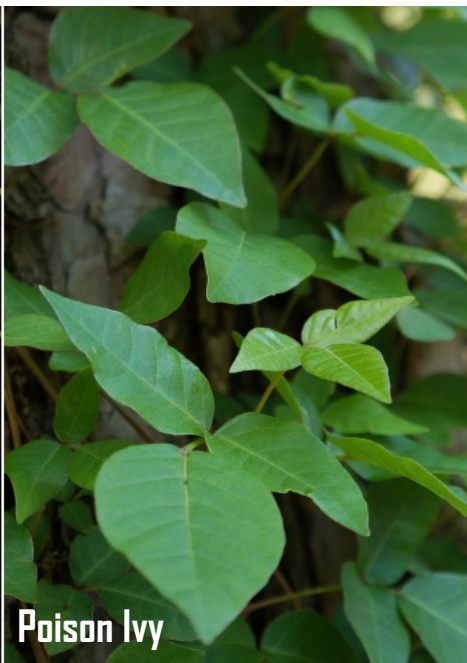
Poison Ivy and Poison Oak contain oily compounds that cause a bubbling skin rash in about two-thirds of the people that come into contact with it. A lucky third of people are immune to it.

The plants are hardy and can grow in damp wooded areas or very dry areas. They can take the form of a vine, trailing shrub, or upright woody plant and also change color with the seasons. The plant oils can stick to skin, clothing, and shoes and spread to other surfaces and people.

- Learn to identify these plants and avoid them.
- Wear long clothing, gloves and/or coveralls when working off of a road or trail in the underbrush.
- Barrier creams can be used to prevent contact with the plant oils. Doctors may prescribe injections or tablets that may provide protection from the oils.
- Scrub arms and legs (the most common points of contact) with soap and water.
- Strip off clothing after potential exposures to poison ivy and oak. Put the clothes directly in the washing machine. Take your shoes off outside and decontaminate them.
- When getting dressed, put your shoes on last, so oils will not contaminate the inside of your pants legs.



Poison Oak



Poison Ivy

## Symptoms and Treatment

Symptoms of poison ivy and poison oak exposure include itchiness, redness, and swelling followed by blisters on the skin.

Wash the plant oils off as quickly as possible.

Hydrocortisone cream will help the itching. See your pharmacist or doctor for additional treatments.

# POISON OAK

## What is Poison Oak?

Poison oak (*Toxicodendron diversilobum*) is a plant that has an oily, lacquer-like resin in its sap called toxicodendrol, which contains a potent chemical called **urushiol**. It commonly causes allergic skin reactions.

Because toxicodendrol does not dissolve in water, it is difficult to wash off and its toxicity persists for a long time as it sticks to the skin. The urushiol binds so strongly to the skin that washing for more than 15 minutes after exposure does little to remove the chemical from the skin.

Poison oak is found primarily in the West Coast of the United States. It can usually be found in the form of a deciduous shrub, but in shady canyons and riparian habitats, it commonly grows as a climbing vine with aerial roots that adhere to the trunks of oaks and sycamore trees.

Poison oak also forms dense thickets in chaparral and coastal sage shrub, particularly in central and northern California. It regenerates readily after disturbances such as fire and the clearing of land. **The leaves come in sets of three, are shiny, without prickles, the stems are erect, and the middle leaf has a distinct stalk that is longer than the other two.**

In some regions, poison oak leaves remain green during the entire time they are on the stem, but in other areas the leaves change to various colors with the changing seasons. **During every season, contact with poison oak can lead to a skin reaction.**

## How does poison oak affect the body and health?

Poison oak is one of the most common causes of allergic skin reactions in the United States. Contact with the urushiol oil of a poison oak plant, which is found in all plant parts of poison oak – roots, stems, leaves, flowers (except in pollen and honey), and the fruit (berries), can cause a form of contact dermatitis.

## Dermatitis

Contact dermatitis is a localized inflammation of the skin. It is caused by direct contact with a toxic or contaminated substance. Dermatitis includes some or all of the following symptoms: itching, pain, redness, swelling, and the formation of small blisters or wheals (itchy, red circles with a white center) on the skin.



Workers whose job tasks require them to be exposed to poison oak are susceptible to occupational contact dermatitis. According to the U.S. Bureau of Labor Statistics, occupational skin diseases, mostly in the form of allergic and irritant (contact) dermatitis, are the second most common type of occupational disease.

# POISON OAK

## Prevention and Treatment of Poison Oak

Know what poison oak looks like. Avoid contact with poison oak and anything, whether animal, clothing or tools, that may have been contaminated by it. Stay away from any vegetation that you suspect may be poison oak. Do not eat any part of a plant that looks like poison oak. If you are required to enter or work in areas where there is poison oak, take the following necessary precautions:

- **Wear protective clothing** such as long-sleeved shirts, long pants tied around the ankles, leather gloves with gauntlets and neckerchiefs.
- **Use protective creams** available that form barriers to protect against the toxic urushiol oil found in all parts of the plant. There are also injections or tablets that provide protection for some people. Consult a pharmacist for advice.
- **Put your shoes on last** when dressing, so that any contamination on your shoes does not contaminate the inside of your trousers.
- **Remove all contaminated clothing** and wash it separately. When removing clothing, take shoes off first and leave them outside for decontamination by washing.
- **Avoid touching anything after exposure.** Any object you touch after having been exposed to poison oak can act as a carrier to contaminate others. Remember that the plant's nearly invisible oil, urushiol, sticks to almost all surfaces, and does not dry.
- **Wash immediately and thoroughly after poison oak contact** by showering using cold water and a strong soap or detergent. Do not take a bath to wash yourself! Thoroughly wash beneath the fingernails. Use rubbing alcohol (isopropyl alcohol) on affected skin areas and rinse with cool water to prevent further skin irritation.
- **Stay cool and apply cool compresses to your skin** because body heat and sweat aggravate itching. Use calamine, hydrocortisone cream, and oatmeal baths to soothe the itching.
- **Consult a physician or seek treatment from a medical facility** for severe inflammation and itching, swelling, or breathing difficulty, or if your rash shows signs of infection.

## Post-contact with Poison Oak

If you came into contact with poison oak and have developed fluid-filled blisters, know that the fluid does not contain urushiol. If the blisters break, the fluid will not cause the dermatitis to spread.

**Urushiol can get embedded and remain under your nails** for several days unless carefully removed by thorough cleaning. Scratching other parts of the body with contaminated fingernails can spread poison oak and cause dermatitis.

If you have come into contact with poison oak, your clothes, tools, equipment, and/or gear also may have been contaminated with urushiol. These items can spread poison oak and cause dermatitis to anyone who comes into contact with them. Note that thick fur protects most animals that run through poison oak from developing symptoms, but people who touch contaminated animals can come directly in contact with urushiol and can develop contact dermatitis.

# POISON OAK

## Poison Oak Leaves: Color Changes During the Seasons



SPRING



SUMMER



FALL



WINTER

In fall, the leaves can turn color such as yellow or red when other plants are still green. The berry-like fruit on the mature female plants also changes color from green to off-white. Remember: “Leaves of three, let it be”, “berries white, a poisonous sight.”

In Spring, the leaves are light, bright green with whitish green flowers clustered on the stems.

Some of the leaves can be either yellow-green, pink, or reddish, with small white or tan berries after the flowers of spring.

The leaves and seeds fall, leaving stick or whip-like stems or climbing vines. Without leaves, poison oak may be identified by the long upright main branches with short, stubby side branches.

## Urushiol

### Contact with Urushiol can occur in three ways:

CONTACT TYPE	DESCRIPTION
Direct Contact	Touching plant sap.
Indirect Contact	Touching an object exposed to urushiol – examples: contaminated tools, clothes, pets, etc. Keep in mind that the oil may remain on contaminated items and surfaces for long periods. These contaminated items can cause future rashes long after the initial exposure.
Airborne Contact	Burning plants with urushiol releases oleoresin particles into the air that can cause severe symptoms to the eyes, nose, throat and lungs.



### **WARNING: Do not burn poison oak!**

Burning poison oak will release a mixture of toxicodendrol and urushiol in the form of smoke that can cause severe symptoms of airborne contact, such as irritation and swelling of the throat and lungs, which makes it difficult to breathe and is life-threatening. Airborne contact with these particles can also deform the face by causing wrinkles and folds.



# FAUNA

## Insects, Arachnids, and Snakes

When you work in the field, you get to call the outdoors your office. But when you enter this outdoor office, you are entering critter habitat. Knowledge of the different creepy crawlies you might find in the county can help you prepare for your work environment in the great outdoors.

## Protective Attire and Safe Work Practices

- Wear coveralls if you must access an area likely to contain spiders, ticks, and insects.
- Wear work gloves to protect your hands. Watch where you put your hands.
- Shake out gloves and shoes before putting them on.
- Do not store your protective clothing, tools and equipment outdoors.
- Avoid sticking ungloved hands into woodpiles and under sinks and buildings alcoves.
- Inspect and clear these areas out before you begin work.

In the following pages, there is information on some of the insects, arachnids, and snakes that you might encounter in our county.



# Insects

## Mosquitoes

Mosquitoes may be infected with West Nile Virus, a virus that is carried by birds and has spread throughout the United States in the last few years. West Nile Virus can be a potentially serious disease, so it is important to avoid mosquito bites.

- Be aware that peak mosquito hours are between dusk and dawn.
- Wear long sleeves and pants.
- Reduce the density of mosquitoes in your yard by reducing sources of stagnant water. Mosquitoes can breed in as little as a teaspoon of water.
- Use insect repellant with DEET in it; apply it to the skin and clothing following the package directions.



## Symptoms and Treatment

Wash mosquito bites with soap and water; hot water run on the bites can reduce the itch. Apply calamine lotion or an itch reducing cream or spray.

Mild symptoms of West Nile include fever, headache, body aches, and occasionally a skin rash on the trunk of the body and swollen lymph glands. Severe symptoms of West Nile include headache, high fever, neck stiffness, stupor, disorientation, coma, convulsions, and paralysis. Seek medical attention if these symptoms appear.

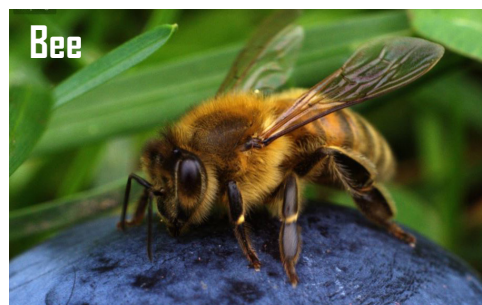
## Wasps, Bees, and Hornets

Avoid bright clothes and strong smelling soaps or colognes that may attract these insects. If an insect lands on you, don't panic or swat it. Brush it off gently and walk away.

## Symptoms and Treatment



Stings hurt because stinging insects inject venom into the victim. Check the sting site closely. If the stinger still remains, gently scrape it out with a credit card or butter knife. Apply a cold pack to reduce swelling and take ibuprofen or acetaminophen for the swelling and pain. AlkaSeltzer tablets can help: dip them in water and apply. Baking soda helps as well: apply it to the site and slowly drip vinegar on it to make it fizz.





# Arachnids: Spiders



Garden Spider

## Spiders in Sonoma County

Garden spiders, pumpkin spiders, Wolf spiders, turret spiders, tarantulas, and black widows dwell in Sonoma County.

Generally, spiders shy away from humans. Bites usually occur when the spider feels threatened, most often if it becomes trapped against a person's skin in clothing or if it is cornered. Of all the species of spiders mentioned, only a black widow's bite could be dangerous.



Wolf Spider

## Precautions

- Shake out gloves and shoes before putting them on.
- Avoid sticking ungloved hands into woodpiles and under sinks and buildings.

## Symptoms and Treatment

Typical symptoms of a bite include initial pain, redness, and sometimes swelling. A small blister may form, often breaking, leaving a sore that heals over a period of several weeks. Soreness near the bite may last for a few days to several weeks or may not occur at all, depending on the individual.

For ordinary spider bites, wash the area with soap and water, apply an ice pack, and take acetaminophen for the pain. Watch for signs of a secondary bacterial infection in the wound.



Pumpkin Spider

## First Aid Measures

Wash spider bite areas with soap and water, apply an ice pack, and take acetaminophen for the pain. Watch for signs of a secondary bacterial infection in the wound. If the bite of any spider causes an unusual or severe reaction, contact a physician.



Tarantula

## Tarantulas

Fall is tarantula time. Hordes of male spiders swarm on roads and through hillsides in order to find a mate. Tarantulas are nocturnal and live in the ground.

While they inspire terror, tarantulas are not considered a threat to humans. No person has ever been killed by a tarantula. They have very small venom glands and the bite of the local tarantula is no more painful than a bee sting. However, some individuals may have allergic reactions to this bite and there is a risk of secondary infection with any bite.

Tarantulas are reluctant to attack unless they are hunting prey. If provoked, tarantulas may signal their intention to attack and bite by raising their front legs

and rearing up into a "threat posture." The tarantula's main defensive weapon is to scratch its tormentor with a cloud of barbed, porcupine-like hairs from its abdomen.

# Arachnids: Spiders

## Symptoms and Treatment

Tarantula hairs can cause irritation to eyes, nose, and skin, and the lungs and airways if inhaled. Skin exposures to the hairs can be treated by applying and then pulling off some sticky tape such as duct tape, which carries the hairs off with it. If any breathing difficulty or chest pain occurs, seek medical attention immediately as this may indicate an anaphylactic reaction.

## First Aid Measures

Encourage bleeding to wash out the puncture wounds from within. Clean the bite site with soap and water and protect it against infection. Monitor the wound for heat, redness, or other signs of infection.

## Black Widow

The black widow has a jet black color and a rounded abdomen with a red hourglass marking on it. The coarse, irregular webs are usually built in or beneath objects close to the ground (under porches, foundations of buildings, and in basements). The venom is highly neurotoxic and respiratory failure can occur if medical treatment is delayed.



Only the female black widow has a venomous bite. The female black widow's body is 0.5 inches long and can be up to 1.5 inches with her legs outstretched. She has a jet black colored, rounded abdomen, with a red hourglass marking.

Adult males are about half the female's size with smaller bodies and longer legs; they are harmless to humans. Males and immature black widows have yellow and red bands and spots over the back.

Black widows spin sticky, coarse, irregular webs. They are usually built on or beneath objects close to the ground. You will find them on the underside of ledges, rocks, plants and debris, and under porches, building foundations, and in basements. Cold weather and drought may drive black widows into buildings.

The venom of the black widow spider is 15 times as toxic as the venom of the prairie rattlesnake. Black widow spiders are not usually deadly, especially to adults, because they inject only a small amount of venom. However, a black widow bite can have serious side effects; so seeking medical treatment is advised.

## First Aid Measures

Apply an ice pack over the bite location and keep the affected limb elevated to about heart level. Try to collect the spider specimen in a small jar or plastic bag for examination by a spider expert, even if you have crushed it. Seek medical attention.

## Symptoms and Treatment

Black widow bites may quickly cause intense pain and stiffness, but some are not painful and may go unnoticed. The poison injected can cause abdominal pain similar to appendicitis as well as pain to muscles or the soles of the feet. Other symptoms include alternating salivation and dry-mouth, paralysis of the diaphragm, profuse sweating and swollen eyelids.



**To control the black widow:** Remove all materials where they might hide. Clean them out of an area by knocking down the webs, spiders, and round, light brown egg sacs with a stick and crushing them under foot. Destruction of egg sacs may help control the population as they are resistant to many insecticides.



# Arachnids: Ticks

## Ticks

A tick is an arachnid with eight legs and is actually related to the spider. Like spiders, ticks cannot fly. Ticks like to live in shady, wooded areas. They can be found in tall grass, moss, bushes, low tree branches, and even lawns and gardens.

The tick life cycle starts from an egg, grows to a larva, nymph, then matures to an adult. Tick size ranges from very small (size of a sesame seed) to large (size of a watermelon seed) depending on the species and life stage. Some ticks have soft bodies while others, like dog ticks and deer ticks, have a very hard shell.

Larvae and nymphs are often found in the Spring and Summer. Adult ticks are found in the fall and winter. Both tick stages feed on humans. Tick species in Contra Costa County include the Pacific Coast tick, American Dog tick, and the Western Black Legged tick.

Ticks may be infected with bacteria that can cause Lyme disease, a serious and chronic illness in humans. In Northern California, only the Western Black-Legged Tick carries Lyme disease. An infected tick does not transmit the Lyme bacterium until it has been attached for 24 hours.

## How to Prevent Tick Bites

The best way to prevent Lyme disease is to avoid tick bites! Here are some tips:

- Wear long sleeves and pants to cover as much skin as possible.
- Wear light colored clothing so that ticks can be seen and removed before attaching.
- Wear high boots. Tuck pants into socks and boots. Tuck shirts into pants.
- Wear a hat and tie back long hair
- Use tick or insect repellants containing DEET or pyrethrin on clothes and/or skin. Follow all label directions when using repellents.
- Choose wide trails and stay in the center. Avoid off-trail hikes with lots of brush and grass.
- Frequently check for ticks on yourself, your children, and pets frequently. Make a “tick check” part of hiking and camping outings. Use approved tick repellents to kill ticks found.
- Once you return home, remove and launder clothing. Shower immediately and check all parts of your body for ticks.
- After removing clothing worn in tick infested areas, put clothing into the dryer for at least 30 minutes to kill any remaining ticks.

## How and Where to Look for Ticks

Look for ticks in pressure points or places that bend. Good places to look for ticks are the back of the knee, fingers, toes, underarms, thighs, belly button, and groin. Other areas to look include under belts, elastic, and behind the ears, back of your neck, scalp, and hairline. It helps to have someone else check areas that you cannot see, like your back, neck, and scalp. Remove all unattached ticks immediately. Use gloves, tissue, or cellophane tape to remove a tick. Do not use your bare hands! If you find a tick, check again for more. Removed ticks should be put into a sealable plastic bag, and thrown away.

## Tick Bites

Ticks survive by finding and biting a host, burying their mouth parts into the skin, and drinking blood (also known as taking a “blood meal”). They often climb to an elevated location such as a blade of grass, tree, or even the walls of an office or home and hold out their front legs to “quest” for a host. Ticks can sense butyric acid, a compound emitted by all mammals, and they latch on to a suitable host when it passes by.

# Arachnids: Ticks

You may not know that you have been bitten by a tick because you can barely feel a tick bite. Once a tick has bitten you, it can stay attached to your skin for several weeks if you don't remove it. Ticks that have taken a large blood meal become engorged, about the size of a large pea. They usually drop off their host and then complete their next life cycle or lay eggs. Most tick bites are followed by a reaction within hours creating a redness at the site of the bite. This reaction disappears within a few days.

## How to Remove an Attached Tick

If you are bitten by a tick, it is important to remove the tick as soon as possible:

1. Use blunt tweezers or gloved fingers.
2. Grasp the tick by the head, near the mouth, and as close to the skin as possible.
3. Apply firm steady pressure until the tick releases, and gently pull the tick straight away from the skin.
4. If the tick's head breaks off in the skin, use tweezers to remove it as you would a splinter.
5. Wash your hands, and clean the wound and the tweezers an antiseptic or soap and water.
6. If you want to have the tick checked, save the tick in a clean vial or ziplock bag with a blade of grass and a moist cotton ball. Bring the tick to your local vector control district or your doctor to check its species and if it carries infection.

Call your doctor if you have any questions or concerns.

## When Removing Ticks, DO NOT:

- Do not use bare hands.
- Do not use sharp tweezers.
- Do not crush, puncture, or squeeze the tick's body.
- Do not use a twisting or jerking motion to remove the tick.
- Do not use hot match, nail, or cigarette to remove the tick.
- Do not smother the tick with petroleum jelly, or other substance



**DO NOT torture the tick; this will cause it to disgorge its stomach contents immediately.**

## Lyme Disease

According to the Centers for Disease Control and Prevention, between 1992 and 1998, there were 88,967 reported cases of Lyme disease in the U.S. In California, only the Western Black Legged Tick carries the bacteria that results in Lyme disease. In other states, Lyme disease carriers include the Deer Tick.

Ticks that feed on the blood of infected animals transmit the Lyme disease bacteria to animals and humans when they feed again. An infected tick transmits the bacteria for Lyme disease after taking a "blood meal" for 24 – 48 hours. It is important that you check for ticks and remove them immediately!

## Symptoms and Treatment

Early symptoms of Lyme disease include "flu-like" conditions including fever, swollen lymph nodes, neck stiffness, fatigue and headaches. Sometimes a bulls-eye shaped rash develops between 3-30 days after the bite of an infected tick. The bacteria that cause Lyme disease can stay in the body for several years if not treated with antibiotics. Seek medical treatment if symptoms appear.

# Snakes

## Snakebites



California is home to approximately 80 species of snakes, 10 of which are rattlesnakes.

In Northern California, the Northern Pacific Rattlesnake (*Crotalus oreganus oreganus*) is the only native venomous species. Its range is defined from San Luis Obispo north to the Oregon border and from the coast to the sierra ridge.

Rattlesnake bites can damage tissue at the bite site and cause other harmful physiological symptoms such as swelling, allergic reaction, and blood clotting problems.



**BE SAFE : Be smart; leave snakes alone and avoid a bite.**

## Snakebite Safety Concerns

Each year, 7,000 snakebites are reported in the United States, 15 of which are fatal. There are 800 rattlesnake bites reported per year and only 1-2 fatalities. Generally not aggressive, rattlesnakes strike when threatened or deliberately provoked; given room they will retreat. Most snake bites occur when a rattlesnake is handled or accidentally touched by someone walking or climbing. Never try to pick up a rattlesnake.

## How Can Rattlesnakes Be Identified?

Looking at a snake's color or pattern is NOT a reliable method of identification. Looking for the characteristic rattle on the tail is a good method, but sometimes these rattles are lost.

Rattlesnakes have a powerful body, thin neck and a well defined triangular or arrow shaped head. Their eyes are hooded and the pupils of the eyes are oval (like a cat) rather than round.

## Venomous and Non-venomous Snakes

Look at the pictures of the non-venomous gopher snake and the venomous rattlesnake below and the different shapes of their heads. Note the rattlesnake's head, which is wider than its body.





# Snakes

## Non-venomous Snakes



### How Do You Identify Them?

Non-venomous snakes have round pupils in their eyes. A non-venomous snake tends to look more like a snake a child rolls out of clay: the head, neck and body have more or less the same diameter. They do not share the distinct skinny neck and larger head of the rattlesnake.



**NOTE:** This is true only of snakes native to California; it does not apply to exotic snakes or imported snakes.

### What Do I Do for Initial First Aid?

Do not chase after the snake to identify it – that will only increase the blood flow and circulate the venom faster if it is a rattlesnake bite. Look at the wound instead. Rows of small tooth marks or lacerations normally show in the bite of a non-venomous snake, and a good antiseptic may be adequate treatment. If the snake is venomous, there will usually be one or two fang punctures with possible smaller teeth marks.



**Do NOT** get close enough to a rattlesnake to see what shape pupils it has unless it is safely captured.



# Snakes

## Develop an Emergency Plan

Because most Californians live in rattlesnake country, a snakebite emergency plan should be developed before it is needed. If you are less than one hour from the nearest emergency room, initial treatment is relatively simple:

- STAY CALM or calm the victim.
- Gently wash the area with soap and water.
- Apply a cold, wet cloth over the bite.
- Transport to the nearest emergency facility for further treatment.

If you will be more than one hour from an emergency facility, follow these guidelines:

- Know how long it will take 911 emergency responders to arrive on the scene.
- Always hike, camp, or work with a buddy who will be able to go for help.
- Take along a portable phone.
- Notify people where you will be and check in with them.

## What Should NOT Be Done After A Rattlesnake Bite?

- DON'T apply a tourniquet.
- DON'T pack the bite area in ice.
- DON'T cut the wound with a knife or razor.
- DON'T use your mouth to suck out the venom.
- DON'T let the victim drink alcohol.
- DON'T apply electric shock.

These treatments will NOT help the victim and are dangerous. Applying ice or a tourniquet can block circulation, which can result in gangrene and eventual loss of the limb due to amputation. Cutting the wound can cause excessive bleeding. Because human mouths are full of bacteria, sucking the venom from the wound can cause infection, making treatment more difficult.

## What About Snakebite Kits?

Snakebite kits contain a syringe-like device that acts like a vacuum to extract venom from the wound. Snakebite kits remove less than half the venom injected into the wound; they are NOT a substitute for treatment in an emergency room.

## What Symptoms Develop After a Rattlesnake Bite?

Fifty percent of the time, a rattlesnake may strike without injecting venom, inflicting what is called a “dry bite.” Even though the victim is not poisoned, the painful bite can still become infected. All rattlesnake bites require medical attention in an emergency room. If a rattlesnake injects venom into the wound, watch for: swelling, pain, bleeding at the site, nausea, vomiting, sweating, chills, dizziness, weakness, numbness or tingling of the mouth or tongue, and changes in the heart rate and blood pressure. Other symptoms can include excessive salivation, thirst, swollen eyelids, blurred vision, muscle spasms, unconsciousness and difficulty with blood clotting.

# Snakes

## What Is the Treatment For a Rattlesnake Bite?

Rattlesnake bites are a medical emergency and require immediate medical attention. Severe symptoms can be life-threatening and must be treated with antivenin, a prescription medication given intravenously with fluids. Other therapy may include antibiotics and a tetanus update.

## What Can Be Done To Prevent a Bite?

Hands, feet, and ankles are the most common sites for rattlesnake bites.

- Wear hiking boots when walking in the rough. Avoid sandals or going barefoot.
- Stay on paths. Avoid tall grass, weeds and heavy underbrush where you can't see the ground.
- Use a walking stick — if you scare a snake, it can strike the stick instead of you.
- Look for concealed snakes before picking up rocks, sticks, or firewood.
- Check carefully around stumps or logs before sitting or stepping over them.
- When climbing, always look before putting your hands in a new location.
- Baby rattlesnakes are poisonous! They can and do bite. Leave them alone.
- Don't handle freshly killed snakes. You may still be bitten.
- Never tease a snake to see how far it can strike. You can be several feet from the snake and still be within striking distance.
- Always give snakes the right of way!