

Hazard Review

- **Skin irritation, dermatitis**
- **Ingestion**

Required Personal Protective Equipment

- **Gloves**
- **Long clothing**

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This safe work practice has been broken down into two sections:

- A. General
- B. Specific Plants

The General section provides information that applies to all poisonous plants. The section on Specific Plants gives information that is specific or unique to a particular plant as noted. You are advised to read section A, and to read that which is applicable from section B.

A. GENERAL

Before

1. Know what kind of plants you are working with, and which plants you are allergic to.
2. There are too many poisonous plants that you may potentially work with to list here. For a complete list, contact EHS (831-2736). Here a few of the poisonous plants that are known to be abundant throughout San Francisco Parks. Be sure you know how to identify them:
 - Oleander (Nerium)
 - Poison oak (Toxicodendron diversiloba; see below)
 - Hemlock (Conium maculatum)
 - Nightshade (Solanum spp.)

During

1. Barrier creams do not provide total protection from contact with poisonous plants, and must be used in conjunction with other means of protection.

2. Use gloves and clothing to prevent contact.
3. Destroy unwanted poisonous plants when you notice them and prior to working in or around them.

After

1. Wash and scrub any part of the body that comes into contact with the poisonous plants.
2. Wash clothes thoroughly after contact with the poisonous plants.

B. SPECIFIC PLANTS

POISON OAK¹

Before

1. NEVER ASSUME THAT YOU'RE TOTALLY IMMUNE TO POISON OAK.
Many people who never reacted to previous exposures suddenly find that they now break out in a rash when they have contact with the plant. There is an oily resin found in the stems, leaves and berries of the plant called urushiol (pronounced oo-roo-shee-ohl). When animals, insects, or people crush or break the plant, they release the oil on the surface of the plant. Then, even if you only brush the plant lightly, your skin, clothes, or tools will come in contact with the oil. When the skin has contact with this oil, it causes a rash that usually involves itching, redness, and blisters. Most people will have this reaction, but about 15-25% of the population doesn't develop a reaction. For those who do, their sensitivity varies.
 - The plant's oil is present and active in the plant year-round, even when it has lost all its leaves.
 - The oil can adhere to clothing, tools, car seats, fingernails, pets, and anything it contacts. This oil which has rubbed onto objects is as potent as the oil which comes directly from the plant, and it can cause the rash just as easily.
 - The oil retains its toxicity (its ability to cause a rash) over many months, and sometimes over years. Oil remaining on boots, clothing, or other objects can produce the rash weeks after your original exposure.
 - For most individuals, the oil penetrates the skin after several hours. For extremely sensitive individuals, it only takes 1 – 3 minutes for the oil to penetrate the deeper layers of the skin. Once it is absorbed in the skin, it **cannot** be washed off.

¹ RPD Industrial Investigation, EHS Case #2998, DOI 12/20/05, Case #3003, DOI 1/13/06, and Case #3004, DOI 1/17/06.

2. LEARN TO RECOGNIZE POISON OAK. Poison oak, a shrub that grows throughout California, has this name because the leaves resemble the leaves of an oak tree, but it is not part of the oak tree family. It's looks vary from season to season and from area to area:
 - Spring and Summer – the leaves are waxy green.
 - Autumn – the leaves yellow, red and deep maroon.
 - Winter – the plant often loses its leaves and looks like bare twigs.
3. WEAR PROTECTIVE CLOTHING.
 - Minimize skin exposure to the oil with clothing that covers legs, arms, feet, and hands. When you're working outside in warm weather, lightweight, loose cotton clothing of light colors may be the most comfortable.
 - Wear cotton or leather gloves, not rubber, because the poison oak oil can penetrate the rubber. Button your sleeves over your gloves to protect your wrists. Never wipe your forehead or face with your hands or gloves because it can transfer the oil to your face.
 - Wear a bandanna or sweatband to collect the sweat.
4. USE THE RESTROOM BEFORE STARTING WORK. This will reduce the chance of exposure to highly sensitive skin surfaces.

During

1. AVOID CONTACT WITH THE PLANT.
 - Stay away from any vegetation you suspect may be poison oak.
 - Use a barrier cream on exposed skin prior to outdoor activity to prevent the oil from penetrating the skin surface. Barrier creams have not been proven to be completely effective in preventing the rash they can reduce rash cases.
2. NEVER BURN THE POISON OAK PLANT because the smoke particles contain the oil which when inhaled may cause fever, fatigue, inflammation of the trachea, and bronchitis. Acute cases may require hospitalization. The smoke can also cause the skin rash.
3. STORE TOOLS OR ITEMS WHILE WORKING AWAY FROM PLANTS. Be aware of where you stash or place any items or tools you are working with. Look for poison oak before setting those items down.

After

1. DECONTAMINATE ITEMS THAT COME INTO CONTACT WITH THE OIL. This includes skin, clothes, boots, tools, and car seats.
 - A few layers of newspaper on your car seat will save you having to wash it.

- When removing clothing, take shoes off first and leave them outside for decontamination by washing.
 - Remove all clothing and wash it separately from other clothing.
 - Decontaminate your exposed skin by flushing it thoroughly with large amounts of cool (not warm) water immediately, or as soon as possible, after exposure without soap, since soap removes protective skin oils, making the washed skin more susceptible to the rash. After you have decontaminating with large amounts of cool water, you may then take a warm shower, using soap.
 - Do not allow contaminated clothing to come in contact with clean clothing, car seats, pets, tools, or other objects.
 - Decontaminate tools as needed using soap and water.
2. TREAT THE RASH AS NEEDED. In about 12-48 hours after exposure there is a visible reaction of redness, itching, and swelling, which may be followed by blisters. The liquid in the blisters does **not** spread the rash to other parts of the body or to any other person; only the oil from the plant can. Once the rash develops, it will run its course – usually 2 – 3 weeks. Infection can sometimes occur due to scratching, so try not to scratch. Consult your physician if your reaction is severe or you develop an infection.

References:

1. "Poison Oak", San Francisco Department of Public Works Tailgate, 2/23/06.
2. "Poison Oak", California State Compensation Insurance Fund, 2006.
3. "Poison Oak Safety Tips", Trail Center website (http://www.trailcenter.org/guides/po_tips.htm), 2/22/06