TerraneaPMC Safety Share

Week of October 1, 2012 – Poison Ivy, Oak and Sumac

Many people think that poison ivy, oak and sumac are different names for the same plant. Actually, the only thing they have in common is the sap, urushiol, which is produced by these plants for protection. The word ñurushiolò is derived from the Japanese word, ñurushiò meaning lacquer, as it has been used in the Far East for centuries to produce traditional lacquerware. Physical contact with these plants can cause urushiol to stick onto whatever surface it had touched. When the sticky sap of the plant is absorbed by the skin, the body begins to manufacture substances, called antibodies, which attach themselves to the invading chemicals and prevent them from moving freely about our bodies. If one is allergic to urushiol, the body tends to overreact to the presence of the sap. In such instances, enormous amounts of antibodies are produced. These antibodies, in turn, produce large amounts of histamines, which cause the body tissue to become inflamed and swollen. Urushiol is quite potent. Depending on each individualôs susceptibility, the amount to cause a reaction will vary; however studies indicate that it doesnôt take much, as some people may experience a severe reaction with contact of only 1 nanogram (billionth of a gram) and some studies profess that as little as ¼ ounce could cause a rash on every person on the planet! Urushiol remains a potent dermal toxin even after the host plant has been dead for over 5 years.

It is a mistake to think that poison ivy, oak and sumac only present a risk during the summer months. Because of urushiolôs longevity, as long as people are hiking or going into the mountains and forests, the potential contact followed by severe health reactions is ever present. And since many parts of the country continue to have lovely weather well into the fall season, these activities remain popular and therefore contracting the unpleasant experience due to these plants, remain a concern.

Below is a brief description of the plants that secrete urushiol:

Poison sumac is mostly found in the Eastern portion of the United States. It is a shrub or small tree, growing up to nearly 30 feet in height. Each pinnate leaf has 7ï 13 leaflets, each of which is 2ï 4 inches long. Its flowers are greenish, growing in loose auxiliary panicles (clusters) 3ï 8 inches long. The fruits are not quite spherical, colored gray, and about 0.2 inches across. While there are many varieties of sumac, only one species is poisonous.

There are two types of **poison oak**: W**estern poison oak** or **Pacific poison oak** and **Atlantic Poison-oak. Western poison oak** occurs only on the Pacific Coast of North America, where it is common, and ranges from southern Canada to the Baja California peninsula. It is one of California's most prevalent woody shrubs, but also climbs, vine-like, up the sides of trees, and can be found growing as single stems in grassland, often as part of early stage succession where woodland has been removed, and serving as a nurse plant for other species. The plant often occurs in California oak woodlands and Douglas-fir forests. The vine form climbs far up the trunks of coast redwoods, potentially killing smaller trees. It is found in damp, semi-shady areas near running water and also thrives in direct sunlight, requiring water only in early spring. Any trail leading to a waterfall on California's coast may likely be home to western poison oak; it can also be found in some inland mountain ranges, such as the Cascades.

Atlantic poison-oak is an upright shrub that can grow to 1 m (3 ft) tall. Its leaves are 15 cm (6 in) long, with three leaflets on each. The leaflets are usually hairy and are variable in size and shape, but most often resemble white oak leaves; they usually turn yellow or orange in autumn. The fruit is small, round, and yellowish or greenish. It is not closely related to true oaks. This species is native to the Southeastern United States from Virginia westward to Texas and Oklahoma and can be found growing in forests, thickets, and dry, sandy fields.

Poison Ivy, is indigenous throughout North America, including the Canadian Maritime provinces, Quebec, Ontario, Manitoba, and all U.S. States east of the Rocky Mountains, as well as in the mountainous areas of Mexico up to around 1,500 m (4,900 ft). It is normally found in wooded areas, especially along edge areas. It also grows in exposed rocky areas and in open fields and disturbed areas. In early to mid autumn these attractive shiny plants turn brilliant shades of bright orange, deep red, bright pink and intense yellow.

If physical human contact is directly made with any part of the Poison Ivy/ Poison Oak/ Poison Sumac plant, it is imperative that you immediately wash those affected body parts for 3 minutes or longer with ***COLD*** running water in combination with using a strong detergent soap. Under **no circumstances** should you ever use hot water. Hot water causes skin pores to open up wide, thereby allowing urushiol to be absorbed deeply within the outer lying layer of skin; therefore, compounding the condition. Failure to cold-water bathe your affected body skin parts with a strong detergent soap will likely assure that a rash will soon develop.

Allergy symptoms from these plants usually appear within first 12-72 hours of contact, causing severe itching, burning skin sensation and lots of oozing blisters. However, the visual symptom of rashes can appear within a few minutes. The delay process is somewhat determined by your composite DNA make up, age, and related blood type chemistry.

Contrary to popular opinion, scratching blisters or a rash **will not** cause a spread of the known toxin urushiol to other parts of the body ***IF*** you already have showered or vigorously washed all affected body parts. Urushiol does not accumulate in these blisters or in the oozing lymph liquid. However it is still important that you do not scratch, break or rupture these blisters, as this then allows harmful bacteria to enter into your skin as this creates an open wound. Worse still, the bacteria can enter into your blood stream, causing what is known as post-secondary infection, which may result in abscesses, enlarged or swollen glands, sore joints, running a fever and even death. Any of these post-secondary infections ordinarily would require additional medical treatment or care by a trained medical professional. Just recently, there was documented case of a landscape grounds crew member who first contacted the poison ivy plant while cutting grass. Later on he discovered - too late - that he was allergic to poison ivy. Initially he developed an itchy rash, and huge blisters, and soon after developed a fever. The individual's open rash/blisters became infected by a drug resistant strain of staph infection, and, unfortunately, lead to his death.

Bottom line: be able to recognize these plants and avoid contact. PPE, such as nitrile gloves, coveralls, and goggles can minimize contact with urushiol. All such PPE must be disposed after use!

"You may be disappointed if you fail, but you are doomed if you don't try." —Beverly Sills (Great Artist and Opera Legend)