



VINIFERAMINE®

MOLECULES & HEALTH

HEALING THROUGH MODERN SCIENCE WITH SMALL MOLECULE TECHNOLOGIES

Soothing Poison Ivy, Oak or Sumac Induced Skin Rash



Poison ivy causes greater than 350,000 cases of human contact dermatitis annually. Poison ivy (*Toxicodendron radicans* or *rydbergii*), poison oak (*Toxicodendron diversilobum*, *toxicarium* or *quercifolium*) and poison sumac (*Toxicodendron vernix*) are found throughout the United States, northern Mexico and southern Canada. Plants from the *Toxicodendron* genus are the most common cause of allergic contact dermatitis (ACD). All of these plants included in the *Anacardiaceae* (cashew or sumac) family contain the oil referred to as urushiol that is located in their leaves, stems and roots. Urushiol exposure is a primary cause of occupational dermatitis and contact with urushiol can sometimes have potentially life-threatening consequences including

anaphylaxis. 50% to 70% of individuals who have contact with urushiol experience ACD, with around 50% of individuals being moderately to highly sensitive and 30% to 40% reacting if they have contact with a large amount of urushiol.

Sensitivity to urushiol can develop after a first exposure, but typically requires a second exposure to produce an allergic skin reaction. ACD requires an allergenic molecule of low molecular weight to penetrate the epidermis. Urushiol is a small molecule (hapten) that binds to a carrier protein within the skin. The primary immune response involves uptake of the antigen (urushiol plus carrier) by skin antigen presenting cells called Langerhans cells that present the antigen to immune cells known as T cells during the sensitization

phase. The second phase occurs when the sensitized individual repeats contact with the antigen. The T cells then recognize the antigen and respond by releasing inflammatory mediators including cytokines. This allergic response usually occurs within 24 to 48 hours following re-exposure to urushiol and can last up to 4 weeks without any treatment.

Reducing Inflammation

Viniferamine® skin and wound care products are non-sensitizing and non-irritating, and contain many potent anti-inflammatory ingredients including the beneficial polyphenols oleuropein, resveratrol, and epigallocatechin-3-gallate (EGCG) from olives, grapes, and green tea, respectively, as well as the important small molecules, melatonin, and L-glutathione. In addition, dipotassium glycyrrhizinate, aloe vera and shea butter also possess anti-inflammatory activities.

Following exposure to urushiol, it only takes minutes for it to penetrate the outer epidermis and bond with skin cell proteins. It's important to wash exposed skin with soap and water as soon as possible to prevent skin reactions. However, if urushiol is on the skin for even 10 minutes, only 50% can be removed with washing. An hour after exposure, urushiol is com-

pletely bound to the skin and can no longer be washed off with regular soap and water. Protective clothing can help prevent exposure, but urushiol can seep through clothing and can even penetrate rubber. Vinyl gloves are recommended instead of rubber. Urushiol can get on clothing, tools, equipment and even pet fur, which should be washed with soap and water to avoid further exposure. Skin exposure can also occur from burning or weed-wacking plants containing urushiol, which can also cause lung irritation. In the winter, the sap containing urushiol can still cause a skin rash so the same precautions should be followed.

Decreasing Rash

Urushiol-induced dermatitis typically presents with itching, followed by redness and blistering. The affected areas may swell and have open, weeping lesions that may be painful. The arms, legs and face are commonly affected. Topical antihistamines don't work and are not recommended due to the potential for severe skin reactions.

References

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Disclaimer: These statements have not been reviewed by the FDA. The decision to use these products should be discussed with a trusted healthcare

Bathing affected skin in warm water and washing with a mild cleanser like Viniferamine® Clean N Moist can help soothe the skin. Sterile drainage of blisters can reduce itching. Application of Viniferamine® SkinMineralZ that includes medicinal clays and zinc oxide with antibiotic properties can help dry and soothe weeping skin. Viniferamine® Hydrocortisone Cream 1% can also help reduce itching.



Relieving Redness, Itch Swelling

Even with rash treatment, pruritis (itching), erythema (redness) and edema (swelling) can last up to 14 days. It's important to keep the affected areas clean to avoid infections. Serum from draining blisters will not cause skin reactions on unexposed individuals or

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on the unexposed skin of an affected individual, however, skin reactions can occur on exposed individuals outside the area of contact due to migrating T cells. Scratching the rash will not spread the rash but may cause further skin damage or skin infections.

It's good to know that Viniferamine® skin care products are non-sensitizing, non-irritating, and include many potent anti-inflammatory ingredients that can help reduce rashes. SkinMineralZ soothes inflamed skin and absorbs moisture and irritants.

Viniferamine® Clean N Moist is perfectly pH balanced to ensure that even the most fragile skin is gently cleansed. Clean N Moist can also be used to remove SkinMineralZ. In addition, hydrocortisone is frequently prescribed to treat itching, redness, swelling, rashes, and pain. Like other Viniferamine® products, Hydrocortisone Cream 1% also contains natural anti-inflammatory ingredients to help soothe skin.

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