

## Removing Skunk Odor

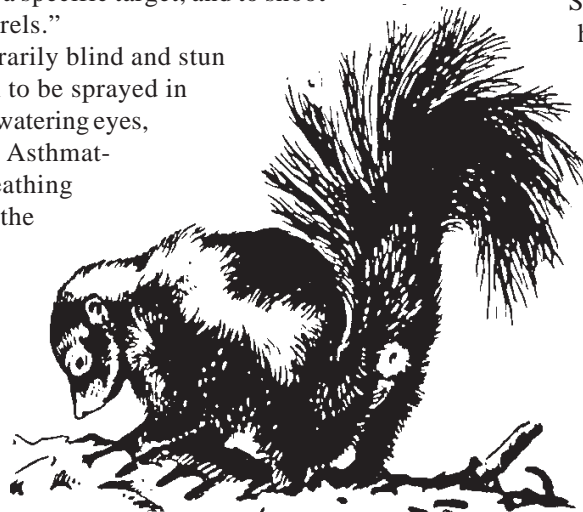
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### General Background

Skunks are famous for their odorous defensive spray. When alarmed or threatened, skunks have been known to spray people, pets, and automobiles. They also spray in basements, garages, window wells, and under porches. The musk they spray is a yellow-tinted oily liquid stored in two sacks located on opposite sides of the anus. Each sack holds about a teaspoon of musk, enough to allow multiple sprays. Skunk musk does not emanate from the animal as it does in the PePe LePew cartoon; it is discharged through two “ducts” that allow the skunk to adjust the spray to a mist or stream, to direct it at a specific target, and to shoot up to 20 feet with “both barrels.”

Skunk musk can temporarily blind and stun individuals unlucky enough to be sprayed in the face. Victims experience watering eyes, nasal irritation, and nausea. Asthmatics also may experience breathing difficulties when exposed to the odor. The rabies virus is not transmitted through skunk musk.

Skunk musk is composed primarily of seven ingredients, six of which are sulfur-containing thiols that give the skunk musk its awful smell. Humans can smell skunk musk in concentrations as low as 1 part per billion.



### Deodorizing Treatment

Consider these approaches when dealing with skunk odor:

1. Remove the source of the odor.
2. Ventilate the area with fresh air.
3. Wash or apply deodorants to the source of the odor.
4. Use air fresheners to mask residual odor in the air.
5. Use laundry detergent to remove residual odor in fabrics.

Skunk odor may reactivate during periods of high humidity. If the odor does not decrease in a week or two, the skunk may have re-sprayed or died on the property.

### Home Remedies/Over-the-Counter Products

Never overlook the simple act of taking a shower and washing clothes to mitigate skunk odor. Time, air, soap and water, and ammonia in water are recommended to remove odor from fabrics. Other treatments include washing items with a strong soap, a heavy-duty laundry detergent, or borax. Be sure to follow any directions that are specific to washing a particular fabric.

A chemist by the name of Paul Krebaum discovered a solution that chemically neutralizes skunk odor. The formula is:

- 1 quart 3 percent hydrogen peroxide (fresh bottle)
- 1/4 cup baking soda (sodium bicarbonate)
- 1-2 teaspoons liquid dish soap.

Ingredients must be mixed in an open container and used immediately. Never mix the ingredients in advance because oxygen released from hydrogen peroxide may cause a closed container to explode. The solution can be used on people or pets; avoid splashing the product in the eyes or mouth. Allow the solution to remain on hair for five minutes before rinsing with water. Repeat as needed. Do not use this solution on clothing — it may discolor the fabric.

For clothing that cannot be washed or dry-cleaned, such as shoes, suspend them outdoors, allowing fresh air to carry away the volatile thiols. The odor will decrease over time provided the material is not re-exposed to skunk musk. Any cleaning fluid or household chlorine bleach also can be used to remove skunk odor from fabrics. Use these products in separate steps — not together. Test cleansers first on an inconspicuous portion of the fabric before applying to the entire fabric.

When deodorizing a house, don't forget to change the air filter to the furnace/air conditioner. Sometimes it can become contaminated with skunk odor and continue to disperse the smell throughout the house after the initial source of the odor has been treated.

A variety of odor control products are available in area stores, including Skunk-Off®, Odor-Mute®, Nature's Miracle Skunk Odor Remover®, and Earth Friendly Products®. Homeowners also may find the following products helpful in deodorizing their property. With any product, always follow the instructions on the label.

**Neutroleum Alpha®** masks skunk odor with a smell described as “minty.” Use it directly on surfaces. It also can be used as an air deodorizer by suspending napkins that have been dipped in the product. One application is usually sufficient. Consumers have reported that Neutroleum Alpha® also can be used to deodorize washable items at a rate of 1 ounce per 2 gallons of warm water. Neutroleum Alpha® has toxic and irritating properties. Use the product in well-ventilated areas and avoid direct contact with skin and mucous membranes. Wear chemically resistant gloves (vinyl if allergic to latex) when mixing the solution. The product dissolves best in warm water. Use only freshly made solutions and dispose of any leftover product. Unmixed Neutroleum Alpha® must be stored in a cool dark environment to prevent fire hazards. Neutroleum Alpha® can be ordered online from [store.yahoo.net/debon-aire/index.html](http://store.yahoo.net/debon-aire/index.html) or at the Pocatello Supply Depot (U.S. Department of Agriculture—Wildlife Services) in Idaho, (208) 236-6920.

**Freshwave®** is the retail name of the industrial deodorant known as Ecosorb®. Freshwave® captures malodorous compounds and chemically neutralizes them. It can be sprayed on affected surfaces and repeated as needed. Freshwave® does have a slight odor that has been described as “tea tree” in nature. For lingering odors, pour the product in a wide-mouthed jar and allow it to spread into the air. Use a fan to hasten the process. Freshwave® is also

available as a gel or candle for slow dispersal. Use appropriate fire precautions with candles. Freshwave®, being comprised of plant oils, has few safety warnings but avoid splashing the product in the eyes. Ecosorb® can be purchased from the Pocatello Supply Depot (U.S. Department of Agriculture—Wildlife Services) in Idaho, (208) 236-6920.

**Epoleon N100®** has received good reviews for its ability to neutralize skunk odor. Epoleon® is a water-based neutralizer of organic odors. It is sold as a concentrate and must be diluted in water before use. One professional, who has used the product on multiple occasions, suggests a ratio of 1 part Epoleon® to 20 parts water up to a 1 to 5 ratio, depending on need. The diluted chemical can then be sprayed or atomized. The product will leave a slight residue as the water evaporates. Simply wipe down surfaces with a wet towel to gather up any remaining product. The chemical has a very slight odor. Epoleon® can be used in a variety of settings except where food is prepared. Half-gallon quantities of Epoleon® N100 concentrate can be purchased from the manufacturer, 800-376-5366; or Wildlife Control Supplies LLC, (877) 684-7262. Eight ounce, ready-to-use spray bottles can be obtained from Apptec Inc., 800-698-6367.

### **Electric Foggers/Atomist Sprayers**

Sometimes the skunk odor is so dispersed that fogging a deodorant is necessary to cover a large area. Atomizers, by converting the deodorant solution into fine mists, provide two key advantages for odor control over hand-pump sprayers. First, the small droplets they produce stay airborne longer, thereby circulating throughout the treatment area. The tiny nooks and crannies present in basements and crawl spaces can be completely treated by exploiting natural air movements. Second, smaller droplets allow less product to be used and still eliminate odors. As a rule of thumb, 16 ounces of neutralizing deodorant solution, atomized with a droplet size of 15 microns can deodorize a 1,500 square foot residence.

Several foggers are available. Consider the following to determine the type that will best suit your needs.

1. Portability—Evaluate the weight, balance and power source.
2. Versatility—Use a flexible spray hose to direct the fog to different areas of the room.
3. Cost—You can rent foggers or purchase them for less than \$100.

### **Deodorizing Techniques to Avoid**

1. Ozone generators are sometimes marketed as having deodorizing abilities. Studies have raised significant questions regarding their safety and effectiveness.

2. Never mix deodorants with other chemicals or products unless the directions specifically permit it.
3. Although widely believed, tomato juice does not effectively neutralize skunk odor. Users assume that tomato juice works because the odor of tomatoes has replaced the odor of the skunk. What actually occurs, however, is that the nose blocks out the skunk odor, allowing the person to sense only the tomato smell.

### General First Aid Tips

First aid guidelines are often included with product directions. Be sure that you and those around you are familiar with the guidelines before preparing and using the product. Keep the product container/label/instructions handy in case you need to re-read the safety information. If a poisoning event has occurred, contact your local physician, emergency services or the Poison Center (800-222-1222) immediately. The following information contains basic protocols for properly handling common poisoning events until medical personnel arrive.

If someone is experiencing headaches, nausea, fatigue or difficulty breathing, immediately move the individual into an area with fresh air. Seek medical advice. Remove clothing soaked with deodorants and flush exposed skin with clean water for 15 minutes to prevent any chemical burns. Flush eyes that are exposed to caustic deodorants with clean water for 15 minutes. Use tepid water, if available. While flushing, make sure run-off water does not contaminate the unaffected eye. For more control, pour water from a large cup and hold it 2 to 4 inches above the affected eye. Have someone else call for emergency assistance during the flushing process. If deodorants are ingested call the Poison Center (800-222-1222) for detailed instructions. Do not encourage vomiting or give fluids without label or medical recommendation.

### Cautions

1. Some deodorants contain toxic materials and may cause adverse reactions in people sensitive to the ingredients. Thus all chemicals, whether natural or synthetic, should be used in a manner that reduces exposure. Special care should be taken to avoid exposing children, pets and plants to chemicals unnecessarily. Remove or secure foodstuffs and food preparation areas whenever possible to prevent being contaminated with the chemicals.
2. Read and follow all product label directions and warnings. It is preferable to use deodorants in ventilated areas.
3. Some products may discolor fabrics and other materials. Always test the product on a less noticeable area prior to treating more visible areas.
4. Multiple deodorant treatments maybe needed, whenever odors penetrate porous surfaces, such as wallboard, concrete or unpainted wood, etc. Sometimes removing contaminated materials will be the only solution.

Reference to commercial products or businesses is made with the understanding that no discrimination is intended and no endorsement by University of Nebraska–Lincoln Extension is implied.

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