

## Air Fresheners

### What You Need to Know



Air fresheners have become very popular in recent years. Many homes and businesses use air fresheners to hide an odor or create a desired smell. However, this benefit comes with exposure to a mixture of chemicals that are released from the air freshener. Some of these chemicals could affect your health, especially for people who are sensitive to chemicals or smells. In many cases air fresheners are not necessary; there are natural ways to solve odor issues.

- Air fresheners don't freshen or clean the air – they add fragrance and in some cases chemicals that could be harmful to one's health
- People with allergies, asthma or other breathing disorders may be sensitive to air fresheners
- Natural ways to decrease odors include opening windows or using common household items (e.g., lemons, vinegar, baking soda) to absorb odors
- Decreasing use of air fresheners will decrease chemical exposure in the home

### **Air fresheners and deodorizers don't "freshen" or clean the air.**

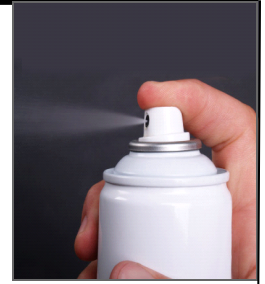
By putting more chemicals into the air, air fresheners can actually make air quality worse. There are no regulations or standards for what can be in an air freshener. This leaves wide open the range of chemicals that might be in any air freshener. The makers of air fresheners don't have to list what is in them, making it hard for the shopper to decide which air freshener is safer.

Air fresheners may hide a problem such as mold. Even if the musty odor is hidden by the fragrance in air freshener, the mold spores can still be a health problem. It is best to address the actual problem rather than use a spray to hide it.

[Allergists say home fragrance products may cause respiratory problems.](#)

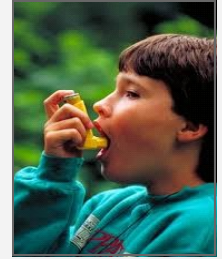
*“This is a much bigger problem than people realize. About 20 percent of the population and 34 percent of people with asthma report health problems from air fresheners.”*

Stanley Fineman, MD,  
president-elect, American  
College of Allergy,  
Asthma & Immunology



## Can Air Fresheners Be a Health Risk?

Yes. Anyone can be affected by direct exposure to high levels of product. There are case reports of air freshener overdose from inhaling the spray at close range. This has caused rapid heartbeat that required hospitalization.<sup>1,2</sup> These cases have been caused by the butane propellant that is used to spray the product. Most people can tolerate air fresheners when used as directed. However, people who are sensitive, especially those with allergy or asthma, may get irritated eyes and throat, headache, and an asthma attack.<sup>3</sup> A recent study in Europe found a link between long-term use of air fresheners in the home and altered heart function; those with lung disease were more affected.<sup>4</sup> Because air fresheners have chemicals of concern, they have warning labels about keeping them away from children.



## What Chemicals are of Concern in Air Fresheners?

Several studies have evaluated the content of air fresheners.<sup>5-7</sup> While the formulation can vary greatly, the following are common ingredients:

- **Fragrance:** This is a mixture of different chemicals, some of which can be irritating and cause allergy.
- **Phthalates:** These plasticizers help distribute and deliver fragrance; they affect hormones and could cause cancer.
- **Propellents:** These hydrocarbons form a fine mist that distributes the product; they are irritating and can cause an abnormal heart beat.
- **Solvents:** Ethanol and glycol ethers are used to dissolve the other ingredients; they are irritating when inhaled.
- **Aldehydes:** These form from the other ingredients when the freshener remains in the air for several hours; they are irritating and cause cancer.
- **Deodorizers:** Chemicals which can absorb and neutralize odors. Some brands use an irritating and cancer-causing chemical (1,4-dichlorobenzene) for this purpose.<sup>8</sup>

Since the label doesn't list ingredients, it is not possible to know which chemicals are in the product. That is why it is best to use air fresheners only where there are no other options for reducing unpleasant odors.

Children are likely to receive the greatest exposure because of their higher breathing rate and greater contact with the floor. Chemicals from air fresheners can settle into house dust where they can be absorbed by the skin, inhaled, or accidentally ingested.

## What can I do to remove odors from my house and make it smell nice?

Instead of an air freshener you can:

- Open a window or use a fan to circulate air; good ventilation is important
- Remove sources of odors such as rotting food, cat litter, damp towels, etc.
- Empty the garbage often
- Install exhaust fans in the bathroom(s) and kitchen to remove odors
- Keep an open box of baking soda in the refrigerator to absorb odors
- Pour white vinegar into a dish and leave on a counter
- Put lemon slices in the garbage or garbage disposal
- Use natural or organic essential oils such as peppermint or orange
- Use or make potpourri with natural ingredients such as rose petals or lavender
- Place fragrant smelling plants such as jasmine, roses or lilies around the house
- Simmer cinnamon, cloves or other spices; make herbal sachets



**Make your own air fresheners** by buying essential oils and adding 8-10 drops to a spray bottle filled with 1 cup of water. Be sure to use true essential oils, as many scented oils are made from petroleum products and therefore are not good for your indoor air quality. Essential oils can be found on-line and in most health stores. Lavender, mint, pine, lemon, and orange are among the natural essential oil scents that can be bought.

A few drops of an essential oil on a cotton ball can freshen up a drawer or closet.



*Products labeled “natural,” “organic” or “green” may still have harmful chemicals. There are no regulations that define these terms. Read the labels and look for plant-based ingredients.*

## Recommendations

- Limit your use of air fresheners. They are not needed in most cases.
- If you do use air fresheners, keep them away from children.
- Find products that have fewer chemicals; the [GoodGuide](#) rates air fresheners and many other products.
- Use natural ways to reduce odors and address odor at the source (e.g., mold).

## References and More Information

- <sup>1</sup>Senthikumaran et al. 2012. [Ventricular fibrillation after exposure to air freshener-death just a breath away](#). J Electrocardiol 45: 164-166.
- <sup>2</sup>Lovecchio F and Fulton S. 2001. [Ventricular fibrillation following inhalation of Glade Air Freshener](#). Eur J Emerg Med 8: 153-154.
- <sup>3</sup>Brownstein J. 2011. [Air fresheners can trigger allergies, asthma](#). NBCNews.com 11-6-2011
- <sup>4</sup>Mehta et al. 2012 [Heart rate variability in association with frequent use of household sprays and scented products in SAPALDIA](#). Environ Health Perspect 120: 958-964.
- <sup>5</sup>Dodson et al. 2012. [Endocrine disruptors and asthma-associated chemicals in consumer products](#). Environ Health Perspect 120: 935-943.
- <sup>6</sup>Potera C. 2011. [Indoor air quality: scented products emit a bouquet of VOCs](#). Environ Health Perspect 119: A16.
- <sup>7</sup>Steinemann, A. 2009. [Fragranced consumer products and undisclosed ingredients](#). Environ Impact Assess Rev 29: 32-38.
- <sup>8</sup>National Institute of Environmental Health Sciences Press Release: [Chemical in Many Air Fresheners May Reduce Lung Function](#). July 27, 2006
- CDC Factsheet: [Chemicals and Odors](#)
- University of California Consumer Products: [The Good Guide](#)
- EPA: [Air Fresheners](#)



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