



Protect Your Family from the Hidden Hazards in Air Fresheners

Our work raises concerns that should be followed up immediately by thorough government testing of these products. Meanwhile, consumers should be aware that the pretty label and sweet scent may mask something much less pleasant.

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Read the full issue paper
*Clearing the Air: Hidden
Hazards in Air Fresheners*
at www.nrdc.org/policy.



Air fresheners have become a staple in many American homes and offices, marketed with the promise of creating a clean, healthy, and sweet-smelling indoor atmosphere. But many of these products contain phthalates (pronounced *thal-ates*)—hazardous chemicals known to cause hormonal abnormalities, birth defects, and reproductive problems. NRDC’s independent testing of 14 common air fresheners, none of which listed phthalates as an ingredient, uncovered these chemicals in 86 percent (12 of 14) of the products tested, including those advertised as “all-natural” or “unscented.”

To protect consumers, government action to conduct more thorough tests and enact basic measures to limit exposure to phthalates is urgently needed. Until consumers are given the information they need to make informed decisions about whether to use these products, it is best to avoid using air fresheners—especially in places where there are children or pregnant women.

Phthalates: Health Hazards in Many Forms

Phthalates are used in many common consumer products—to soften plastics in children’s toys, as sealants and adhesives in nail polish, and in perfumes and air fresheners. When people use air fresheners, the phthalates are released into the air where they may be inhaled or may land on the skin and be absorbed. Once these chemicals enter the bloodstream, they can alter hormone levels and cause other health problems.

Phthalates are known to interfere with production of the male hormone, testosterone, and have been associated with reproductive abnormalities. Numerous animal studies have linked prenatal exposure to certain phthalates with decreases in testosterone, malformations of the genitalia, and reduced sperm production. The State of California notes that five types of phthalates—including one that we found in air freshener products—are “known to cause birth defects or reproductive harm.” Phthalate exposure in indoor environments has also been associated with allergic symptoms and asthma.

Improving Your Home’s Air Quality and Safety

Air fresheners are not a solution for poor air quality and cannot substitute for good ventilation. The best solution is to open windows to bring in fresh air or to use fans to maintain air circulation.

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If you decide to use an air freshener, however, careful selection may reduce phthalate exposures to you and your family. The table shows which brands we tested contained phthalates.

Stronger Regulations Are Needed to Protect Consumers

There is a clear need for closer monitoring of the types of chemicals manufacturers are allowed to put into air fresheners—and for consumers to be provided with better information about what is in the products they do purchase. NRDC recommends the following immediate steps:

- Consumers should avoid using air fresheners, but when necessary should use products with the lowest levels of phthalates to limit exposures to these potentially dangerous chemicals.
- The Environmental Protection Agency should require manufacturers to test and submit data on phthalates found in air fresheners, the extent of human exposure to phthalates in air fresheners, the health effects of the exposure, and the toxicity, persistence, sensitization, and other health effects of inhaling chemicals in air fresheners.



- The Consumer Product Safety Commission should ban phthalates in consumer products and should require that manufacturers provide ingredient information on the label.

According to studies done by the U.S. Centers for Disease Control, the majority of the U.S. population is routinely exposed to at least five different phthalates. Although the measured levels in the human blood stream are small, they are significant because a mixture of phthalates at low doses can act in an additive manner to cause the same health hazards as just one phthalate at a higher dose. **The difficulty of avoiding general exposure is all the more reason to eliminate further exposure in an environment over which you have much more control—your home.**

Toxic Phthalates Found in Air Fresheners

The chemicals below were found in at least one of the 14 air fresheners NRDC tested.

- **Di-ethyl Phthalate (DEP):** Has been associated with changes in hormone levels and genital development in humans.
- **Di-n-butyl Phthalate (DBP):** Is recognized as a reproductive toxicant by the National Toxicology Program and the State of California, and can lead to changes in genital development.
- **Di-isobutyl Phthalate (DIBP):** DIBP metabolites have been associated with changes in male genital development.
- **Di-methyl Phthalate (DMP):** Inconclusive evidence has shown reproductive toxicity in animal studies.
- **Di-isohexyl Phthalate (DIHP):** Limited toxicity testing has shown that DIHP is probably a developmental and reproductive toxicant.

Phthalate Level in Air Fresheners Tested

Brand	Level of Toxic Phthalates Found	Phthalates Found
Air Wick Scented Oil	●	0.75 ppm DBP; 6.3 ppm DEP; 1.6 ppm DIBP; 2.1 ppm DIHP
Citrus Magic	○	0.25 ppm DBT
Febreze Air Effects Air Refresher	●	0
Febreze NOTICEables Scented Oil	●	0.19 ppm DBP; 1.5 ppm DIBP
Glade Air Infusions	●	1.5 ppm DEP
Glade PlugIn Scented Oil	●	4.5 ppm DBP
Lysol Brand II Disinfectant	○	0.12 ppm DBP; 0.49 ppm DEP
Oust Air Sanitizer Spray	●	5.7 ppm DEP
Oust Fan Liquid Refills	○	0.78 ppm DEP; 0.24 ppm DIBP
Ozium Glycol-ized Air Sanitizer	●	360 ppm DEP; 0.15 ppm DMP
Renuzit Subtle Effects	●	0
Walgreens Air Freshener Spray	●	1,100 ppm of DEP
Walgreens Scented Bouquet Air Freshener	●	7,300 ppm of DEP; 0.47 ppm of DBP; 6.5 ppm DMP
Walgreens Solid Air Freshener	●	23 ppm DEP

- LEGEND: ● Contained highest level of phthalates (more than 10 ppm of total phthalates)
 ● Contained moderate level of phthalates (between 1 and 10 ppm of total phthalates)
 ○ Contained trace level of phthalates (less than 1 ppm of total phthalates)
 ● Contained no phthalates

