

Hidden Hazards in Air Fresheners and Deodorizers

Why are these products hazardous?

- Air fresheners and deodorizers can contain hundreds of chemicals, some of them toxic in very small amounts. Even one molecule can be unsafe, according to the U.S. Environmental Protection Agency.
- Common air freshener chemicals, such as limonene, generate additional hazardous pollutants such as formaldehyde and acetaldehyde, linked with cancer, and ultrafine particles, linked with heart and lung disease.

Why are the hazards hidden—aren't toxic chemicals listed on labels?

- No. Air fresheners do not need to list all of their ingredients, and typically do not. If any ingredients are listed, they are usually safe-sounding ones, rather than potentially hazardous ones.
- All air fresheners tested (sprays, gels, solids, disks, and oils) emitted chemicals classified as toxic or hazardous by federal laws, but **none of these chemicals** were listed on any product label or material safety data sheet.

Where are air fresheners used? Many places:

- Public restrooms in stores, offices, restaurants, schools, hospitals, churches, theaters, and parks.
- Transportation including airplanes, airports, cars, buses, trains, terminals, and boats.
- Homes, businesses, apartments, hotel lobbies, health clubs, child care and elder care facilities.

How can air fresheners harm health?

- Many ways. Pollutants emitted from air fresheners are linked with damage to the brain, lungs, heart, reproductive system, immune system, and with cancer. Everyone is vulnerable, especially children.
- In two national studies, approximately 20% of the U.S. population, and 40% of asthmatics, report headaches, breathing difficulties, or other health problems when exposed to air fresheners or deodorizers.

Are "natural" air fresheners any safer?

- Not necessarily. All air fresheners tested—even those advertised as "natural," "green," "organic," or with essential oils—emitted chemicals classified as toxic or hazardous, including some with no safe exposure level.
- Emissions of toxic chemicals from "natural" air fresheners were not significantly different from other brands.
- Claims of "natural," "green," or "organic" are unregulated and undefined, and typically used for marketing.

Do air fresheners clean the air?

- No. Scented air fresheners and deodorizers are not designed to clean or purify the air.
- But they do add potentially hazardous chemicals to the air we breathe, and worsen air quality.

Do air fresheners pose liability risks?

- Yes. The use of a single air freshener can violate the Americans with Disabilities Act, because people who suffer disabling health effects from air fresheners cannot access the facility (such as a restroom).
- People can have seizures, asthma attacks, or lose consciousness if exposed to air fresheners, also a liability risk.

What can we do?

- Use ventilation instead of air fresheners. Remove sources of odors rather than mask with chemicals.
- Speak up. Ask facilities managers to remove or disconnect their air fresheners.

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References: Steinemann AC. Fragranced consumer products and undisclosed ingredients. *Environ Impact Assess Rev* 2009;29(1):32-38; Steinemann AC, MacGregor IC, Gordon SM, Gallagher LG, Davis AL, Ribeiro DS, Wallace LA. Fragranced consumer products: Chemicals emitted; ingredients unlisted. *Environ Impact Assess Rev* (in press, 2010); Caress SM, Steinemann AC. Prevalence of fragrance sensitivity in the American population. *J Environ Health* 2009;71(7):46-50; Environmental Protection Agency. Prioritized chronic dose-response values for screening risk assessments, Table 1, June 12, 2007; Nazaroff WW, Weschler CJ. Cleaning products and air fresheners: exposure to primary and secondary air pollutants. *Atmos Environ* 2004;38(18):2841-65; TOXNET. United States National Library of Medicine.