

## 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.