

Health Risks from Perfume:

Relevant Facts:

- 95% of chemicals used in fragrances are synthetic compounds derived from petroleum. They include benzene derivatives, aldehydes and many other known toxics and sensitizers - capable of causing cancer, birth defects, central nervous system disorders and allergic reactions. Neurotoxins: At Home and the Workplace, Report by the Committee on Science & Technology, U.S. House of Representatives, Sept. 16, 1986. (Report 99-827)
 - Central Nervous System disorders (brain and spine) include Multiple Sclerosis, Parkinson's Disease, Alzheimer's Disease, Sudden Infant Death Syndrome.
 - Chloroform was found in tests of fabric softeners: EPA's 1991 study.
 - A room containing an air freshener had high levels of p-dichlorobenzene (a carcinogen) and ethanol: EPA's 1991 study.
 - An FDA analysis (1968-1972) of 138 compounds used in cosmetics that most frequently involved adverse reactions, identified five chemicals (alpha-terpineol, benzyl acetate, benzyl alcohol, limonene and linalool) that are among the 20 most commonly used in the 31 fragrance products tested by the EPA in 1991!
 - Thirty-three million Americans suffer from sinusitis (inflammation or infection of sinus passages).
 - Ten million Americans have asthma. Asthma and asthma deaths have increased over 30% in the past 10 years.
 - Headaches cost \$50 billion in lost productivity and medical expenses and 157 million lost work days in 1991.
- "Focus on Fragrance and Health," by Louise Kosta, The Human Ecologist, Fall 1992.

The Most Common Chemicals Found in Thirty-One Fragrance Products by a 1991 EPA Study

by Julia Kendall 1995

Compiled by Julia Kendall*, Co-Chair, Citizens for a Toxic-Free Marin. Phone: (415) 485-6870. Reference: Lance Wallace, Environmental Protection Agency; Phone (703) 341-7509 Excerpts from "Health Hazard Information." References: Material Safety Data Sheets (MSDS). Provided with permission by Barbara Wilkie wilworks@lmi.net of the [Environmental Health Network \(of California\)](#). [*NOTE: [Julia Kendall](#) died July 12, 1997 from Multiple Chemical Sensitivities and Leukemia caused by pesticide poisoning.]

Principal chemicals found in scented products are:

ACETONE

(in: cologne, dishwashing liquid and detergent, nail enamel remover) - On EPA, RCRA, CERCLA Hazardous Waste lists. "Inhalation can cause dryness of the mouth and throat; dizziness, nausea, incoordination, slurred speech, drowsiness, and, in severe exposures, coma." "Acts primarily as a central nervous system (CNS) depressant."

BENZALDEHYDE

(in: perfume, cologne, hairspray, laundry bleach, deodorants, detergent, vaseline lotion, shaving cream, shampoo, bar soap, dishwasher detergent) - Narcotic. Sensitizer. "Local anesthetic, CNS depressant"... "irritation to the mouth, throat, eyes, skin, lungs, and GI tract causing nausea and abdominal pain." "May cause kidney damage." "Do not use with contact lenses."

BENZYL ACETATE

(in: perfume, cologne, shampoo, fabric softener, stickup air freshener, dishwashing liquid and detergent, soap, hairspray, bleach, after shave, deodorants) - Carcinogenic (linked to pancreatic cancer); "From vapors: irritating to eyes and respiratory passages, exciting cough." "In mice: hyperaemia of the lungs." "Can be absorbed through the skin causing systemic effects." "Do not flush to sewer."

BENZYL ALCOHOL

(in: perfume, cologne, soap, shampoo, nail enamel remover, air freshener, laundry bleach and detergent, Vaseline lotion, deodorants, fabric softener) - "irritating to the upper respiratory tract" ... "headache, nausea, vomiting, dizziness, drop in blood pressure, CNS depression, and death in severe cases due to respiratory failure."

CAMPHOR

(in: perfume, shaving cream, nail enamel, fabric softener, dishwasher detergent, nail color, stickup air freshener) - "local irritant and CNS stimulant" ... "readily absorbed through body tissues" ... "irritation of eyes, nose and throat" ... "dizziness, confusion, nausea, twitching muscles and convulsions" "Avoid inhalation of vapors."

ETHANOL

(in: perfume, hairspray, shampoo, fabric softener, dishwashing liquid and detergent, laundry detergent, shaving cream, soap, Vaseline lotion, air fresheners, nail color and remover, paint and varnish remover) - On EPA Hazardous Waste list; symptoms:
"...fatigue; irritating to eyes and upper respiratory tract even in low concentrations..." "Inhalation of ethanol vapors can have effects similar to those characteristic of ingestion. These include an initial stimulatory effect followed by drowsiness, impaired vision, ataxia, stupor..." Causes CNS disorder. [Note: this refers to denatured ethanol, which is commonly used in the cosmetic industry, not to drinking alcohol.]

ETHYL ACETATE

(in: after shave, cologne, perfume, shampoo, nail color, nail enamel remover, fabric softener, dishwashing liquid) - Narcotic. On EPA Hazardous Waste list; "...irritating to the eyes and respiratory tract" ... "may cause headache and narcosis (stupor)" ... "defatting effect on skin and may cause drying and cracking" ... "may cause anemia with leukocytosis and damage to liver and kidneys" "Wash thoroughly after handling."

LIMONENE

(in: perfume, cologne, disinfectant spray, bar soap, shaving cream, deodorants, nail color and remover, fabric softener, dishwashing liquid, air fresheners, after shave, bleach, paint and varnish remover) - Carcinogenic. "Prevent its contact with skin or eyes because it is an irritant and sensitizer." "Always wash thoroughly after using this material and before eating, drinking, ...applying cosmetics. Do not inhale limonene vapor."

LINALOOL

(in: perfume, cologne, bar soap, shampoo, hand lotion, nail enamel remover, hairspray, laundry detergent, dishwashing liquid, Vaseline lotion, air fresheners, bleach powder, fabric softener, shaving cream, after shave, solid deodorant) - Narcotic. ... "respiratory disturbances" ... "Attracts bees." "In animal tests: ataxic gait, reduced spontaneous motor activity and depression ... development of respiratory disturbances leading to death." ... "depressed frog-heart activity." Causes CNS disorder.

METHYLENE CHLORIDE

(in: shampoo, cologne, paint and varnish remover) - Banned by the FDA in 1988! No enforcement possible due to trade secret laws protecting chemical fragrance industry. On EPA, RCRA, CERCLA Hazardous Waste lists. "Carcinogenic" ... "Absorbed, stored in body fat, it metabolizes to carbon monoxide, reducing oxygen-carrying capacity of the blood." "Headache, giddiness, stupor, irritability, fatigue, tingling in the limbs." Causes CNS disorder.

a-PINENE

(in: bar and liquid soap, cologne, perfume, shaving cream, deodorants, dishwashing liquid, air freshener) - Sensitizer (damaging to the immune system).

g-TERPINENE

(in: cologne, perfume, soap, shaving cream, deodorant, air freshener) - "Causes asthma and CNS disorders."

a-TERPINEOL

(in: perfume, cologne, laundry detergent, bleach powder, laundry bleach, fabric softener, stickup air freshener, Vaseline lotion, cologne, soap, hairspray, after shave, roll-on deodorant) - ... "highly irritating to mucous membranes" ... "Aspiration into the lungs can produce pneumonitis or even fatal edema." Can also cause "excitement, ataxia (loss of muscular coordination), hypothermia, CNS and respiratory depression, and headache." "Prevent repeated or prolonged skin contact."

Chemicals in Home a Big Smog Source

Gary Polakovic / LA Times March 9, 2003

<http://www.mindfully.org/Air/2003/Home-Chemicals-Smog9mar03.htm>

Even before the chemicals escape into the environment, they contribute to indoor air pollution, which typically is more dangerous than smog because the chemicals concentrate nearer to people.

Cleansers, cosmetics and other products pump 100 tons of pollutants daily into the Southland's air, ranking second to tailpipe emissions, studies show.

Ordinary household products such as cleansers, cosmetics and paints are now the Los Angeles region's second-leading source of air pollution, after auto tailpipe emissions, air quality officials say.

Regulators have long known that smog-forming chemicals escape with every squirt of antiperspirant, each bubble of detergent and every spritz of aerosol hair spray. And they have been controlling some products' emissions for years, with mixed success. But new research shows that products common in kitchens, bathrooms and garages contribute more to Southern California's smog problem than previously thought.

"It's the same stuff that comes out of a tailpipe or a smokestack," said Jerry Martin, a spokesman for the California Air Resources Board. "We're talking hundreds of different kinds of products, stuff everyone uses. It's almost one secret area of emissions that you don't hear about and no one talks about."

The offending items include detergents, cleaning compounds, glues, polishes, floor finishes, cosmetics, perfume, antiperspirants, rubbing alcohol, room fresheners, car wax, paint and lawn care products.

On a typical day, about 108 tons of smog-forming fumes are emitted from such products used in houses and small businesses in Los Angeles, Orange, Riverside and San Bernardino counties. The South Coast Air Quality Management District released those estimates last month as part of a new comprehensive plan to cut smog and haze in the region. ...

Original URL: <http://www.andersonlaboratories.com/alweb23a.htm>

Toxic effects of air freshener emissions.

Rosalind Anderson Ph.D. and Julius Anderson M.D.-Ph.D.
Archives of Environmental Health (1997) 52: 433-441.

Check out your favorite restaurant - the air freshener in the restroom may make you feel dizzy or short of breath. The last time you walked through a parking lot on a hot day, could you tell which cars had little air fresheners on the dash board with your eyes closed?

Under controlled conditions, we had groups of laboratory mice breath the fumes released by several types of air fresheners. We found scientific data demonstrating irritation of the eyes, nose, throat, and sinuses; difficulty breathing; asthmatic reactions, and changes in nervous system function(loss of balance, tremors, and convulsions). Several of the mice died as a result of breathing these chemicals.

The data demonstrate that some air fresheners release toxic (poisonous) chemicals which can irritate the airway and cause serious malfunction of the nervous system.

<http://www.free-press-release.com/news/200703/1174980567.html>

Study Finds Cologne Causes Acute Neurotoxicity and Air Flow Reduction

MCS America / Lourdes Salvador
2007-03-27 02:29:27

Summary: A study at Anderson Laboratories in Vermont concluded that fragrance chemicals caused a variety of acute toxicities in mice after an hour long exposure to breathing five commercial colognes.

A study at Anderson Laboratories in Vermont concluded that fragrance chemicals caused a variety of acute toxicities in mice after an hour long exposure to breathing five commercial colognes. The researchers discovered "the emissions of these fragrance products caused various combinations of sensory irritation, pulmonary irritation, decreases in expiratory airflow velocity, as well as alterations of the functional observational battery indicative of neurotoxicity." Mice exposed to toilet water, rather than cologne, did not show any change in air flow velocity, pulmonary function, or neurological function. "Neurotoxicity was more severe after mice were repeatedly exposed to the fragrance products. Evaluation of one of the test atmospheres with gas chromatography/mass spectrometry revealed the presence of chemicals for which irritant and neurotoxic properties had been documented previously" (Anderson & Anderson, 1998).

Many people do not realize that fragrances have changed over the years and are not regulated by law. Once a pleasant and natural oil from a plant, fragrances are now made with many chemical ingredients that have become harmful to human health and are not disclosed on the label. When people walk around wearing these fragrances, they share them with everyone around them. Breathing second-hand fragrance is like breathing second-hand smoke. It has all the same effects amounting to acute toxicity. Wearing cologne affects all those who share the same air space, including pets and children who are at increased risk due to their smaller size. Asthmatics, respiratory patients, and the chemically sensitive can also be seriously injured by fragrances. Even the wearer is sacrificing good health.

"Fragrances are unnecessary and often unpleasant for others to smell," said Lourdes Salvador, Founder and President of MCS America. "The media has misled us to believe that scents make us sexy and attractive," added Salvador who is also the chief editor of MCS America News. "Quite to the contrary, many cannot tolerate being near these toxicants and avoid them. More and more employers are enacting fragrance free policies in the workplace leading to a reduction of migraines and missed work. So, maybe that elusive girl that retreats each time you approach is really interested, but avoiding your cologne."

Before fragrances emerged on the market the human species still mated and reproduced. This shows that fragrances are not necessary to attract the opposite sex. Quite to the contrary, much like animals, we use body scent to attract mates. Some fragrance manufacturers have realized this and are now marketing fragrances that smell like sweat. Unfortunately these fragrances are synthetic, made with chemicals known for their neurotoxic effects. Fortunately, we are each equipped with our own sweat. So, go for a hard core workout guys and enjoy your mate au natural! Sweat is in and cologne is out!

For more details:

Contact: Lourdes Salvador, 13 Vale Street, Salem, NY 12864, 213-985-3096
Website: www.mcs-america.org

BE SAFE!

Use fragrance-free alternatives.

A variety of "ready to use" fragrance-free and organic products are available from natural food, co-op stores and mail order catalogs. It is important to read labels, even from these "natural" sources.

- "Unscented" and "fragrance free" products can contain masking fragrances to cover up the smell of ingredients.
- Both expensive and inexpensive products may contain synthetic fragrance chemicals.
- Misleading advertising words such as natural, floral, hypoallergenic, natural scent, and flower names make you think the products is safe when it is not.

For information about making, using and purchasing fragrance-free products see the books marked by a star (✱) on the resource page.

Some alternatives to regular products are:

Laundry detergent: baking soda, vinegar, borax, laundry disks.

Fabric Softeners: Use vinegar or baking soda in the rinse cycle. Wear natural fabric to avoid static cling.

Skin soap: Castile soap, ground oatmeal.

Shampoo: Castile soap. For dandruff use baking soda.

Hair spray/hair styling: For extra body use unflavored gelatin. For hair spray use lemons or egg white.

Deodorant: Baking soda, wear natural fiber clothes.

Hand and body lotion: Lanolin, vitamin E, rose hip oil or organic formulas.

Perfumes: Even "natural" scents (essential oils) may be a problem. Non-organic essential oils may be contaminated with solvents and pesticides.

Shaving Cream: Fragrance-free soap.

After shave: To close pores use cold water.

Cleaning/freshening: Baking soda, vinegar, salt, lemon juice, borax, hydrogen peroxide, hot water, sunshine.

Air fresheners: Use a dish of baking soda, lemon or vinegar, or ventilate the area.

New clothing/bedding: Wash in baking soda or vinegar. Wear natural fibers.

Insect repellent: Wear protective clothing, do not use any fragrance products that will attract insects.

Resources

- ✱ Better Basics for the Home, Annie Berthold-Bond, 1999.
 - ✱ Creating a Health Household, Lynn Bower, 2000.
 - ✱ Home Sweet Home: Protecting Yourself and Your Family from Everyday Toxics and Harmful Household Products, Debra Lynn Dadd, 1997.
 - ✱ **Less Toxic Alternatives**, Carolyn Gorman, 2001.
 - **"Acute Toxic Effects of Fragrance Products,"** Rosalind C. Anderson, Julius H. Anderson, *Archives of Environmental Health*, 1998; 3(2):138-146.
 - **Fragrance and Health**, Louise Kosta, 1998, (Human Ecology Action League 404-248-1898).
 - **Perfume Toxicity, Sensitivity, Accommodations and Disability.**: Cindy Duehring, *Medical and Legal Briefs*, Part 1-Evidence of Health Hazards, 4(1), Part II-Regulatory Void and Fragrance Use for Public Behavior Control,4(2). Available from the Chemical Injury Information Network, 406-547-2255.
 - **"Respiratory Toxicology of Fabric Softener Emissions,"** Rosalind C. Anderson, Julius H. Anderson, *Journal of Toxicology and Environmental Health*, 2000; Part A 60:121-136,
 - **Secondhand Scent: Accommodating People with MCS** (video, booklet), Boston Self Help Center, 617-277-0080.
 - **Fragranced Products Information Network**, www.fpinva.org.
- FOR ADDITIONAL READING:
- **An Alternative Approach to Allergies: The News Field of Clinical Ecology Unravels the Environmental Causes of Mental and Physical Ills**, Theron G. Randolph, Ralph W. Moss, 1980.
 - **Chemical Exposure: Low Levels and High Stakes**, Nicholas Ashford and Claudia Miller, 1998.
 - **Our Stolen Future**, Theo Colburn, Dianne Dumanoski, John Peterson Myers, 1996.
 - **Staying Well in a Toxic World: Understanding Environmental Illness, Multiple Chemical Sensitivities, and Sick Building Syndrome**, Lynn Lawson, 1993.

If you are exposed to a fragrance, or fragranced product, avoid it or dispose of it immediately. If you delay, you can no longer perceive the odor, but you will still experience the harmful effects of the chemicals.

Fragrances are not just pleasant odors...

Fragrances are toxic chemicals you breathe and absorb through your skin.

Fragrance chemicals in fabric softeners, laundry detergents, perfumes, personal care products and many other products contribute to health problems and environmental damage.

Halifax, Nova Scotia recognized the danger of fragrance chemicals to the health of its citizens and declared their city fragrance free.

Inside... information to help you:

- Make informed buying decisions
- Protect and enhance your family's health.

To order bulk brochures send SASE to the:
ENVIRONMENTAL HEALTH COALITION
OF WESTERN MASSACHUSETTS
PO Box 614, Leverett, MA 01054

*PRINTING FUNDED BY
The New England Grassroots
Environment Fund*

A grassroots organization created to help educate the public about environmental health issues and meet the needs of chemically injured people.

DID YOU KNOW

- **One in five people** experience health problems when exposed to fragrances.
- **72% of asthmatics** have adverse reactions to perfume.
- **95% of chemicals used in fragrances are synthetic compounds derived from petroleum.** They include benzene derivatives, aldehydes and many other known toxins and sensitizers – capable of causing cancer, birth defects, central nervous system disorders and allergic reactions.
- **A single fragrance** can contain from ten to several hundred chemicals.
- **These constantly vaporizing** chemicals are neurotoxins, skin, eye and respiratory irritants, and can cause other systemic effects.
- **Chemicals that are known hormone disrupters, such as phthalates,** are in fragrances. Phthalates have been associated with thyroid and reproductive (premature breast development and birth defects) disorders.
- **Even if you don't use fragrances,** you inhale and absorb other people's fragrances, just like second-hand tobacco smoke. Skin, hair and clothing absorb fragrance vapor from the air and by direct contact. *You are exposed to toxic fragrance chemicals without your consent.*
- Your **skin,** the largest organ of the body, **directly absorbs** fragrance chemicals that are applied to it.
- **Clothing and bedding washed and dried with fragrances** provide constant contact for fragrance chemicals to be absorbed by your skin directly into your body and also inhaled as vapors. Infant's skin is especially susceptible to penetration by fragrance chemicals from clothing, diapers and bedding.
- **Manufacturers specifically make fragrances to be long-lasting.** They do not break down easily, and break down products can be more toxic than the original substance. Fragrances accumulate and become concentrated in fabrics. Fragrances can be difficult to remove from clothing.
- If you use public laundry facilities where other people use fragranced products, your laundry will absorb their fragrance chemicals.
- Fragrances are causing widespread indoor and outdoor air pollution. It is difficult to enter many buildings, stand next to most people or walk outside without being exposed to fragrances. Fragrances can deny access to public places for many people.
- A study in Norway found synthetic musk fragrance compounds in **outdoor air, even in a remote area.**
- The documented presence of fragrance chemicals in **drinking water** could adversely affect the health of people, animal life and plants.

You are exposed to toxic fragrance chemicals without your consent!

You are not protected by the government from exposure to fragrance chemicals because trade-secret laws keep toxicity testing of ingredients from being accurately and truthfully disclosed.

Fragrance exposure is hazardous to everyone. Children, reproductive-age people, asthmatic, allergic and chemically injured people are especially vulnerable

HEALTH PROBLEMS ASSOCIATED WITH EXPOSURE TO FRAGRANCE CHEMICALS. 1991 EPA Study

- Death due to respiratory failure (severe cases)
- Cancer
- Neurotoxic (central and peripheral nervous system): coma, convulsions, headache, depression dizziness, irritability, confusion panic attacks/anxiety, memory loss, impaired concentration, drowsiness, insomnia, impaired vision, ataxia, stupor, spaciness, giddiness, slurred speech, twitching muscles, tingling in the limbs, loss of muscular coordination. Constant low-level exposure to neurotoxins can lead to progressive and permanent brain damage.
- Inhalation exposure can cause drying, irritation and inflammation of the mucous membranes: nose, sinuses, mouth, throat and lungs.
 - Asthma, reactive airway disease
 - Difficulty breathing, coughing
- Eye irritant
- Fatigue
- Damage to the immune system
- Drying and cracking of skin. Skin absorption can cause systemic effects.
- Nausea, vomiting, abdominal pain
- Kidney and liver damage
- Drop or rise in blood pressure

COMMON CHEMICALS FOUND IN 31 FRAGRANCE PRODUCTS.

1991 EPA Study

Acetone, benzaldehyde, benzyl acetate, benzyl alcohol, camphor, ethanol, ethyl acetate, limonene, linalool, methylene chloride, a-pinene, g-terpinene, a-terpineol.

ç Luciano Pavarotti has a clause in his personal appearance contracts that says there must be no distinct smells anywhere near him. Providence Journal, April 7, 2001.

FRAGRANCES ARE EVERYWHERE

Consider how much they contribute to the following:

- One out of every 2.18 persons will experience cancer during their life.
- 17.3 million Americans have asthma. Asthma and asthma deaths have increased 75% since 1980.
- Headaches cost \$50 billion in lost productivity and medical expenses and 157 million lost work days in 1991.
- One in six children in the US suffers from neurologic problems such as autism, aggression, dyslexia and attention deficit hyper-activity disorder.
- 33 million Americans suffer from sinusitis.
- 13% of US adults have anxiety disorders, the #1 mental health problem (NIMH).
- 49% of Americans report trouble falling asleep or staying asleep.
- 40% of US adults suffer from hypo-thyroidism (Broda Barnes, M.D.).
- An estimated 25% of American couples can not conceive children.
- Approx. half of all pregnancies in the US result in prenatal or postnatal death or in a less than healthy baby. (National Research Council).

THESE PRODUCTS CAN CONTAIN FRAGRANCE CHEMICALS

Fabric softeners, laundry detergent, bleach and bleach powder, bar and liquid soap, dishwashing detergent, room and car air fresheners/deodorizers, perfume, cologne, deodorants, hand and body lotion, makeup, hair products (hair spray, shampoo, conditioners, gel), disinfectant spray, nail enamel and remover, shaving cream, after shave, kitty litter, candles, tissues, toilet paper, trash/kitchen plastic bags, scented paper, toys, advertising materials, markers, foods, pesticides, etc.

***Second-hand fragrances are invisible, but are toxic just like second-hand smoke!**

- For people who are already chemically injured, inescapable exposures may be debilitating or even life-threatening.
- For others, exposure to fragrance chemicals adds to their "total body load" of synthetic chemicals, which increases the risk of developing health problems.

CHEMICAL EXPOSURE IS A GROWING PROBLEM

Over 80,000 synthetic chemicals are in use today, most of which have not been tested individually or in combination for their effects on human health. Chemicals permeate all aspects of our lives from personal care products and clothing to the materials used in building, furnishing and maintaining our homes. Many people are developing reactions from exposure to these pervasive low-level, common chemicals. Continued exposure can cause a "spreading" effect and one then reacts to many other kinds of chemicals. Environmental illness caused by exposure to chemicals is widespread and growing. It has been shown that 20-30% of the US population reacts to one or more synthetic chemical substances.