

Fragrance advertising and packaging make you think fragrances in products are made from flowers, fruits, herbs and spices. They actually contain toxic chemicals you inhale, and absorb through your skin.

“Fragrance” Ingredients Are Not Required by Any U.S. Law to be Listed on Product Labels.

A 2010 study* of 25 widely-used fragranced consumer products identified 133 volatile organic chemicals (VOCs), 24 of which are toxic or hazardous under federal laws, and only 1 VOC was listed on any product label.

Products included: “laundry products” (detergents, dryer sheets and fabric softener), “personal care products” (soaps, hand sanitizer, lotions, deodorant, shampoo, and baby shampoo), “cleaning supplies” (household and industrial cleaning supplies, disinfectants, and dish detergent), and “air fresheners” (sprays, gels, solids, and deodorant disks).

- About half of the products emitted chemicals that have no safe exposure level, according to the U.S. EPA.
- 11 of the products were labeled as “green,” “organic,” “non-toxic,” or “natural,” and their emissions of VOCs, classified as toxic, hazardous or carcinogenic, were not significantly different.
- Product formulations are typically complex. In addition to the “product base” mixture, a single “fragrance” in a product may contain up to several hundred substances among the 2600+ substances (natural and synthetic) documented as fragrance ingredients.
- None of the products listed all of the chemicals emitted. 14 of the product labels did not list “fragrance” and this is legal.
- Formulations are confidential.

* Steinemann AC, et al., *Fragranced consumer products: Chemicals emitted, ingredients unlisted*, Environ Impact Assess Rev (2010), doi:10.1016/j.eiar.2010.08.002

How Fragrance Oils Are Widely Dispersed by Volatility in Air, and Transfer by Contact

Tiny oil droplets of fragrance chemicals (designed to be very volatile and long lasting), are constantly being released into the air from people’s fragranced personal care and laundry products, and other products such as air fresheners. The fragrance oil droplets, floating in the air, adhere to every surface they contact, including people, furnishings and food. This is why if you don’t use any fragranced products, and go to any public or private place where fragranced products are used or sold, you will smell fragrance on your clothes, hair and skin when you go outside or return home. Fragrance chemical oils are difficult to remove from skin, hair, clothes and other surfaces.

How Exposure to Fragrance Chemicals Adversely Affects Your Health

Skin Effects: Fragrance chemical oils are absorbed very quickly by the skin, the body’s largest organ. Exposure is by direct application, contact with fragranced items, and exposure to air containing fragrance oil droplets. Some fragrance chemicals can alter the skin’s surface tension, which greatly facilitates the absorption of other fragrance chemical components into the skin.

The stratum corneum, the outer layer of the skin, can store topically applied, contact and air absorbed fragrance oils, other fragrance chemicals, and their metabolic breakdown products. They are slowly released into the blood vessels directly under the skin, and entering the blood stream can affect every cell and organ system in the body before entering the liver for detoxification.

Clothing and bedding, washed and dried with fragranced products, provide a constant exposure both absorbed and inhaled. *Infants’ skin is especially susceptible to absorbing fragrance chemical oils.*

Fragrances can be skin allergens, irritants and photosensitizers, causing eczema, dry skin, cracking and itching, and eye irritants causing

dryness, itching, burning and redness.

Respiratory Effects: Fragrances can induce or worsen respiratory problems. Fragrance chemicals are known respiratory irritants and can cause inflammation, increase mucus production, and make the nose, sinuses, mouth, throat, and lungs more susceptible to bacterial and viral infections. They can cause and worsen asthma, sinusitis, coughing, bronchitis, drying of mucus membranes, etc. A severe asthmatic reaction from acute fragrance exposure can cause death.

Neurological Effects: Fragrance chemicals affect the entire nervous system, including the brain. Some effects are immediate and transitory, while others are chronic and long lasting: headaches, migraines, depression, dizziness, irritability, confusion, panic attacks, anxiety, aggression, memory loss, impaired concentration, drowsiness, insomnia, impaired vision, stupor, spaciness, slurred speech, twitching muscles, tingling in the limbs, loss of muscular coordination, coma and convulsions.

Endocrine Hormone Disrupting Effects: It is unknown how many of the hundreds of fragrance chemicals have endocrine hormone disrupting properties. Fragrances often contain large amounts of phthalates, a group of toxic semi-volatile organic chemicals (SVOC), that are known to disrupt estrogen and testosterone metabolism. Phthalates are used to impart an oily moisturizing film and to help dissolve and fix other ingredients. Phthalates in plastic containers can leach into the contents.

- Obesity is an example of chemicals causing endocrine hormone disruption of fat metabolism. The epidemic increase in obesity and diabetes in the last 20-30 years mirrors the huge increase in fragranced products.
- Phthalates have been associated with: thyroid disorders, sperm damage (DNA), infertility, miscarriages, birth defects (abnormal male genital development), and premature breast development in baby girls.

Systemic Effects: Fragrance chemicals which are absorbed by skin contact, breathing and ingestion have been found in the blood. They can irritate the endothelial cells that line the insides of the blood vessels, causing blood vessel dysfunction in any organ system throughout the entire body. Fragrance chemicals can react with other indoor and outdoor chemicals (e.g. ozone) to form secondary pollutants such as formaldehyde, acetaldehyde, and ultrafine particles (related to cardiovascular disease). Fragrance chemicals absorbed through the skin, and their metabolic breakdown products, can circulate throughout the entire body and major organs *before* they enter the liver for detoxification.

- Fragrance chemicals can cause: fatigue, immune system suppression and dysfunction, cancer, kidney and liver damage, nausea, vomiting, and abdominal pain.

Air, Water and Environmental Contamination: The widespread use of a large variety of fragranced products is causing extensive indoor and outdoor air pollution. Waste water treatment does not remove the increasing quantity and types of fragrance chemicals, many of which are persistent and accumulate in the environment.

CDC Establishes Fragrance as a “Recognized Hazard”
The U.S. Centers for Disease Control and Prevention (CDC) issued an Indoor Environmental Quality Policy June 2009 to provide 14,000 CDC employees in over 54 countries “a safe place of employment and free of recognized hazards”... to protect the health of workers.



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