

## **FRAGRANCE ALLERGY/SENSITIVITY**

Perfume is also known as fragrance or scent and has been used down the ages in religious rituals, as aphrodisiacs and to mask unpleasant odours. In the past fragrances were extracted from plants and natural sources, but in the late 1800s the first synthetic fragrances were introduced and since then have been used extensively to mimic fragrances from nature. There are currently around three thousand chemicals used in the manufacture of fragrances. Many of these are petrochemical derivatives. Chemicals used to manufacture fragrances are also used to produce flavourings.

There are thousands of body fragrances on the market today. Fragrances are also found in a large number of perfumed consumer products such as personal care products, air fresheners, laundry products, detergents, paper tissue products, essential oils, fragranced candles and incense, antibacterial products added to air conditioning systems to reduce the risk of legionella or other diseases that can be circulated via air conditioning. Fragrances are present in public areas from air fresheners and commercial cleaning products used on public transport, in public buildings and health care facilities. As fragrances are now more the norm than the exception, it is difficult to find products, including food, pharmaceuticals and tobacco products that are not fragranced or flavoured.

**Are fragrances safe?**

Little is known about the impact fragrances have on human health and there are individuals in the community who are made ill as a result of exposure to fragrances. Cases of anaphylaxis or allergic shock have been observed following fragrance exposure while lesser symptoms such as hay fever or rhinitis are reported. Some studies have shown that fragrances are respiratory irritants and many asthmatics react adversely to them. Studies also indicate that fragrances may actually cause asthma. Individuals who are chemically sensitive can become disabled when exposed to fragrances and cannot take part in normal activities. They report symptoms such as migraine, nausea, dizziness, fatigue, shortness of breath, difficulty concentrating and allergy-like symptoms. Studies report that some 15 - 30% of the population report sensitivity to chemicals and that around 4 - 6% have a major impact on their quality of life. Of these, more than 80% claimed that exposure to fragrances is troublesome (Ashford, N and Miller, C. 1998.).

The fragrance industry claims that chemicals used in fragrances are used at low concentrations and are blamed for ill health because they are more noticeable than other chemicals. Industry's view is that people who claim they react to fragrances suffer from psychological problems. This view does not take into account that fragrance chemicals are part of complex mixtures of very toxic substances and these same chemicals are present in a large number of frequently used consumer products contributing to an additive effect. A study by the US EPA identified volatile organic compounds emitted by fragranced products that contribute to indoor air pollution and sick building syndrome. These compounds were found to be toxic and carcinogenic (Wallace, L et al. 1995). While some of the compounds identified occur commonly in many fragrances, few fragrance products containing them have been tested for carcinogenicity. In the USA, a report by the Environmental Working Group entitled "Skin Deep" found that around 89% of the 10,500 ingredients in personal care products have not been evaluated; one in three personal care products has at least one ingredient classified as a possible carcinogen and one in one hundred contain probable cancer-causing agents; some other ingredients e.g. phthalates are endocrine disruptors that are linked to birth defects, while parabens used as preservatives in underarm deodorants and other personal care products have been linked to breast cancer. ( [www.ewg.org/reports.skindeep/](http://www.ewg.org/reports.skindeep/))

## **Secret ingredients**

The constituents of a fragrance do not have to be disclosed on labels and are protected by secrecy laws. All that has to be labelled is the term 'fragrance', so individuals who are allergic or chemically sensitive to specific compounds do not have the right to know what is in a product

in order to avoid unnecessary exposure. In some cases products labeled 'unperfumed' are perfumed, while other products labeled 'unperfumed' on closer scrutiny of the label contain 'masking fragrance'.

Extensive research has been conducted on skin disorders from contact with fragrance chemicals. Dermatologists use 'fragrance mix' to test for skin allergy. Fragrance mix is a collection of eight compounds, largely essential oils ( [www.dermnetz.org](http://www.dermnetz.org) ). However, while most research on fragrances has focused on dermal exposure as the primary route of exposure, there is rarely any thought given to inhaled exposure and respiratory testing. Some researchers believe that fragrance molecules can be absorbed via the olfactory bulb in the nose directly into the brain. There is also an assumption that fragrance only produces a sense of odour, however, fragrance can stimulate the olfactory and trigeminal nerves causing irritation that results in sensations such as stinging, burning, prickling and tingling. This process is referred to as 'sensory irritation' and can result in neurogenic inflammation.

Many individuals with pre-existing nasal allergy such as hay fever seem to react more strongly to chemical irritants. In the vast majority of people, exposure to chemicals tends to cause irritation rather than allergy and as irritation is less responsive to treatment than allergy, avoidance of chemicals is the only effective solution to the problem.

## **Child health**

There is a serious lack of research into child environmental health. Children from infancy to adolescence are in various stages of development and are more vulnerable to chemical insults than are adults. Yet many products aimed at infants, children and adolescents are scented in spite of the lack of data on fragrances to prove safety. A recently initiated biomonitoring program in the USA has discovered measurable levels of chemicals in the human body and breast milk e.g. phthalates ([www.cdc.gov/nceh](http://www.cdc.gov/nceh)). This raises concerns for the health of breast fed infants and their future health.

## **Right to clean air and a safe environment**

The fragrance issue is the same as the tobacco smoke issue i.e. the right to wear fragrances that pollute the air and damage human health over the right to clean air and a safe environment. In the USA there are many places that post notices asking people to refrain from wearing fragrances ( <http://www.ehnca.org/ehnhompg/takheart.htm> ) e.g. University of Minnesota School of Social Work.

ASEHA would like to see the intensity and the life of fragrances reduced so they are not discernable any more than an arm's length from the user and that they degrade in a short space of time. ASEHA would also like to see a ban on fragrances as per the cigarette smoking ban.  
(Link to form letter)

## **Bibliography**

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Wallace, L et al. 1995. The identification of polar organic compounds found in consumer products and their toxicological properties. *J Expo Anal Environ Epidemiol* 5:57

## **Links**

[www.fpinva.org/](http://www.fpinva.org/)

[www.dermnetnz.org](http://www.dermnetnz.org)

<http://www.ehnca.org/ehnhompg/takheart.htm>

[www.ewg.org/reports.skindeep/](http://www.ewg.org/reports.skindeep/)

[www.cfsan.fda.gov](http://www.cfsan.fda.gov)

***Some health problems associated with fragrance exposure***

v *Anaphylaxis*

v *Allergic rhinitis*

v *Asthma and other Respiratory irritation*

v *Allergic contact dermatitis*

v *Migraine*

v *Fibromyalgia like pain*

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***Is there a connection between your chronic medical condition and Allergy, Food Intolerance or Chemical Sensitivity?***