

California Safe Cosmetics Program



Fragrance Allergens in Cosmetics or Personal Care Products

What are fragrance allergens?



Fragrance allergens are fragrance ingredients that are hazardous to people who are allergic to them. Allergic

reactions from fragrance ingredients most commonly involve the skin or respiratory system. Skin allergies often appear as itchy, red rashes--otherwise called contact dermatitis.[1] Skin allergy to fragrance ingredients can appear about a day after the skin has been exposed and frequently affects the hands, face, or underarm area.[2] Some fragrance allergens can also be asthmagens, meaning they can cause asthma in people who have never had asthma. They can also trigger asthma in people who already have asthma.[3] Asthma symptoms (wheezing, chest tightness, coughing, shortness of breath, or difficulty breathing) can start immediately following exposure or hours after exposure. Sometimes a person can suddenly develop asthma from substances they have been around for years. For people who are allergic, exposure to fragrance allergens can also result in headaches, eye irritation, runny nose, and phlegm[4]. Some of

the most common fragrance allergens in cosmetics or personal care products are linalool, limonene, citronellol, geraniol, and citral.[5]

How common are fragrance allergies?



About a third of people report negative health effects from using or being around fragranced products.[6]

Although not all those effects are caused by allergies, it is estimated that at least 20 percent of the general population have contact allergies, with fragrance being the second most common environmental allergen.[7] People of any age can develop allergies.

How do fragrance allergies develop?

These allergies develop after a susceptible person has been exposed to the allergen, such as with regular use of a product or several products that contain the allergen. Once the allergy has developed, it's a life-long condition —the immune system will always

react to that allergen. Fragrance allergens typically affect the skin. If allergens are repeatedly applied to the skin of someone who has developed an allergy, the condition can become chronic, and there can be scaling and painful cracking of the skin.[8]

Why focus on fragrance ingredients in cosmetics or personal care products?

A large majority of cosmetics or personal care products contain fragrance ingredients.[9] The average person uses between 6 and 12 personal care products daily.[10] Even a small amount of fragrance allergen in one of these many products can affect the health of people who are allergic, and these allergies are common. Though the focus of this fact sheet is fragrance allergens, fragrance ingredients may also be associated with other serious health problems, such as cancer, hormone disruption, and reproductive harm.[11]

Greater impact on workforce and the economy

Fragrance allergens also have consequences for the workforce and the economy. A multi-nation survey of over 4,000 people found that 9 percent of the population have lost workdays or lost a job in the past year due to illness from fragranced product exposure in the workplace. The estimated cost to workers annually is in the billions of dollars.[12] People who work with cosmetics for many hours a day (massage therapists, cosmetologists, hairdressers, manicurists, and other



professions commonly occupied by women) are the most highly exposed to fragrance allergens and other hazardous chemicals in cosmetics[13],[14]. Special attention should be taken to ensure these workers use fewer toxic products, have workplace controls like good ventilation, and have adequate personal protective equipment, such as gloves and long sleeves. More info for workers can be found on the [OSHA website](#).



How can I protect myself and others from fragrance allergens?

It can be hard to know if there are fragrance allergens in cosmetics by looking at the label because the ingredients can be referred to by many different names, and because fragrance ingredients are not required to be listed on labels in cosmetic products in the U.S. However, with California's Cosmetic Fragrance and Flavor Ingredient Right to Know Act, it is now possible to search to see if products contain fragrance allergens or other hazardous ingredients in the [California Safe Cosmetics Product Database](#). Of the 100,000+ products reported to contain hazardous ingredients, about 90 percent contain fragrance allergens. [15] You can also look for products advertised as "fragrance-free" to reduce exposure.

References

1. [Federal Drug Administration website: Cosmetic Ingredients](#)
2. [European Commission website: Perfume Allergies](#)
3. [California Department of Public Health website: Fragrances](#)
4. [Federal Drug Administration website: Cosmetic Allergens](#)
5. [California Safe Cosmetics Program \(CSCP\) Product Database](#)
6. Steinemann, A. International prevalence of fragrance sensitivity. *Air Qual Atmos Health* 12, 891–897 (2019).
7. Alinaghi F, Bennike NH, Egeberg A, et. al. Prevalence of contact allergy in the general population: A systematic review and meta-analysis. *Contact Dermatitis*. 2019 Feb;80(2):77-85.
8. [European Commission website: Skin Problems](#)
9. November 2022 - [Johnson PI, Favela K, Jarin J, Le A, Clark P, Fu L, Gillis A, Morga N, Nguyen C, Harley K. Chemicals of concern in personal care products used by women of color in three communities of California. J Expo Sci Environ Epidemiol \(2022\). <https://doi.org/10.1038/s41370-022-00485-y>](#)
10. [Federal Drug Administration website: Modernization Cosmetic Regulation Act](#)
11. [Hazardous Ingredients in Personal Care Products - Data Reported to the California Safe Cosmetics Program 2009-2022 \(PDF, 2.5MB\)](#)
12. [Uter W, Schnuch A, Geier J, et al. Association between occupation and contact allergy to the fragrance mix: a multifactorial analysis of national surveillance data. Occupational and Environmental Medicine 2001;58:392-398.](#)
13. [Iorizzo M, Parente G, Vincenzi C, Pazzaglia M, Tosti A. Allergic contact dermatitis in hairdressers: frequency and source of sensitisation. Eur J Dermatol. 2002 Mar-Apr;12\(2\):179-82. PMID: 11872418.](#)



For more information, contact the CDPH Occupational Health Branch at occhealth@cdph.ca.gov. For the Cosmetics Safe Program latest updates, use the QR code to sign up for the mailing list.

December 2024 • © 2024, California Department of Public Health

