

# Cosmetics and your health

Most people use a range of cosmetics every day. We are so familiar with these products it is easy to forget they contain chemicals that can be harmful. Accidental ingestion, particularly by children, is the most serious health risk associated with using cosmetics. For this reason, cosmetics, like all household chemicals, should always be **KEPT OUT OF THE REACH OF CHILDREN**. Sensitive people, like asthmatics or those with multiple chemical sensitivities, can be affected after inhaling cosmetics. Severe and potentially life-threatening allergic reactions (anaphylaxis) to cosmetics are rare. However, some serious reactions to hair dyes have been reported, with a smaller number of reactions linked to fragrances and essential oils. The most common health effect associated with using cosmetics is contact dermatitis ('eczema' is a general term for inflamed skin but doesn't describe the cause). Irritant contact dermatitis (skin irritation) is seen more frequently than allergic contact dermatitis.

## Which chemicals are found in cosmetics?

Cosmetics usually contain a combination of some of the following ingredients: water, emulsifiers (to mix oil and water), preservatives (to prevent growth of bacteria and mould or prevent degradation by light), thickeners (to change consistency), colours, fragrances, pH stabilisers (to make the product compatible with the body's acidity), and various active ingredients to carry out the product's intended purpose.

Even simple cosmetics, like soap, may contain a mixture of fragrances, detergents, colours and essential oils that can affect sensitive skin.

## How might my skin be affected?

**Irritant Contact Dermatitis** is the most common type of contact dermatitis and may be acute or chronic. Acute irritant contact dermatitis is caused by a harsh substance directly contacting and damaging the skin. The more common form is called chronic or cumulative. Chronic irritant dermatitis can often affect hairdressers and nurses, who have intermittently wet hands throughout the day, and use soap or skin cleansers frequently. This can lead to dry and cracked skin that is more susceptible to injury.

Irritant contact dermatitis usually starts as patches of scaly, reddened, itchy or stinging skin; particularly where the skin is dry. It typically starts between the fingers.

Blisters can develop that may ooze, especially if scratched. These effects usually occur only at the site of contact with the irritating substance.

Strong irritants, like hair removal creams or some creams containing glycolic acids, can cause a reaction almost immediately or within hours of application. Weaker irritants, like soap, may take days or weeks of repeated exposure before symptoms develop. Common irritants include some shampoos, soaps, eye shadows, mascaras, make-up removers, antiperspirants and moisturisers.

**Allergic Contact Dermatitis** is caused by your body's immune system over-reacting to a chemical (allergen) that is usually harmless to most people. Allergic responses only occur after your immune system has been sensitised to an allergen (that is, your body recognises the allergen from a previous exposure). The more contact you have with the allergen the greater chance you have of becoming sensitised. Factors that have a role in determining whether allergic contact dermatitis develops are: the concentration of the chemical, whether your skin is already damaged or inflamed, and the nature of the allergen. Some chemicals are strong allergens (like hair dye), while others have almost no potential to cause allergic reactions (like petroleum jelly). Genetics may also have a role, but it is generally thought to be minor.



Allergic contact dermatitis typically appears as a severely itchy, tingling, red and hot skin rash. Blisters may develop. It is usually not possible for clinicians to tell allergic and irritant contact dermatitis apart. A less common form of allergic rash is hive-like raised bumps (urticaria), which can occur in groups or join together to form large irregular swellings. An allergic skin rash, unlike irritant dermatitis, can spread beyond the site where the cosmetic was applied. Symptoms are usually delayed, occurring 12-96 hours after exposure and possibly getting worse after each application of the allergen.

Sometimes an allergy can develop after years of using the same product because sensitisation may take time to develop, or a manufacturer may change ingredients in the product.

Common cosmetic allergens include: fragrances, preservatives, and paraphenylenediamine (PPD)—a permanent hair dye. In recent years, many people have become allergic to PPD after having so-called 'henna' tattoos. These are temporary tattoos, often applied in holiday destinations like Bali. However, rather than being henna which is safe, the tattoos contain PPD. When PPD is applied in a concentrated form it can produce a severe delayed allergic reaction appearing initially at the site of the tattoo. After this reaction, people will be severely allergic to all permanent hair dyes and eyelash and eyebrow tints. This can be devastating, particularly for hairdressers and beauty therapists if they are no longer able to work.

Working out which substance triggers allergic dermatitis is difficult and often requires specialist help from a dermatologist (whereas allergists investigate a different form of allergy that is involved in asthma, hay fever and food allergies). It is difficult because there are a large number of potential allergens and it is not always the active ingredient that

causes the problem. In addition, symptoms may show up some distance from where the cosmetic was applied. A classic example of this occurs when nail polish causes eyelid reactions; the eyelid is the most sensitive skin on the body!

Cosmetics can also have other effects on skin. For example, exfoliants and skin peels leave new skin underneath that is temporarily more sensitive to sunlight. Tanning solutions contain active ingredients that cause a chemical reaction in dead skin cells to change skin colour, but they do not provide any protection from the sun.

### What should I do if I react to a cosmetic?

1. Stop using the cosmetic immediately and wash off with copious amounts of water; but, keep it nearby so you can provide the name and ingredients to a medical professional if required.
2. If the product has been accidentally consumed by a child and they are showing symptoms; this is a medical emergency and you must call **000 (112 from mobile phones)**. If the child doesn't have symptoms, call the **Poisons Information Service ph. 13 1126** for advice.

Remember to **KEEP COSMETICS OUT OF THE REACH OF CHILDREN.**

3. If someone has collapsed or is having trouble breathing they may be having an anaphylactic reaction. This is a medical emergency and you must call **000 (112 from mobile phones)**.
4. Skin reactions usually clear up after a few days, but if your symptoms are severe or prolonged, contact your doctor. Avoid heat which may make the condition itchier. Cool substances, like ice packs, can be soothing. Medical treatment from your doctor may include:
  - > anti-inflammatory creams to control itching, swelling and redness
  - > oral prescription medications like



corticosteroids, antihistamines or antibiotics (if blistered skin becomes infected)

> referral to a dermatologist.

5. Call the **Adverse Medicines Event Line ph 1300 134 237**. This is a national phone line where consumers can report undesirable health effects from using cosmetics and toiletries. It is important to report your experience so information about the same product (or similar ones) can be gathered. Government agencies responsible for controlling cosmetic ingredients and labels can then be made aware of potential public health risks.
6. Contact the manufacturer to advise them of your reaction. If they receive a number of calls about a product they are more likely to initiate an investigation.

### Where can I get more information?

Cosmetics: Tips

[www.health.sa.gov.au/pehs/PDF-files/ph-factsheet-cosmetics-tips.pdf](http://www.health.sa.gov.au/pehs/PDF-files/ph-factsheet-cosmetics-tips.pdf)

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