

Latex allergy

What is latex?

Latex, or natural rubber latex, is derived from the sap of the rubber tree, *Hevea brasiliensis*. After collection, latex goes through a complex manufacturing process during which chemicals such as accelerators and preservatives are added. The final product is a durable, flexible material consisting of latex proteins and added chemicals.

Latex is most commonly used to manufacture disposable latex gloves and is widely used in the following industries to protect workers from the risk of infection, particularly when performing tasks that involve contact with blood and body substances:

- health care
- veterinary care
- emergency services
- funeral industry
- cleaning services
- beauty and hairdressing
- early childhood education and care
- body piercing
- tattooing
- law enforcement
- hospitality.

Types of latex allergies

Latex allergy is diagnosed by a doctor using a number of tests including medical history, physical examination and allergy testing such as skin prick testing and blood tests.

Latex allergy is a catch-all term to describe three distinct conditions:

1. Irritant contact dermatitis

Irritant contact dermatitis is a non-allergic skin rash which appears several days after

exposure on areas of the skin that are in direct contact with latex products.

It is the most common presentation of latex allergy and is reversible.

It is caused by:

- moisture accumulation from incomplete hand drying and sweating during prolonged glove use
- detergents, soaps and antiseptics which are not completely rinsed off the skin after hand washing and which become trapped under the glove
- skin irritation from the cornstarch which is present in powdered gloves
- incorrect selection of latex gloves for use with chemicals that can permeate through the glove material.

2. Allergic contact dermatitis

Allergic **contact** dermatitis (also known as type IV or delayed hypersensitivity reaction, T-cell mediated reaction or rubber allergy) is an allergic skin rash which occurs up to 48 hours after exposure to latex products.

Repeated exposure may cause the skin condition to extend beyond the area of contact. The skin rash resolves once exposure ceases; however symptoms will recur with subsequent exposure.

It is most commonly caused by sensitivity (allergy) to the chemicals used in the manufacture of latex products, such as thiurams and carbamates.

3. Immediate allergic reaction

Immediate allergic reaction (also known as type 1 or immediate hypersensitivity reaction or immunoglobulin E (Ig E) mediated

reaction) is the least common form of latex allergy; however it is the most dangerous because it can be life threatening.

It is caused by sensitivity to latex proteins and occurs within minutes to an hour after exposure.

The condition includes:

- local reaction at the site of contact (e.g. hives, redness and itching)
- generalised reaction (e.g. widespread hives, swelling of the face, sneezing, itchy eyes, stuffy nose and wheezing)
- anaphylaxis, which causes breathing difficulties and collapse. This is a medical emergency.

The symptoms of an immediate allergic reaction can be treated but symptoms will recur and may escalate with subsequent exposure.

Irritant and allergic contact dermatitis can increase the risk of a person developing an immediate allergic reaction.

How are people exposed to latex?

Respiratory exposure

Cornstarch powder is sometimes added to disposable latex gloves during manufacture to make them easier to put on. Latex proteins leach into the powder and become airborne when the gloves are removed.

Inhaling the powder can cause respiratory sensitisation in susceptible people.

Skin exposure

Skin exposure can occur from handling latex products and wearing latex gloves. During glove use, chemicals added during manufacture and latex proteins can leach out of the glove material causing skin sensitisation in susceptible people.

Skin exposure can also occur from touching surfaces that are contaminated with powder from powdered latex gloves.

Individual worker risk factors

Anyone can develop latex allergy, however people with the following risk factors are at greater risk of acquiring the condition:

- frequent and prolonged exposure to latex products
- food allergies (e.g. bananas, avocado, kiwi fruit, papaya and chestnuts)

- atopy (a tendency towards allergy such as asthma, hay fever or eczema)
- prior or current dermatitis
- previous multiple surgical procedures involving repeated exposure to medical latex devices.

Ways to prevent latex allergy

A person conducting a business or undertaking (PCBU) must ensure, so far as is reasonably practicable, the health and safety of themselves, workers and others at risk of exposure to latex. Latex allergy risks must be eliminated so far as is reasonably practicable or if this is not reasonably practicable the risk must be minimised so far as is reasonably practicable.

Latex allergy risks can be managed by conducting a risk assessment, implementing suitable control measures, and maintaining and reviewing the control measures. For more information on risk management refer to [How to Manage Work Health and Safety Risks Code of Practice 2011](#).

Control measures may include:

- selecting suitable gloves, for example:
- not using latex gloves for tasks that do not involve an infection risk (e.g. catering, maintenance and routine housekeeping)
- using alternative gloves where appropriate (e.g. vinyl or nitrile)
- where latex gloves are used, selecting low protein powder-free latex gloves; this is an important way to prevent latex allergy
- using water-based hand care products, as oil-based products can cause latex deterioration and leaching of latex proteins
- changing work processes or the physical environment for example:
 - redesigning tasks so that latex gloves are not worn for prolonged periods
 - positioning hand washing facilities close to where latex gloves are worn to promote hand hygiene after removing the gloves
- applying administrative arrangements for example:
 - developing and implementing latex policies and procedures to reduce the risk of latex allergy occurring in the workplace, and provide a safe workplace for sensitised people

- identifying all products at the workplace which contain latex
- providing information, instruction and training about:
 - o latex allergy and how to protect against it
 - o hand hygiene and skin care
 - o reporting signs of latex allergy
- identifying workers in high risk workplaces who have latex allergy, or who are at increased risk of developing an allergy (this could include a suitably qualified person assessing a worker's risk before commencing work using a latex allergy questionnaire)
- ongoing monitoring of workers' health for signs and symptoms of latex allergy
- ensuring that workers who develop signs and symptoms of latex allergy seek medical advice (If a worker is diagnosed with an immediate allergic reaction, review the work environment to ensure that it is latex-safe and seek specialist advice as needed)
- identifying patients in healthcare settings who have a latex sensitivity and ensuring that they can be treated in a latex-safe environment with access to latex-free emergency equipment
- if a worker is at risk of anaphylaxis and requires emergency medication (such as an Epi Pen), ensuring that key people are trained in its use.

Choosing suitable gloves

PCBUs should select and provide workers with suitable gloves based on:

- a risk assessment to determine the most appropriate glove material for the task
- specialist advice, such as from an affected worker's doctor.

Where sweat is contributing to latex allergy, consider providing cotton glove liners to wear under the latex glove. The finger tips of the cotton gloves can be removed where greater dexterity is required. Cotton gloves should be washed in a mild detergent after use and rinsed well to prevent residual detergent accumulating under the glove.

For tasks involving an infection risk, select low protein powder-free latex gloves or alternative products such as nitrile gloves. Seek specialist advice on glove selection if a worker is diagnosed as having a latex allergy. For tasks involving chemical exposure, refer to the chemical's [safety data sheet \(SDS\)](#) for guidance on suitable glove selection.

More information

For more information about latex allergy or any other workplace health and safety issue, visit www.worksafe.qld.gov.au or call WHS Infoline on 1300 369 915.