

# LATEX ALLERGY IN THE WORKPLACE

## WHAT IS LATEX ALLERGY?

Latex allergy is a hypersensitivity reaction to certain proteins in natural rubber latex (NRL). It is characterised by the presence of latex specific IgE antibodies. NRL is made from liquid from the rubber tree *Hevea brasiliensis*. Sensitisation occurs through recurrent skin contact and also by inhaling aerosolised NRL proteins. A variety of medical devices and consumer products contain NRL. One of the most commonly used NRL products is hand gloves. Other adverse reactions associated with the use of NRL gloves are irritant and allergic contact dermatitis.



## WHO IS AT RISK OF DEVELOPING LATEX ALLERGY?

High-risk groups for developing latex allergies are health care workers because of frequent use of latex gloves, rubber industry workers, atopic individuals and spina bifida patients. Workers who use gloves less frequently such as hairdressers, food handlers, cleaning staff, forensic workers, fire fighters, factory workers and mortuary workers are also at risk.

## EXAMPLES OF PRODUCTS CONTAINING LATEX

### PERSONAL PROTECTIVE EQUIPMENT

Gloves, surgical masks, goggles, rubber aprons and boots.

### HOSPITAL EQUIPMENT AND SUPPLIES

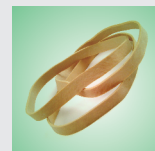
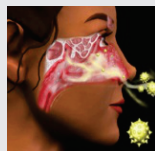
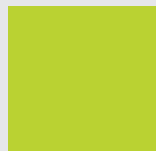
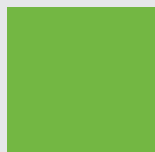
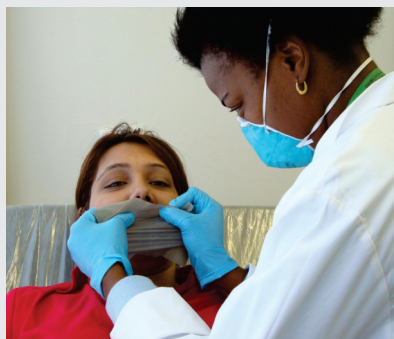
Blood pressure cuffs, stethoscopes, disposable gloves, endotracheal tubes, tourniquets, intravenous tubing, syringes, electrode pads, wound drains, injection ports, dental dams, catheters, masks, and vial tops.

### OFFICE SUPPLIES

Rubber bands and erasers.

### DOMESTIC EXPOSURE

Balloons, shoe soles, hot water bottles, elastic bands, baby dummies, plasters, condoms, toys, household gloves



## Reactions and symptoms associated with the use of NRL

Types of reactions	Causative agent	Mechanism	Signs and Symptoms
Latex allergy	Latex proteins	IgE mediated hypersensitivity to latex protein	Urticaria, angioedema, rhinitis, conjunctivitis asthma, rarely anaphylactic shock or death
Allergic contact dermatitis	Chemicals used in latex manufacturing such as mercaptobenzothiazole, thiurams and carbomates	Cell mediated type hypersensitivity reaction	Swelling, redness, itching, cracking and thickening of skin in exposed areas
Irritant contact dermatitis	Frequent hand washing, insufficient rinsing, scrubs, antiseptics, glove occlusion, glove powder	Irritation	Dry, red, scaly, irritated, itchy, painful skin in exposed areas

### OTHER SOURCES OF LATEX EXPOSURE

- Aerosolised cornstarch powder coating latex gloves acts as a carrier for latex protein and is the most common source of exposure.
- Airborne latex particles deposited on surfaces may be resuspended during human activity and air movement, creating a secondary source of exposure.

### PREVENTION OF LATEX ALLERGY

- Prevent contamination of air and surfaces by correctly donning and doffing the gloves.
- Use of non latex gloves and avoidance of all other latex containing products.
- If latex gloves are used they must be powder-free and low in protein and chemical allergens.
- Wear cotton liners with latex gloves for wet work.
- Proper cleaning and drying of hands before putting on gloves.
- Use a pH-balanced soap and avoid hand contact with damaging chemicals.
- Use only non-oil-based hand care products when using gloves.
- Installation of proper ventilation system in the working area.
- Contaminated surfaces should be cleaned with a high efficiency particulate air (HEPA) filtered vacuum and wiped with isopropyl alcohol.
- Staff should be trained on the correct handling, storage and disposal of latex products.

### WHAT TO DO IF YOU FIND OUT YOU ARE ALLERGIC TO LATEX

- Report the condition immediately to the employer.
- Complete avoidance of contaminated areas.
- Replacing latex-containing products with alternative products.
- Increase ventilation in the room.
- Use non-latex personal protective equipment (e.g. face masks or respirators) to minimise inhalation of allergens.
- Always wear a medic alert bracelet.
- Avoid foods that cross react to latex (bananas, kiwi, chestnuts, avocados).
- Carry auto-injectible epinephrine, non-latex gloves and emergency medical instructions.
- Avoid other sources of latex exposure.
- Inform healthcare providers that you have a latex allergy

### DIAGNOSIS OF LATEX ALLERGY

A diagnosis is made by obtaining the medical history, performing a physical examination and tests.

The NIOH offers the following latex allergy tests:

#### RESPIRATORY ALLERGY TESTS

Blood Test (serum specific IgE) and skin prick testing.

#### SKIN ALLERGY TESTS (CONTACT DERMATITIS)

Patch testing.

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