
Policy Statement
The University of Dundee recognises that exposure to latex occurs through use of many products used in normal daily activities but that users of disposable latex gloves face significant exposure. Therefore, the University permits the use of latex gloves only when there is a documented justification for using them. The University is committed to providing full information on latex allergy to all users of latex gloves.

Arrangements
Dean/Director are responsible for ensuring that:

- Latex gloves are not used unless a written risk assessment and justification for their use has been approved by him/her.
- Any latex gloves that are used must be low in protein and powder free.
- A sufficient range of synthetic non-latex disposable gloves are provided suitable for the activities in the School/Support Service.
- All their staff are informed of this revised policy.

Staff who need to use latex gloves following risk assessment must:

- Read the Guidance Note on Latex Allergy (below).
- Wear gloves only when necessary.
- Not use barrier creams or lotions unless they have been shown to reduce exposure to latex and maintain glove barrier protection.
- Wash their hands after wearing gloves.
- Be aware of the symptoms of latex allergy: skin rashes, hives, flushing, itching; nasal, eye or sinus symptoms; asthma; and shock (possibly fatal).
- If they develop symptoms of latex allergy they should cease to use latex, and inform their supervisor and the Occupational Health Service promptly.
Guidance on Latex Allergy

Background
Staff and students who use latex containing products such as disposable gloves are at risk of developing an allergic response to latex. Latex allergy is a major issue facing the University. The Health and Safety Executive has reported a steady increase in the number of reported cases of latex allergy during the 1990s. American Food and Drug Administration statistics suggest that between 5 and 20% of health care workers have developed latex allergy of some sort, often due to repeated exposure. This allergic response to latex can, in rare cases, result in anaphylactic shock, a potentially life-threatening condition.

What is latex and how can it harm your health?
Natural latex is a liquid collected by ‘tapping’ from the rubber tree *Hevea brasiliensis*. Latex contains more than 200 proteins and peptides, about 50 of these have the potential to cause an allergic reaction in humans. During the manufacturing process sulphur and other organic agents (accelerators) are added to provide strength and durability to the rubber. Some of these may also be responsible for causing an allergic response. The amount of latex exposure required to produce an allergic response is unknown.

Allergic reactions caused by the components of latex are:

- Irritation (Irritant Contact Dermatitis)
  This is the most common reaction to latex products. Symptoms include dry, itchy, irritated areas on the skin, usually the hands caused by wearing gloves. Once the irritant agent has been identified and contact with it ceases, the symptoms disappear. The reaction can also result from repeated hand washing and drying, incomplete hand drying, use of cleaners, and exposure to powders added to the gloves. Irritant contact dermatitis is not a true allergy.

- Allergic Contact Dermatitis (Delayed Hypersensitivity, or Type IV allergic reaction)
  Symptoms include dermatitis and itching which may progress to oozing red blisters, usually confined to the hands or arms. The rash begins from 10-24hrs after
exposure and may progress over the next 72hrs. Such a reaction results from allergy to the chemical accelerating agents added during the manufacturing process.

- Latex Allergy (Immediate Hypersensitivity, or Type I allergic reaction)
Reactions of this type nearly always begin within minutes of exposure to latex, but can occur hours later. Symptoms of mild reactions involve a localised or generalised rash: more severe reactions may involve rhinitis (inflammation of the mucous membranes in the nose); conjunctivitis (red and swollen eyes with discharge); asthma (wheezing, difficulty breathing, cough). Rarely, anaphylactic shock may occur, but such a life-threatening condition is seldom the first sign of latex allergy.

The use of disposable powdered latex gloves poses an additional risk both to the user and to sensitised people in the vicinity. Powder is often used in gloves to facilitate donning and removal of the gloves. When powdered gloves are removed the powder (often cornstarch) containing allergenic latex proteins is scattered into the air. Therefore, a sensitised person can be exposed to latex allergens by being close to someone who is removing gloves.

Who is at risk?
- Individuals with ongoing exposure to latex are at risk of developing latex allergy. Within the University exposure to latex is most likely to occur within laboratories where disposable latex gloves might be used routinely.
- Individuals with a tendency to multiple allergic reactions (atopic individuals) are at increased risk for developing latex allergy.
- Individuals with allergies to certain foods, especially avocado, potato, banana, tomato, chestnuts, kiwi fruit, and papaya, have an increased risk of developing latex allergy, as these are all associated allergies.
- Individuals with spina bifida are also at increased risk of latex allergy.

Use of disposable gloves
Disposable gloves are used in laboratory situations for one of two purposes:
1. To protect the wearer from contact with potentially damaging chemical or biological agents. For chemical protection selecting the appropriate glove material is vital to ensure adequate protection: no one type of glove material protects against all chemicals. Always consult the glove manufacturer’s specifications and
recommendations before use. A list of glove manufacturer’s websites is given in Appendix 1.

2. To protect sensitive work (eg biological material or electrical components) from contamination by the wearer (eg sweat, skin cells).

Latex gloves offer the best protection for a few chemical applications (eg ketones such as acetone). In these cases, powder-free low-protein latex gloves can be used. For other applications alternative types of disposable gloves should be available eg PVC and nitrile. Where latex gloves are used to protect against exposure to ketones, a risk assessment should be carried out to identify whether there are any other ways of reducing the exposure. If gloves are being used solely to protect in the event of an accidental spill, gloves of alternative synthetic materials which offer some degree of protection should be substituted for the latex. Standard Operating Procedure for the work should be amended to instruct the wearer to remove contaminated gloves quickly once contamination has occurred.

All types of gloves become permeable to chemicals and solvents, either if they are in frequent contact or immersed for long periods. Therefore, gloves should be changed frequently when prolonged contact with substances is likely to occur.

The use of oil-based hand creams or lotions when wearing gloves is not recommended, as these can cause glove deterioration. However, PRE-GLOVE, a commercially available barrier cream, is claimed to reduce latex-related problems and maintain barrier protection.

Gloves should be worn only when necessary, and removed as soon as possible. After removing gloves, hands should always be washed.

Appendix 1. Glove manufacturers
1. Best Manufacturing Company (http://www.bestglove.com/) has a chemical resistance guide for gloves.
2. Marigold (http://www.marigoldindustrial.com/GB/index.html) has a chemical resistance chart located by following links in this site.
3. Safeskin Corporation (http://www.des.umd.edu/ls/safeskin.html) has a chemical resistance and barrier guide comparing nitrile and latex gloves.

4. Superglove (http://industrial.superglove.net/) has a guide to their gloves and performance.