Policy and Code of Practice for the Prevention of Latex Allergy

Guidance for University Departments and Functions

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Safety Services Office

Issued with the approval of the Biological and Chemical Hazards Sub-Committee
POLICY AND CODE OF PRACTICE FOR THE PREVENTION OF LATEX ALLERGY

Introduction ........................................................................................................................................... 2

1. Scope of this policy .......................................................................................................................... 3

2. Reduction of exposure .................................................................................................................... 3
   (a) Curbing inappropriate use ........................................................................................................... 3
   (b) Selection of low-allergen latex gloves ...................................................................................... 4
   (c) Glove liners ............................................................................................................................. 4
   (d) Hand Creams ........................................................................................................................... 4

3. Training and information .................................................................................................................. 4

4. Purchasing ....................................................................................................................................... 4

5. Action on discovery of suspected latex allergy ............................................................................... 4

6. Responsibilities ............................................................................................................................... 5
   (a) Heads of Department ................................................................................................................ 5
   (b) Supervisors, Chief Technicians and research group leaders ................................................. 5
   (c) The Safety Services Office ................................................................................................... 5
   (d) The Occupational Health Service ........................................................................................ 5

Further information ............................................................................................................................ 5
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Introduction

Latex allergy is an increasing problem in healthcare and laboratory workers as a result of the greatly increased use of latex gloves in recent years. This increase has been largely due to the need for protection against blood-borne viruses, and the need to protect work from contamination e.g. in molecular biology laboratories.

Latex is a milky fluid produced by many plant species. The latex referred to here is natural rubber latex (NRL) from the sap of the *Hevea brasiliensis* rubber tree found in Africa and South East Asia. This latex is used to manufacture a vast range of goods from car tyres and toys to medical devices. To date, fourteen proteins from latex have been registered as allergens with the WHO. Latex gloves also contain potentially allergenic chemical additives required during processing and to prolong shelf life. In addition, they may be powdered with modified maize starch, which adsorbs allergens and carries them into the air. Powdered latex gloves therefore constitute a greater hazard.

Health problems associated with the use of latex gloves are:

- **Irritant contact dermatitis**: a non-immune reaction characterised by dry, crusty, hard bumps and cracks appearing on the skin 48 to 72 hours after contact. This is not an allergic condition. It can be associated with soaps and detergents, glove powders and the occlusion caused by glove wear. Only the area of skin that has been in contact with the glove is affected.

- **Delayed hypersensitivity or allergic contact dermatitis**: a type IV cell-mediated allergic reaction typically caused by chemical accelerators (e.g. thiurams) used during the glove manufacturing process. Symptoms include a red rash, bumps, sores and cracks and occur from several hours to several days after contact. The affected area of skin may extend beyond the area in contact with the glove.

- **Immediate sensitivity**: a type I IgE-mediated allergic reaction to one or more of the latex proteins. Symptoms range from immediate contact urticaria (weal and flare reaction, itchy rash and eczema) to runny eyes and nose, breathing difficulties, swelling of eyelids, lips and face and life-threatening anaphylaxis. On contact with any natural rubber latex product, sensitised individuals are at risk of severe reactions, comparable to those with nut allergy. Powder from latex gloves presents a particular hazard, as where these are used there is a high risk of allergen inhalation.

The majority of hand rashes among health care and laboratory workers are irritant, not allergic. The incidence of allergy is difficult to quantify but current estimates are that it occurs in about 8-12% of those regularly exposed. Atopic individuals, those with spina bifida and those with allergies to certain fruits (such as avocados, tomatoes,
bananas, chestnuts and kiwi fruits) are at increased risk. Sensitised individuals have to avoid any contact with latex products, not only at work but in their daily lives – even balloons used as decorations at a party can trigger symptoms. An individual with Type I allergy to latex who undergoes medical or surgical procedures is at serious risk of life-threatening anaphylaxis if contact with latex occurs (there are thousands of medical devices which contain NRL apart from gloves.) Several such cases have been reported in the literature. Between 1988 and 1992 the Food and Drugs Administration in the USA received reports of more than 1,000 systemic allergic reactions to latex, 15 of which were fatal. In one American study, out of 350 employees of Mayo Medical Centre, Rochester whose clinical histories and laboratory findings indicated sensitisation to latex, 77% reported contact urticaria, over 50% experienced allergic rhinitis, conjunctivitis or asthma, and 16 episodes of latex-induced anaphylaxis were documented in 12 employees.

In staff that are allergic/sensitised to latex, taking latex avoidance measures results in cessation or diminution of symptoms. Markers of sensitisation decrease regardless of whether co-workers continue to use powder-free low protein latex or latex-free gloves. However, in highly sensitive latex-allergic staff where a significant risk of reaction remains that cannot be adequately controlled, switching to latex-free gloves as a group, where practicable, will help.

Further information regarding latex allergies and their management can be found on the NHS at work website (http://www.nhshealthatwork.co.uk/latex-allergy.asp) and information about guidance on glove selection can be found in the University of Leicester document “Glove selection guide”, available from the Safety Services Office.

Latex is a substance hazardous to health under the Control of Substances Hazardous to Health Regulations 1999; therefore the University is obliged to take steps to control these risks to its staff. The following is the University’s policy on prevention of latex allergy.

1. **Scope of this policy**
   This policy covers the **non-clinical** use of protective gloves in all Departments of the University, including those sited within the University Hospitals of Leicester. Use of gloves in clinical settings, is covered by the Leicester General Hospitals NHS Trust Latex Allergy Policy and Guidance.

2. **Reduction of exposure**
   (a) **Curbing inappropriate use**
   For many jobs disposable latex gloves are not the best choice. Indiscriminate use of latex gloves must be curbed. All laboratory staff must have access to the University of Leicester document “Glove selection guide”. Supervisors and research group leaders must encourage staff to choose non-latex gloves where appropriate. Suitable alternatives in many cases include vinyl and nitrile. These must be made available when their use is indicated.
   Non-Departmental staff (e.g. cleaners) must not be allowed to use laboratory stocks of gloves.
(b) Selection of low-allergen latex gloves
   i. Powdered latex gloves will not be used.
   ii. Where the use of latex gloves is indicated (e.g. when human blood or other
tissues are being handled), non-powdered gloves with a low extractable
protein content (less than 50 micrograms/gram) must be used. Gloves must be
marked to BS EN455-3:2006

(c) Glove liners
   Glove liners (e.g. cotton or nylon) should be made available to staff on request.

(d) Hand Creams
   The prior use of hand creams cannot be recommended in people who are wearing
powder free low protein latex gloves.

3. Training and information
   The problem of latex allergy must be discussed with new staff during induction
training. Staff should be asked about any previous history of latex allergy, any other
allergy, or any skin problems especially if associated with glove use. If there are any
grounds for suspicion of latex allergy the member of staff must be referred to the
Occupational Health Service for clinical evaluation.
   Existing staff must be informed about the risks. Copies of the HSE leaflet “Latex and
You” must be kept in each Department and must be available for staff to read.
   All staff must be told to keep vigilant for signs of sensitisation, such as asthma or the
sudden appearance of rashes on the hands or forearms.

4. Purchasing
   • Powdered latex gloves will not be kept in bulk stores.
   • Stocks of non-latex gloves, such as nitrile and PVC, must be kept.
   • Before purchasing non-powdered latex gloves, the extractable protein content
of the gloves must be ascertained in writing from the supplier and only those
with less than 50 µg/g must be purchased. The Safety Services Office can
assist.

5. Action on discovery of suspected latex allergy
   If actual or possible latex allergy presents, the staff member must discontinue using
latex gloves immediately and must be referred to the Occupational Health Service.
The Safety Services Office must be informed immediately.
   If the Occupational Health Physician considers that the patient may be sensitised to
latex, allergy testing must be carried out. If confirmed, the case is reportable under the
Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 1995.
   Risk assessments must be re-evaluated and the use of non-latex gloves must be
considered.
   If the person proves to be highly sensitive, switching to non-latex gloves as a
department must be considered.
6. **Responsibilities**

(a) **Heads of Department**
   
i. have overall responsibility for enacting this Policy in their Departments
   
   ii. must ensure that sufficient time and resources (such as induction training time) are allocated to do so.

(b) **Supervisors, Chief Technicians and research group leaders**
   
i. will ensure that all staff who report to them, or whose work they direct or control, are sufficiently informed to make the correct choice of protective gloves.
   
   ii. must ensure that all workers who report to them, or whose work they direct or control, keep vigilant for any kind of health problem associated with the use of protective gloves.

   iii. must report any reported health problem associated with the use of protective gloves to the Safety Services Office and to their Head of Department.

(c) **The Safety Services Office**
   
i. will make available up-to-date information on latex allergy.
   
   ii. will keep records of any reported health problem associated with the use of protective gloves.

   iii. will report confirmed cases of latex allergy to HSE under the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 1995.

   iv. will give advice to any member of staff on request.

(d) **The Occupational Health Service**
   
i. based on clinical judgement, will arrange for latex allergy testing of patients referred with suspected latex allergy.

   ii. may, at their discretion, report a confirmed case to the MDA as an Adverse Incident.

   iii. All members of staff

   iv. will abide by Departmental procedures laid down to enact this Policy.

   v. will keep vigilant for signs of sensitisation or irritation, and report any symptoms immediately.

**Further information**


(http://www.nhshealthatwork.co.uk/images/library/files/Clinical%20excellence/Latex_allergy_full_guidelines.pdf)

(http://www.nhshealthatwork.co.uk/images/library/files/Clinical%20excellence/Latex_allergy_hc_professionals_leaflet.pdf)


BS EN 455-3: Medical gloves for single use-Part 3: Requirements and testing for biological evaluation.

Glove selection guide: (https://swww2.le.ac.uk/offices/safety-services/documents/pdfs/glove-guide-0910.pdf)