



Feidhmeannacht na Seirbhíse Sláinte
Health Service Executive

Policy on the Prevention and Management of Latex Allergy

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Signature Sheet

I have read, understood and agree to adhere to the attached Policy and Guidelines:

Print Name	Signature	Area of Work	Date

1.0 Policy Statement

1.1 General Policy

It is the policy of the HSE to:

- 1.1.1 Ensure, as far as is reasonably practicable, the safety, health and welfare of its employees and others who may be affected by its work activities.
- 1.1.2 Reduce, to the lowest level reasonably practicable, the exposure of staff and patients to Natural Rubber Latex (NRL) and provide articles that are safe and without risk to health.
- 1.1.3 Reduce, as far as is reasonably practicable, the risk of sensitised individuals being exposed to NRL.
- 1.1.4 Make appropriate health surveillance available to employees exposed to NRL.
- 1.1.5 Provide necessary information and training.
- 1.1.6 Record and report as appropriate all incidences of allergy.

1.2 Risk Control Policies

In order to minimise the risks from NRL:

- 1.2.1 Risk assessments are to be undertaken to ensure that the exposure of staff and patients to NRL is avoided where reasonably practicable, and adequately controlled in all other circumstances.
- 1.2.2 Where available, latex free products shall be used, so far as is reasonably practicable.
- 1.2.3 Where it is not practicable to use latex free products, the HSE recommends that only low protein (less than 50ug/mg) latex powder free gloves (or approved synthetic equivalent) should be used in the Health Service Executive. *Powdered* latex gloves shall be phased out of use.
- 1.2.4 Staff who are exposed to NRL will be provided with information on the following (See Appendix 6):
 - 1.2.4.1 The risk of latex allergy.
 - 1.2.4.2 Recognising the symptoms of an allergic reaction.
 - 1.2.4.3 Reporting the experience of symptoms to enable further investigation.
 - 1.2.4.4 Obtaining advice on protection.
- 1.2.5 HSE induction processes shall examine the potential for NRL allergy or situations where there is a significant risk of allergy development.
- 1.2.6 Employees who develop an NRL allergy are to be managed in such a way as to minimise the risk of ill health effects (See Appendices 2, 3, 4 and 6).
- 1.2.7 Monitoring and review arrangements are to be established to ensure that HSE's programme for managing latex allergy is effective.

1.3 Disclaimer

This document identifies products/product types solely for ease of reference. This should not be construed as product promotion on behalf of the HSE. The HSE accepts no liability from suppliers in this regard.

2.0 Purpose

2.1 Introduction

NRL has many applications in the healthcare setting such as disposable gloves, medical devices, equipment and clothing (See Appendix 7).

It is recognised that exposure to NRL may lead to the development of an allergy (see Appendix 6), which is associated with a range of reactions to the substance including skin rashes (allergic contact dermatitis), local or generalised urticaria (“hives”), ‘hay-fever’ like symptoms (e.g. rhinitis and conjunctivitis) and asthma. In rare cases contact may lead to potentially fatal anaphylaxis. Contact with NRL may be either direct (skin contact) or indirect (exposure to airborne particles).

Allergy to NRL may be an issue for HSE staff who could be exposed to NRL during the course of their work, and for patients who may be exposed during treatment. The risk of developing NRL allergy is associated with the extent of individual exposure to latex proteins.

2.2 Key Legislation

- Safety, Health and Welfare at Work Act 2005.
- Safety, Health and Welfare at Work (Chemical Agents) Regulations 2001.
- Safety, Health and Welfare at Work (General Application) Regulations 2007.
- Social Welfare (Consolidated Occupational Injuries) Regulations 2007.

2.3 Purpose

The purpose of this policy is to set out the HSE’s chosen approach to managing the risks to patients, staff and others who may be exposed to NRL in the course of the HSE’s activities.

3.0 Scope

3.1 This policy applies to any manager (Responsible Person) or member of staff:

- 3.1.1 Who may be responsible for, or work in an area where products containing NRL may be used or handled.
- 3.1.2 Involved in the procurement of medical equipment/devices/clothing.
- 3.1.3 Involved in the setting of clinical/procurement (etc) policy where the policy may have an impact on the use of products containing NRL.

4.0 Glossary of Terms and Definitions (Table 1)

NRL	Natural Rubber Latex
Latex-free	The term used to describe products that are not manufactured from natural rubber latex.
Latex-safe	The term used to describe an environment that minimises the risk of a reaction occurring in sensitised or allergic individuals. This is achieved by removing the NRL products that are the most likely to cause a reaction.
Type I Latex Allergy	Immediate Hypersensitivity. An immediate hypersensitivity reaction characterised by urticaria, conjunctivitis, rhinitis and occasionally threatening anaphylaxis. This is a reaction to the latex sap proteins due to IgE antibody.
Type IV Latex Allergy	Delayed Hypersensitivity. Characterised by an eczematous rash often developing hours after exposure. Possible causes include latex proteins or chemical/accelerating agent residues, such as thiurams or carbamates, used in latex and nitrile glove processing. This reaction predisposes individuals to developing Type I allergy.
Atopic	Individuals with the predisposition for atopy - A form of allergy in which there is a hereditary or constitutional tendency to develop hypersensitivity reactions e.g. hay fever, allergic asthma, atopic eczema in response to allergens. (Oxford Concise Medical Dictionary)

5.0 Roles and Responsibilities

5.1 Board of the HSE

The general responsibilities of the HSE Board are detailed in the HSE Corporate Safety Statement.

5.2 Chief Executive Officer

- 5.2.1 The Chief Executive Officer has responsibility for ensuring the development of and compliance with this policy.
- 5.2.2 The delegated authority for co-ordinating and monitoring implementation of this policy and the associated protocols/procedures are the Regional Directors of Operations.

5.3 Regional Directors of Operations (RDOs), Area Managers (AM), Purchasing/Contract Managers (PCM)

- 5.3.1 RDOs, AMs and PCMs are responsible for ensuring that risks associated with NRL allergy to patients and staff are managed in accordance with this policy and the associated protocols and procedures.
- 5.3.2 RDOs, AMs and PCMs will ensure:
 - 5.3.2.1 That *powdered* latex gloves are phased out.
 - 5.3.2.2 With regard to gloves and other medical equipment, clothing, etc., that a latex-free alternative is procured and used where reasonably practicable.
 - 5.3.2.3 That all latex gloves and NRL containing products supplied for use have been approved.
- 5.3.3 Identify, with Directors of Nursing and General Managers (and other Responsible Persons as appropriate), the resources required for staff training and other aspects of the implementation of this policy.
- 5.3.4 Develop and maintain a database of latex-containing and latex-free products.

5.4 Directors of Nursing (DONs) and General Managers (GMs)

- 5.4.1 DONs and GMs are responsible for implementing this policy and associated policies/procedures at local/hospital level, for feeding back to RDOs, AMs and PCMs and ensuring arrangements are in place for the provision of information and attendance at training on NRL allergy and its management.
- 5.4.2 Ensuring that a database of latex-containing & Latex-free products is developed and accessible at local level.
- 5.4.3 Ensuring with the Responsible Persons (Line Managers, etc.) that there is an adequate supply of latex-free/powder-free products available within the Unit, Ward, Service or Department.

5.5 Responsible Persons (Line/Ward/Department/Service Managers, etc.)

Responsible Persons shall:

- 5.5.1 Ensure that risk assessments for their area cover the potential for exposure to NRL.
- 5.5.2 Ensure that specific risk assessments are completed for patients and staff who are identified as being allergic to NRL.
- 5.5.3 Identify and implement any action/control required following NRL risk assessment(s), using the general NRL allergy control programme and procedures (see Section 6 and Appendices 1 to 7 These may need to be adapted to meet local circumstances.
- 5.5.4 Ensure that non-latex products are provided, so far as is reasonably practicable, for identified latex allergic patients.
- 5.5.5 Surgeons and Anaesthetists shall:
 - 5.5.5.1 Ensure that a history of latex allergy is taken prior to anaesthesia.
 - 5.5.5.2 Ensure that all theatre staff are aware of the patient's status if allergy is identified.
 - 5.5.5.3 Ensure that a safe environment is available for anaesthesia, surgery and recovery.

In order to enable a latex free environment to be prepared allergic patients shall:

 - 5.5.5.3.1 Be placed first on elective operating lists (if powdered latex gloves in use –see Appendix 1, 8.1).
 - 5.5.5.3.2 Be managed with care on emergency operating lists.
 - 5.5.5.4 So far as is reasonably practicable, ensure that only latex free equipment is used.
 - 5.5.5.5 Provide follow-up for any patient who has an unexpected reaction during anaesthesia and highlight same in medical notes.
 - 5.5.5.6 Notify allergy to ward and theatre staff, who will cascade information to other care givers.
 - 5.5.5.7 Ensure patient is referred for further follow-up and testing for latex allergy.
- 5.5.6 Refer to the database on latex content (to be developed by Procurement staff in conjunction with ward staff) and manufacturer/supplier product data when ordering equipment and products, etc.
- 5.5.7 The contents of all emergency carts should be checked for latex content and alternatives should be procured for any products containing latex.
- 5.5.8 Ensure that staff take a proactive approach to recognising latex related health problems.

- 5.5.9 Ensure that staff are given the necessary information, instruction and training to enable them to manage the risk of NRL allergy and comply with this policy.
- 5.5.10 Ensure that staff read and sign that they have read the policy on page 3.
- 5.5.11 Report NRL allergic reactions suffered by patients/staff via the clinical incident reporting mechanism.
- 5.5.12 Refer staff who appear to have symptoms suggestive of NRL allergy to the Occupational Health Department.

5.6 Responsibilities of Staff

Employees shall:

- 5.6.1 Ensure that they are aware of policies, procedures, guidelines and systems of work relating to NRL allergy. Staff shall be requested by line managers to provide a signature of acknowledgement and understanding for these policies, etc.
- 5.6.2 Comply with this policy and follow any associated procedures, guidelines and systems of work for their area(s) of work and responsibility.
- 5.6.3 Report possible NRL allergy symptoms either to the Responsible Person for their area or directly to the Occupational Health Department.
- 5.6.4 Check latex content in resuscitation equipment before use.

5.7 Resources Provided by the Occupational Health Service

- 5.7.1 Facilitate Staff and the Responsible Person with regard to NRL training.
- 5.7.2 When indicated investigate potential sensitivity to NRL at pre-employment/induction stage.
- 5.7.3 Facilitate the investigation of staff suspected of having NRL allergy.
- 5.7.4 Ensure that staff (or prospective staff) with NRL allergy and their managers, are advised of any necessary adjustments or restrictions to their work activities, using an evidence and risk assessment based approach.
- 5.7.5 Provide guidance to staff and managers on suitable and safe working environments for NRL sensitised employees.
- 5.7.6 Provide statistical and other relevant information concerning NRL allergy in staff to the Health and Safety Committee, whilst maintaining individual confidentiality.
- 5.7.7 Provide advice to managers developing protocols/procedures/systems of work relating to NRL allergic patients.

5.8 Pharmacy Managers

- 5.8.1 So far as is reasonable practicable, endeavour to dispense commonly used emergency drugs in latex free containers/equipment.
- 5.8.2 Provide advice on drugs that may potentially contain latex. So far as is reasonably practicable such drugs should not be used in situations where a patient is suspected as having a latex allergy.

- 5.8.3 The current manufacturing process of some drug vials involves the presence of dry natural latex (DNR). The protein content and allergenicity of DNR has been determined as extremely low. Latest recommendations are that vials containing DNR may be used once a “single stick” method of puncturing only once on a fresh vial is used (Heitz, Bader, 2009). This method has been used widely in the U.S. and studies have shown it to be as effective as removing the bung (which may cause microbial contamination). Insulin vials may be punctured as many as 200 times during shelf life so a latex free alternative should be used if practicable.

6.0 Procedure/Guideline

- 6.1 The overriding risk control policies are detailed in Section 1 of this document and responsibilities for fulfilling these policies are set out in Section 5. This section summarises the general risk control programme for NRL allergy and is supported by a number of appendices which give detailed procedures and guidelines.
- 6.2 The general risk control programme takes account of the general principles of prevention outlined in the 3rd Schedule to the Safety, Health and Welfare at Work Act 2005.
- 6.3 The following general risk control programme shall be considered non-exhaustive (refer to the Legislation and attached procedures and guidelines for further information):

6.3.1 Avoid Hazard

- 6.3.1.1 Identify the Hazard: E.g. Latex gloves or products.
- 6.3.1.2 Use NRL free products where reasonably practicable.

6.3.2 Evaluate the Risk

Where the Hazard cannot be avoided:

- 6.3.2.1 Identify particular latex allergy risk groups (see appendices 4 and 5), e.g. Spina Bifida/genito-urinary abnormalities/paraplegics, patients who have had multiple surgeries and health care workers with atopy.
- 6.3.2.2 Identify staff and patients with latex allergy (note there are several types of allergy with varying levels of risk and seriousness. See Section 4 & Appendix 6):
- 6.3.2.2.1 Identify patients at risk through proper review/ allergy questioning (Signs of Allergy/ Questions by staff/ Use of Screening tool for patients - see Appendix 5).
- 6.3.2.2.2 Allergies in new staff are identified through pre-employment checks, including allergy questions on pre-employment health questionnaire.
- 6.3.2.2.3 Existing staff are educated to recognise symptoms and to self-report.

6.3.3 Avoid Exposure to Risk

6.3.3.1 Adapt to Individual:

6.3.3.1.1 NRL avoidance (workplace and work equipment/products and systems of work, e.g. for theatre patients) for latex allergic staff/patients.

6.3.3.1.2 Treatment of anaphylaxis (see Appendix 1, 1.8)

6.3.3.1.3 Post-operative follow-up.

6.3.3.2 Adapt to Technical Progress/Find a Replacement (safe or less dangerous substitute):

6.3.3.2.1 Ongoing substitution program for latex products.

6.3.3.2.2 A HSE-wide directory of commonly used NRL-containing hospital products should to be prepared and maintained by Procurement staff in conjunction with ward staff) (see Appendix 7 for examples).

6.3.3.2.3 Products are to be standardised across the HSE where practicable.

6.3.3.2.4 Maintain a procurement policy which supports the identification and substitution of NRL products where practicable.

6.3.3.2.5 Use of powder-free low protein latex gloves which is a proven effective method of reducing the incidence of latex allergy. The scientific evidence does not support a complete ban on the use of latex gloves. (Power et al, 2010)

6.3.4 Collective over Individual Measures

6.3.4.1 Implement guidelines on latex use (See Appendices 1 and 2).

6.3.4.2 Consider providing latex free (so far as is reasonably practicable) facilities e.g. designated Ward, Department Section and/or Theatre.

6.3.5 Prevention Policy

6.3.5.1 Measures as discussed above.

6.3.5.2 Availability of an appropriate evidence-based health surveillance programme administered by the Occupational Health Department (Based on Laney, 1998).

E.g.:

6.3.5.2.1 Primary prevention – Provide information to staff in relation to latex allergy and assess those with potential symptoms.

6.3.5.2.2 Secondary and tertiary care – Follow-ups for staff diagnosed with latex allergy as appropriate.

6.3.6 Training and Instruction

6.3.6.1 Staff (exposed) and management to be informed of risks, information and education and ongoing consultation.

- 6.3.6.2 Communication with other care givers: e.g. Allergy information to travel with patient to facilitate the implementation of preventative measures and procedures.

7.0 Implementation Plan

Implementation of this policy forms an integral part of the safety management system and is underpinned by effective communication, education and training by competent persons, and follow up monitoring and review.

As discussed in Section 5 of this document RDOs, AMs and PCMs will play a fundamental role in the implementation of this policy. At more local level, key persons include GMs, Hospital Managers and DONs.

Never-the-less the cooperation of all Responsible Persons (Managers) and staff is essential to the effective implementation of this policy.

8.0 Evaluation, Audit and Review

The HSA (Health & Safety Authority) Audit Tool and Management System for the Health Service 2006, the HSE Quality and Risk Management Standard (OQR009 revision 3 of 2007) and Integrated Risk Management Policy (OQR023 version 3 of 2009), are to be utilised to assist in the evaluation and compliance of this policy.

This policy will be reviewed at least biennially, or when legislation or best practice dictates.

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10.0 Additional Resources

www.lasg.org.uk

A useful website for further information on latex allergy for patients including patient fact sheet, advice on precautions in schools etc. Also contains information on latex allergy for healthcare workers including product information and latex content.

11.0 Appendix 1

Specific Procedures - Patients & Clients

1.0 General Procedures

- 1.1 Every patient/client should be asked about allergies.
- 1.2 If a patient/client has possible latex allergy, the Latex Screening Tool should be used, and the medical team informed.
- 1.3 Confirm latex allergy.
- 1.4 Ensure full awareness of all staff involved with patient.
- 1.5 Keep numbers of people involved to a minimum – restrict personnel to those involved with the patient (to avoid inadvertent exposure).
- 1.6 If patient is newly diagnosed:
 - 1.6.1 They should be given information on latex allergy and told to inform their G.P., dentist and gynaecologist before any examination/treatment as appropriate (MDA, 1996).
 - 1.6.2 Their diagnosis of latex allergy should be included in their discharge letter.
 - 1.6.3 If they have a Type I allergy they should be advised to wear a Medi Alert Bracelet.
 - 1.6.4 Patients who are very sensitive and have had a previous anaphylactic reaction should be advised to carry an EpiPen and have their own supply of latex free gloves for emergencies (The Latex Allergy Information Resource, 2001)
- 1.7 Keen eyes are necessary for the continuity of care, observing signs and symptoms of delayed Latex Sensitivity/Allergy, which may include skin reactions (dermatitis) respiratory problems, asthma attacks, and /or anaphylactic shock (Davis 2000).
- 1.8 Be prepared to treat serious reactions :
 - 1.8.1- <http://www.resus.org.uk/pages/reaction.pdf#search=%22latex%20allergy%22>
– Page 20 Quick One page summary on Treatment of Anaphylaxis)
 - 1.8.2 Consider the possibility of latex-induced anaphylaxis in any patient with a severe allergic-type reaction with respiratory difficulty and/or hypotension especially if skin changes present, and particularly in the following groups:
 - History of anaphylaxis to latex, or other latex, rubber or food (especially fruit) allergy.
 - Spina bifida, genitourinary abnormalities, multiple surgical procedures or reactions to Intravenous drugs
 - 1.8.3 -If anaphylactic reaction to latex suspected:
 - Remove Allergen,
 - Get Latex-free Resuscitation Equipment,
 - If patient experiences anaphylactic shock arrange admission to Hospital for 24 hours of monitoring, since symptoms may re-occur following successful treatment (LAIR, 2001)
- 1.9 When patients are being examined, latex safe precautions should be used such as the use of Nitrile (Latex free) gloves only.
- 1.10 Remove all latex products from room (including gloves) that may come into contact with the patient (Dakin, Yentis, 1998). Note: Latex free symbol on packaging is “Latex” in a circle with a line through it. Only some companies label their products with latex free symbols. Products that do contain latex

often have “Warning - This product contains Natural Rubber latex (or Dry Natural Latex) which may cause allergy to some people” (see Appendix 7 for further information on labelling).

- 1.11 All procedures must be planned in advance where possible.
- 1.12 Latest recommendations are that vials containing DNR may be used once a “single stick” method of puncturing only once on a fresh vial is used (Heitz, Bader, 2009) See 5.8.3

2.0 Common Procedures (Inpatient/Outpatient/Clinic/ Community)

- 2.1 Blood Pressure - Use latex free blood pressure cuffs where available, otherwise cover arm with sleeve or knitted cotton stockinette (not elastic type) before applying cuff. Stethoscopes may have latex in tubing, ear pieces or bell. If in doubt cover bell with transparent film IV dressing.
- 2.2 Taking Blood - If patient needs blood taken alert phlebotomist to the possible latex allergy so Nitrile gloves and disposable latex free tourniquet (or Nitrile glove as tourniquet) can be used.
- 2.3 Carrying out an ECG – check electrodes are latex free.
- 2.4 X-ray - If patient needs an x-ray alert radiographer beforehand.
- 2.5 Inserting IV lines- Commonly used brands of cannulas, transparent film IV dressing, t-pieces, yellow heplocks, 3-way stopcocks and extension sets are latex free. Some IV giving sets may have latex in the side ports. Do not inject through these ports-follow local IV policy. Common brands of needles and syringes in use in the Health Service Executive (for IM, SC, IV injections) are Latex free.
- 2.6 Internal examinations - PV, PR, use latex free gloves.
- 2.7 Catheterising - avoid Foley latex or silastic catheters – only use 100% or ALL silicone catheter and latex free gloves. Avoid leg bags as they may have latex in the elasticised straps (unless packaging states latex free). Avoid latex condom catheters, use 100% silicone alternatives.
- 2.8 Dressings - avoid elastic adhesive type bandages, elastic net type tubular bandages and sticking plaster unless latex free. Tape- check latex content. Some tape cloth/silk adhesive tapes do not contain latex but seem to cause localised reaction in most latex allergic/sensitive patients. Use paper tape. There are latex free versions of waterproof plastic adhesive tape.
- 2.9 Other procedures e.g. smears, insertion of IUDs, colposcopies, flexible cystoscopes, dialysis, -check all equipment is latex free before use.

2.10 Dental Surgery:

- 2.10.1 If treating a known latex sensitive patient be aware of signs and symptoms of adverse reaction (see Appendix 6, Section 4.3) and be prepared to treat same (see Section 1.8)
- 2.10.2 Caution should be used when intending to use gutta percha (material for filling root canals) as it is similar in chemical properties to latex rubber. Consultation with an allergist and allergy testing for gutta-percha is recommended before endodontic treatment of latex sensitive patients (Kean, McNally 2009)
- 2.10.3 The current manufacturing process of some plastic dental cartridges involves the presence of dry natural latex (DNR) as a component. DNR has been shown to have extremely low risk of reactions. Latest recommendations are that vials containing DNR may be used once a “single stick” method of puncturing only once, on a fresh vial is used (Heitz, Bader, 2009)

- 2.10.4 Surgical masks with looped elastic ear ties may contain latex.
- 2.10.5 Some dental dams also contain latex so check first with supplier.
- 2.10.6 Other common dental equipment which may contain latex include:
 - Bite blocks
 - Amalgam carriers
 - Impression materials
 - Orthodontic rubber bands and elastics
 - Polishing discs
 - Prophylaxis cups
 - Alginate Mixing Bowls
 - See also 6.0 Anaesthetic equipment

2.11 Orthopaedics

- 2.11.1 Check bandages for latex content.
 - Bandages made from woven/knitted crepe/cotton are latex free.
 - Cotton/synthetic wool bandages are latex free.
 - Elastic compression bandages/tubular stocking bandage may contain latex (unless synthetic elastic used).
- 2.11.2 Plaster Room materials such as Plaster of Paris (gypsum) and fibreglass casting materials are latex free.
- 2.11.3 Cotton /plastic cervical collars are latex free. All other braces supports and crutches should be checked before use.
- 2.11.4 Other orthopaedic products that may contain latex include skin traction sets.

2.12 Outpatients

- 2.12.1 If a patient has a possible latex allergy, the patient should be referred for testing to a dermatologist so allergy can be confirmed/ruled out before patient comes in for admission.
- 2.12.2 If patient is due for surgery, alert surgical team as patient may need to be first on the list and ward/theatre will need prior notice of admission.
- 2.12.3 If patient with confirmed allergy presents consider using "Latex Allergy" stickers (see Appendix 8) on back and front of chart comply with local policy on maintenance of patient records.

3.0 Additional Inpatient Ward Precautions (Includes Dialysis, Ante/Post Natal Wards, Community Care, Mental Health)

- 3.1 There is no justification for powdered gloves being in stock in any ward setting therefore patients should not need to be nursed in a side room.

- 3.2 Room should be prepared in advance with all horizontal surfaces damp dusted, wearing Nitrile gloves, to remove latex protein residue.
- 3.3 Signs declaring latex sensitive patient should be placed over bed and on door of room (with patients consent).
- 3.4 Extra wristband on patient with "Latex Allergy" written on it.
- 3.5 Some multi-dose vials have latex rubber bungs. Use "single stick" method (see Policy 5.8.3)
- 3.6 Contact kitchen to ensure patients food is prepared without using latex gloves. There have been reports of anaphylaxis associated with the eating of contaminated food. Also warn them if patient has any food allergies. Catering areas should only be using blue vinyl or polythene gloves for food preparation. Latex/nitrile gloves are not appropriate for food preparation (see Appendix 3).
- 3.7 If patient needs to leave ward to visit other department e.g. x-ray, endoscopy alert them beforehand.
- 3.8 Anti-embolism stockings -some brands may contain latex –check before use.
- 3.9 If patient due for theatre:
 - 3.9.1 Give theatre as much advance notice as possible.
 - 3.9.2 Trolley mattress must be completely covered with cotton sheet (Dakin, Yentis, 1998).
 - 3.9.3 Use a tie-on theatre hat instead of an elasticised one.
 - 3.9.4 Patient should be first on list if powdered gloves used in the theatre (ASCIA, Davis, 2000, AANA Latex allergy protocol). If theatre suite does not use powdered gloves, then the patient does not need to be first on the list.
 - 3.9.5 Post op precautions:
 - 3.9.5.1 Venturi oxygen masks are latex free.
 - 3.9.5.2 Some PCA syringes **may** contain Latex - Check before use.
 - 3.9.5.3 Only use Silicone resuscitation bag mask valve sets and not black rubber ones.
 - 3.9.5.4 Remind ward staff of the need to continue latex safe environment post-operatively and to be alert for delayed signs of reaction as above.
- 3.10 Ostomy belts may contain latex.

4.0 Additional Precautions For Maternity Hospitals

- 4.1 As there is a link between development of latex allergy and the number of operations in the first year of life (Degenhardt et al, 2001), all babies (under one) having operations should be treated in a latex safe environment.
- 4.2 Admission room/scan rooms in maternity hospitals - CTG monitoring reusable brown elastic straps contain latex. Disposable latex free versions should be available.
- 4.3 Transducer covers for vaginal ultra sounds some brands may contain latex.
- 4.4 Disposable plastic Amniotic Membrane Perforator (Amnio-hooks) for rupture of membranes is latex free.
- 4.5 If the mother has a latex allergy the baby should also be cared for in a latex safe environment to reduce the mother's risk of having an accidental exposure and possible reaction.
- 4.6 Silicone bottle teats and soothers should be used instead of latex.

5.0 Additional Precautions For Other Critical Areas Such As A/E, ITU (General & Cardiac), CCU, Labour Ward

- 5.1 Swann-Ganz catheters may contain latex-check before use.
- 5.2 Disposable Adhesive Defibrillation pads may contain latex-check before use.
- 5.3 ECG electrodes- commonly used brands are latex free-check before use.

6.0 Anaesthesia (LASG):

- 6.1 Great Ormond Street Hospital has published Anaesthetic guidelines for the management of children with NRL Allergy.
- 6.2 The Association of Anaesthetists for Great Britain and Ireland give guidance for “Anaphylactic reactions associated with Anaesthesia” including diagnosis of suspected latex-induced anaphylaxis (<http://www.frca.co.uk/article.aspx?articleid=101014>)
- 6.3 See 1.8.1 for link for most recent (2008) Resuscitation Council (UK) guidance for emergency medical treatment of anaphylactic reactions.

7.0 Common Anaesthetic Equipment That Is Acceptable To Use

- 7.1 Plastic Endotracheal Tubes, Guedal airways, commonly used brands of ECG electrodes, disposable Laryngeal Mask Airways, clear plastic filters, plastic angle pieces.
- 7.2 Ventilator and Anaesthetic machine (includes common gas outlet & excludes black paediatric bellows. Use disposable latex free adult/paediatric re-breathing bag not black rubber reusable one.
- 7.3 Bird ventilator, diaphragm, exhalation valve housing and flow sensor.
- 7.4 Disposable Re-breathing bags - most commonly used are latex free, check packaging.
- 7.5 Most commonly used C-PAP, Bi-PAP systems are latex free, check packaging.
- 7.6 Most disposable catheter Mounts are latex free, check packaging.
- 7.7 Most commonly used anaesthetic disposable tubing (includes elephant tubing but **not** re-breathing bag) are latex free, check packaging.
- 7.8 Most commonly used Anaesthetic monitoring equipment (pulse oximeters, ECG leads) are latex free (check packaging) except reusable BP cuff.
- 7.9 Nebulisers and attachments-most commonly used brands are latex free-check packaging.
- 7.10 100% Silicone resuscitation bag mask valve sets and pocket masks.
- 7.11 Disposable plastic suction tubing, suction catheters and yankuers.
- 7.12 Clean laryngoscope blades with alcohol wipe before use as they may have been handled with latex gloves or use disposable plastic version.
- 7.13 Have disposable latex free endotracheal introducer (boogie) available.
- 7.14 Disposable venturi oxygen masks from unopened packet.
- 7.15 Blue silicone nasal airways are latex free but red may contain latex-check packaging.
- 7.16 Disposable transparent intra-operative anaesthetic eye covering or paper tape.
- 7.17 Inserting IV lines – See 2.5
- 7.18 Check blood warming lines, epidural and spinal needles.

8.0 Common Anaesthetic Equipment That Is Not Suitable Includes

- 8.1 Reusable B/P Cuff (may only be used if arm is covered with stockinet first, making sure that black rubber parts are not in contact with patient –alternative disposable BP cuff may be used and ideally stored on a latex free trolley.
- 8.2 Black anaesthetic masks- use new clear disposable anaesthetic masks.
- 8.3 Black anaesthetic harness for holding mask- do not use.
- 8.4 Black angle piece- use clear plastic one.
- 8.5 Black re-breathing bags-do not use, use disposable latex free version.
- 8.6 Check if Bains/paediatric circuits are marked latex free, if not change re-breathing bag to Latex Free version ideally stored on a latex free trolley.
- 8.7 Reusable mouth gag-do not use.
- 8.8 Stethoscopes-cover bell with transparent IV adhesive dressing.

9.0 Theatre Precautions - These Guidelines Also Apply To Any Medical/Invasive Procedures And Units Including Endoscopy, X-Ray (Angiograms, Scans Etc)

9.1 Preparing The Theatre

- 9.1.1 If powdered gloves are used in the theatre - First on list (Davis, 2000, AANA Latex allergy protocol), or theatre cleaned using latex free gloves and left for 30 minutes to allow sufficient air exchanges or 15 minutes if laminar air flow is in use (LASG) ..
- 9.1.2 If powdered gloves are not used in the theatre the patient does not need to be first, but all unnecessary equipment should be removed and all horizontal surfaces cleaned using Nitrile gloves before the case (ASCIA).
- 9.1.3 Tie on theatre hat to be used instead of elasticised one unless latex free version available.
- 9.1.4 All latex gloves removed from theatre.
- 9.1.5 “Latex Free” signs on theatre doors – all doors closed.
- 9.1.6 Personnel limited.
- 9.1.7 Remove all non- essential equipment from theatre.
- 9.1.8 Anaesthetise patient in main theatre and not in anaesthetic room.
- 9.1.9 Some sources advise pre-med with corticosteroids and other drugs (Darin, Yentas 1998), but this is controversial and may mask early symptoms of a reaction (Bowyer 1999).
- 9.1.10 Table & accessories covered in cotton sheets or pillowcases.
- 9.1.11 Surgical attire – fresh scrubs, tie on masks (not ones with rubber elasticised ties).
- 9.1.12 Any patient that experiences an unexplained anaphylactic shock intra-operatively should be presumed to be latex allergic until proven otherwise. Follow up testing should then be carried out to identify the allergen responsible.
- 9.1.13 It is useful to have one designated latex free cart of supplies which can be used by all theatres and should contain items such as latex free surgeons gloves and nitrile gloves in all sizes, latex free disposable blood pressure cuffs, disposable re-breathing bags and any other latex free alternative to items commonly used that contain latex.

9.2 Intra-operatively

- 9.2.1 Draping/gowning - Linen drapes are latex free and most disposable drapes are latex free – check packaging.
- 9.2.2 Instruments:
 - 9.2.2.1 Set up trolley with latex free gloves.
 - 9.2.2.2 Exercise caution with instruments that have rubber/elastic bands around them.
 - 9.2.2.3 If informed of case in time, get pack and/or extra instruments re-washed and re-autoclaved without rubber bands and without using latex gloves to handle them. If not possible, remove rubber band, irrigate instruments in bowl of sterile saline, dispose of bowl and change gloves.
- 9.2.3 Avoid rubber bands, rubber shods, vessel loops unless clearly labelled latex free on packaging.
- 9.2.4 Tourniquet:
 - 9.2.4.1 If the application of a tourniquet and /or Reese Davis type exsanguinators is necessary then the limb must be covered with cotton (not elastic) tubular bandage first.
 - 9.2.4.2 Care must also be taken that the rubber connecting tubes are also covered where they could come into contact with patient.
- 9.2.5 Avoid red rubber Esmarch bandages- alternative is elevation or order latex free version.
- 9.2.6 Disposable Patient Return Electrodes for Monopolar Diathermy: most common brands are latex free-check packaging.
- 9.2.7 Magnetic mats may contain latex - do not use
- 9.2.8 Other products that may contain latex and should be checked before use include:
 - 9.2.8.1 Image Intensifier covers,
 - 9.2.8.2 Penrose drains (unless 100% silicone) and Kehrs t-tubes.
 - 9.2.8.3 If catheterising in theatre avoid Foley or silastic catheters – use 100% or all silicone only.
 - 9.2.8.4 Check all stents and guidewires.
 - 9.2.8.5 Check embolectomy catheters – balloon may contain latex.
- 9.2.9 Check adhesives and tapes in relation to latex content to see which ones are latex free. Avoid elastic adhesive (unless packaging states latex free), silk tape and zinc oxide tape. Paper tape is latex free.
- 9.2.10 Orthopaedic products: See Appendix 1- 2.11

9.3 Post- operatively

- 9.3.1 Patient should be recovered in the operating theatre if possible until ready to return to ward. PACU staff should come in appropriately dressed to recover them. (Davis 2000).
- 9.3.2 If this is not feasible then the patient should be recovered in an end bay of recovery. The bay should be prepared in advance by removing latex gloves/products from bay. The latex safe cart of supplies from Theatre can accompany patient to recovery. PACU staff should be given adequate notice to prepare.

- 9.3.3 A “Latex Allergic” sign should be put up in PACU cubicle.
- 9.3.4 Venturi oxygen masks are latex free.
- 9.3.5 Check PCA syringes.
- 9.3.6 Common brands of needles and syringes in use in the Health Service Executive (for IM, SC, IV injections) are Latex free.
- 9.3.7 Only use Silicone bag mask valve resuscitation device and not black rubber one.
- 9.3.8 Keen eyes are necessary for the continuity of care, observing signs and symptoms of delayed Latex Sensitivity/Allergy, which may include skin reactions (dermatitis) respiratory problems, asthma attacks, and /or anaphylactic shock (Davis 2000).
- 9.3.9 If patient experiences anaphylactic shock arrange admission to ICU for 24 hours of monitoring, since symptoms may re-occur following successful treatment (LAIR, 2001).
- 9.3.10 Remind ward staff of the need to continue latex safe environment post –operatively and to be alert for delayed signs of reaction as above.

Appendix 2

Specific Procedures – Employees (Prevention and Management of Latex Sensitisation)

These guidelines are aimed at the prevention of latex allergy as well as the prevention of symptoms in latex allergic staff so the policy is in use at all times.

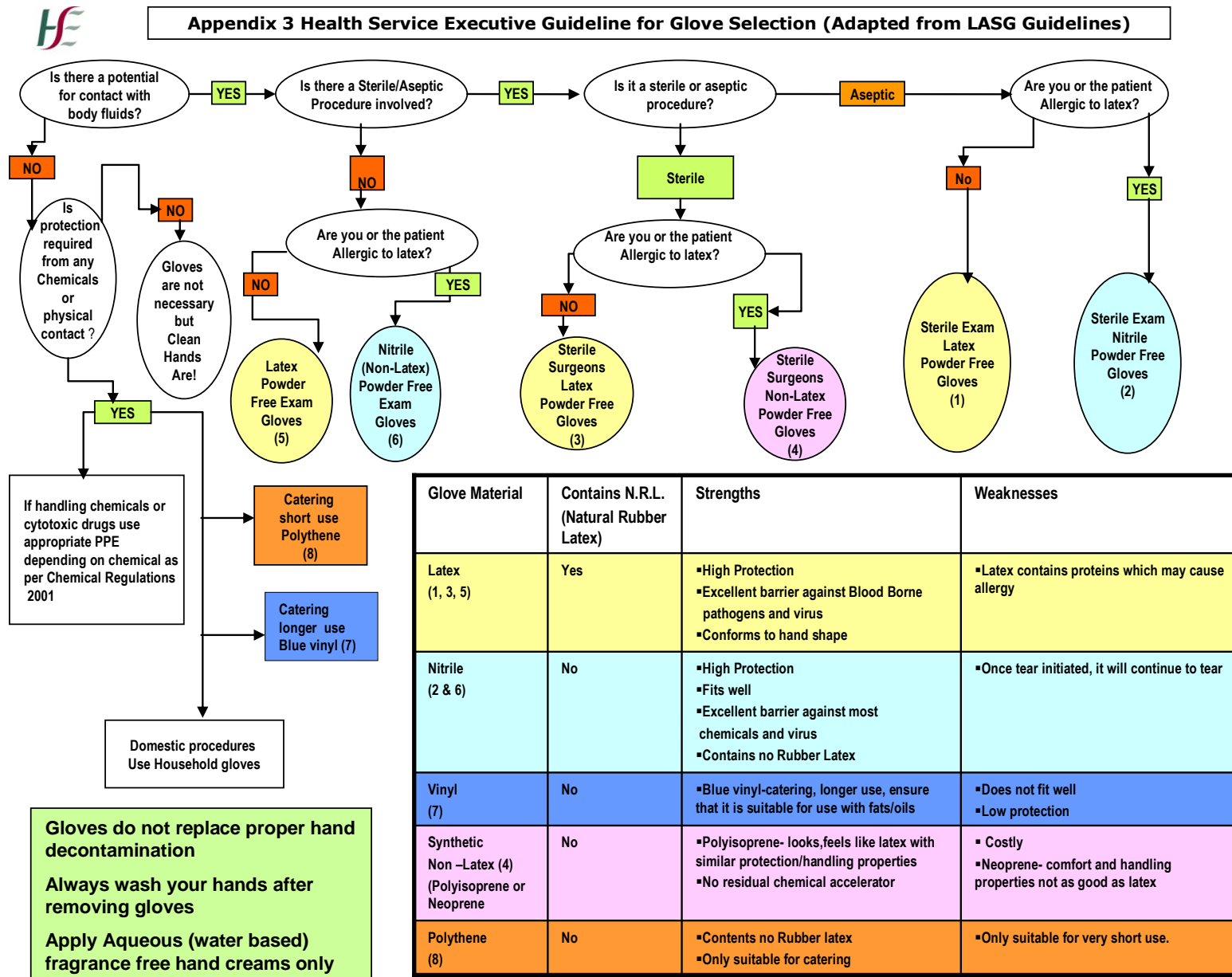
Special Precautions for Staff (based on recommendations by the Health & Safety Authority (H.S.A.)

“Report of the Advisory Committee on Health Services Sector to the Health & Safety Authority”, 2001 Pg. 66 & National Institute for Occupational Safety and Health- (NIOSH) Publications Nos. 97-135 & 98-113.

- 1.0 Limit exposure to latex gloves by not wearing them when there is no risk of contact with infectious materials (e.g. bed making-unless soiled) (H.S.A. Report). Note: While it is imperative that latex/nitrile gloves are worn for Universal Precautions, gloves should not be over used. Gloves are no substitute for hand washing (Dyke, 1999).
- 2.0 When gloves are necessary (as per Regulations e.g. food safety) but not likely to involve contact with infectious materials (e.g. food preparation) non-latex gloves such as polyethylene or vinyl should be used (NIOSH 98-113).
- 3.0 When handling infectious materials or exposed to blood/ body fluids, use powder free, latex gloves with reduced protein levels or approved synthetic alternative.. Vinyl gloves do not provide adequate protection against blood and body fluids. See Appendix 3 for HSE Guideline on glove selection.
- 4.0 Prevent exposure to airborne powder particles from latex gloves. Use gloves that are powder-free with low protein/ low residual chemical accelerators. HSE Procurement should ensure that gloves on contract in the HSE have been selected using these criteria. Remember if powdered gloves are used, it is not just the user that is affected but also all staff/patients in the room.
- 5.0 Use non-latex gloves for workers who are sensitised to latex (H.S.A. Report).
- 6.0 Good hand care as per HSE Hand washing advice leaflet see <http://www.hse.ie/eng/services/newscentre/Campaigns/cleanhandsleaflet.pdf>
When wearing latex gloves, do not use oil-based hand creams or lotions as they interact with the latex facilitating absorption of the latex proteins (H.S.A. Report).
- 7.0 Good housekeeping to remove latex dust from workplace where powdered latex gloves are in use (H.S.A. Report).
- 8.0 Implement an education program for staff to ensure that employees are aware of (H.S.A. Report):
 - 8.1 The risks of exposure to latex for staff.
 - 8.2 Safe working methods.
 - 8.3 Availability of Health checks/surveillance as appropriate (see previous comments).
 - 8.4 How to recognise symptoms of latex allergy: skin rashes; hives; flushing; itching; nasal, eye, or sinus symptoms; asthma; and shock.
 - 8.5 Action needed if they think they are affected by latex allergy (report to Occupational Health department for assessment).
- 9.0 All employees attending the Occupational Health Department with skin complaints are assessed, and treatment is on an individual basis as required. They will be given on-going support and referred

for testing if needed. If they have a latex allergy their work area will be risk assessed and control measures implemented. They will be required to avoid contact with latex products at work and at home indefinitely.

- 10.0 If you have latex allergy, consult your Occupational Health Physician regarding the following precautions (NIOSH 97-135):
 - 10.1 Avoid contact with latex gloves and products.
 - 10.2 Avoid areas where you might inhale the powder from latex gloves worn by others.
 - 10.3 Tell your employers, physicians, nurses, and dentists that you have latex allergy.
 - 10.4 Wear a medical alert bracelet.
 - 10.5 Staff who have had serious reactions should be advised to carry an EpiPen.
 - 10.6 Possible evidence-based options for health surveillance.
- 11.0 Resources and Equipment Required: Latex free gloves/products are available from Supplies departments across the HSE.



Appendix 4

Identification of Risk Groups and Testing for Type I Allergy

1.0 Identification Of Risk Groups (Dakin, Yentis, 1998). Look for:

- 1.1 History of anaphylaxis to latex or a positive skin prick test to latex.
- 1.2 History of allergy / sensitivity to latex:
 - 1.2.1 Itching, swelling or redness after contact with rubber products
 - 1.2.2 Swelling of tongue or lips after dental examination or blowing up balloons
- 1.3 High risk groups without history of latex sensitivity:
 - 1.3.1 Repeated catheterisation e.g. spina bifida, urogenital abnormalities (18-73%, Sussman et al 1995).
 - 1.3.2 Health care workers / occupational exposure to latex (7-10%, Sussman et al 1995).
 - 1.3.3 History of multiple surgical procedures (6.5%, Moneret-Vautrin et al 1993).
 - 1.3.4 Atopic nature / multiple allergies, especially fruit allergies (e.g. banana, avocado, chestnut, nuts, potatoes and kiwi fruit) (6.5%, Kurup et al).

2.0 Testing For Type 1 Latex Allergy

Confirmation of latex allergy is based on:

- 2.1 History (previous exposure, risk groups, previous reaction)
- 2.2 Latex RAST test, which is a serum IgE antibody immunoassay. Note that this can result in false negatives. Therefore, if the result is negative but there is a strong history refer the individual for Skin prick testing.
 - 2.2.1 **Note:** Skin prick testing can result in anaphylaxis and should only be done in a suitable environment (e.g. in an Occupational Health Department where appropriate resuscitation equipment is available) by an experienced professional.

Appendix 5

Patient Latex Allergy Screening Tool

Name		Date	
Address		Reason for hospital visit	
D.O.B.		Consultant	
MRN		Occupation	

1. Have you ever had a reaction to Natural Rubber Latex (NRL) devices/products? If yes, please explain what happened							
2. Has a doctor or a dentist ever told you that you have an allergy to latex products? If yes, what were you told							
3. Do you have any medical condition/congenital abnormalities (spina bifida/spinal injury) that have caused you to be exposed to a great number of latex products?							
4. Have you ever had a reaction (i.e. redness, swelling, watery eyes, breathing difficulty) to any of the following sources of NRL? (Tick as appropriate).							
Balloons		rubber gloves		band aids		contraceptives device	
hot water bottle		eraser		rubber bands/balls		latex/rubber face mask	
foam pillows		elastic bandages		baby bottles/nipples/soothers		cuffs/ elastic waistbands	
ostomy bags		belts/bras/suspender		footwear			
5. After handling NRL products, have you experienced any of the following? (Tick as appropriate)							
Difficulty in breathing		Itching (e.g. hands, eyes)		Chapping or cracking of hands		Swelling of mouth, lips or throat	
Runny Nose/congestion		Hives		Redness			
Other							
6. Do you have a history of any of the following? (Tick as appropriate)							
Eczema		Asthma		Hay fever			
Contact dermatitis				Auto-immune disease (e.g. lupus)			
7. Have you ever experienced an unexplained allergic reaction during a dental or medical procedure?							
8. Do you have any food allergies e.g. banana, kiwi, avocado, tomato, potato, nuts etc.? If YES describe which products and the reactions experienced.							
9. Do you have any other allergies e.g. penicillin, nickel?							
10. Have you ever had any surgery or extensive dental treatment before? If yes, please list:							
11. Does your occupation involve contact with products containing NRL? If so, which ones?							

Guidelines on the Screening Tool

This patient latex allergy assessment-screening tool is used to determine the need for “Latex precautions” by diagnostic history or risk factors for latex allergy:

Guideline 1- All patients regardless of risk group status, should be questioned about a history of latex allergy. Any unexplained reactions during surgery such as low blood pressure with hives or trouble breathing should also cause concern, as they may be indicative of a latex allergy. Latex allergy should be considered as a possible cause in any intra-operative anaphylactic reaction especially if within 15 to 30 minutes of commencement of operation (due to exposure to latex gloves, catheters etc.)

Guideline 2 – Procedures on all patients with a positive history regardless of risk group status should be performed in a latex safe environment.

Guidelines 3 - Procedures on all patients with spina bifida regardless of history should be performed in a latex safe environment.

Guideline 4 – A serious reaction to food especially banana, kiwi, nuts etc. could indicate a cross reaction to latex and patients should be tested for latex allergy.

If a patient answers yes to any of questions 1- 5, treat in a latex safe environment. Confirm latex allergy in patients with suspected/unconfirmed latex allergy.

This questionnaire was compiled from a number of sources as follows:

- Liebermann, Phil, “Anaphylactic reactions during surgical and medical procedures” Journal of Allergy and Clinical Immunology, Vol. 110, Number 2, August 2002, Pg S67
- National Association of Theatre Nurses policy document - “Understanding Latex in the Peri-operative setting”
- Laney G.E. 1998 “A Guideline to assist in the management of those patients known, or thought, to be at risk of suffering from an allergy to latex containing products”
- Miller, Kristi, Weed, Page, “The latex allergy triage or admission tool: An algorithm to identify which patients would benefit from ‘latex safe’ precautions”, Journal of Emergency Nursing, Vol.24 (2) 1998

Appendix 6

General Information on Latex Allergies

1.0 Executive summary

- 1.1 There has been a rise in patients and staff with latex sensitivity in the HSE and an increase in awareness of the dangers of latex allergy (from dermatitis to anaphylaxis). This has necessitated the drawing up of HSE Policy (and associated procedures and guidelines) for the Prevention & Management of Latex Allergy for Patients and Staff.

2.0 Background to Problem of Latex Allergy

- 2.1 The reasons for the rise in latex allergy are due to a number of factors, the most significant being the introduction of Universal Precautions and the increase in usage of latex gloves in the 1980's in response to the rise in cases of HIV. To meet the demand more glove manufacturers entered the market. Manufacturing processes were changed with a consequent deterioration in glove quality. This and other factors, such as high levels of protein and the use of powder in gloves, may have compounded the risk.
- 2.2 An allergic response to the protein allergens present in Natural Rubber Latex products will cause symptoms. Immediate hypersensitivity was first reported in 1979 and since then has increased dramatically (17 deaths out of 450 anaphylactic reactions due to the latex cuff on enema catheters in the U.S.) This resulted in the F.D.A. issuing an Emergency Alert in 1990, which led to a recall of latex containing barium enema catheters in that year (FDA, 1997). There have been 5 deaths related to latex gloves in the U.S.
- 2.3 Latex allergy incidence peaked in the early 2000's and has fallen in all countries that adopted a powder free, low protein latex policy. The incidence in the U.K. is generally agreed to be <1% in general the population and higher in certain risk groups (see 'Identification of risk groups'). Latest estimates for incidence in NHS staff are 1 in 200. Figures are not available for Ireland but anecdotally have seen a fall in incidence.

3.0 What is Latex?

- 3.1 Latex rubber can be synthetic or natural.
- 3.2 Natural Rubber Latex (NRL) is manufactured from milky sap of rubber trees (*Hevea Brasilliensis*) found mainly in South East Asia, and should be distinguished from synthetic rubber (e.g. Silicone, Nitrile, Butyl, vinyl) which is made from petrochemicals (Davis, 2000).
- 3.3 NRL is a good barrier against bacteria/viruses.
- 3.4 It is used to manufacture thousands of healthcare and household products.
- 3.5 There are two types of manufacturing processes used with NRL. One is 'Crepe' - hard moulded rubber e.g. tyres and rubber balls. The other is 'Dipping' - where liquid latex is used to make thin stretchy products e.g. gloves, condoms, balloons. Most true latex allergies are to products manufactured from liquid latex.

4.0 Mechanism of Development of Latex Sensitivity/Allergy

- 4.1 NRL contains plant proteins, which are harmless to most people, but in some individuals they can be an allergen.
- 4.2 Repeated exposure over a period of time causes a process called induction where the immune system becomes sensitive to the proteins. The body then begins to recognise the protein as being a foreign substance and the immune system creates antibodies against it. This is known as sensitisation. A person can remain sensitised for an indefinite length of time and will have no symptoms.
- 4.3 With repeated exposure the body finally reaches a state of hypersensitivity where an allergic reaction happens and the person displays symptoms of latex allergy: skin rashes; hives; flushing; itching; nasal, eye, or sinus symptoms; asthma; and shock. There usually a progression of symptoms with repeated exposure:
 - 4.3.1 1st stage: Localised skin rash/hives.
 - 4.3.2 2nd stage: Generalised hives, watery/ itchy eyes/nose.
 - 4.3.3 3rd stage: Asthma, broncho-spasm.
 - 4.3.4 4th stage: Swelling of mouth, lips, throat, drop in blood pressure, and anaphylactic shock (an extreme and generalised allergic reaction in which widespread release of histamine causes (oedema) constriction of the bronchioles, heart failure, circulatory collapse and sometimes death -Oxford Concise Medical Dictionary)
- 4.4 Some people progress through the above stages quicker than others.
- 4.5 Latex allergy is not reversible but with recognition of the problem the progression of the disease can be halted. Hence, the main aim of management of latex allergy is avoidance of latex products especially latex gloves.

5.0 Glove powder

- 5.1 Latex gloves were traditionally powdered to aid donning. While the powder itself is not an allergen (though it can be an irritant), the latex protein molecules attach to glove powder.
- 5.2 Protein levels in powdered latex gloves can be up to 10 times greater than those in low protein powder free latex gloves recommended for use.
- 5.3 When the powdered glove is taken off, the powder disperses into the air and becomes an aero allergen, which can get into a persons airway by breathing it in. This can trigger an allergic reaction in a sensitised staff member or patient.
- 5.4 Glove powder also causes surgical complications such as adhesions, granulomas, delayed wound healing and can promote bacterial growth causing wound infection (ICNA, 1999).
- 5.5 In accordance with this policy document, only low protein latex powder free gloves (or approved synthetic equivalent) should be used in the Health Service Executive. All non sterile/sterile exam gloves used in the HSE should be powder free. Where there is still a small minority of powdered surgeon's gloves still in use, these should be phased out as soon as is reasonably practicable and following discussion with users.

6.0 Incidence of Latex Allergy

- 6.1 More children than adults.
- 6.2 Ratio of Female to male sufferers = 4:1.
- 6.3 Ration of Type IV: 80% to Type I: 20%
- 6.4 Health care workers - higher incidence in staff with history of atopy, contact dermatitis, asthma and rhinitis.

7.0 Incidence of Intra-operative Latex Anaphylaxis

- 7.1 50% obstetrics/gynaecology surgery/procedures.
- 7.2 20% abdominal surgery.
- 7.3 10% orthopaedic surgery.
- 7.4 Rest- dental, barium enemas.

8.0 Types of reaction to latex gloves

- 8.1 Irritant Dermatitis - not a true allergic response.
- 8.2 Type IV - contact dermatitis, or delayed hypersensitivity.
- 8.3 Type 1 – immediate hypersensitivity, anaphylactic reaction is possible.

See Table 2 below, based on the “Report Of The Advisory Committee On Health Service Sector To The Health & Safety Authority”, and Glove usage guidelines, 1999, Infection Control Nurses Association.

Table 2 - Types of Reaction to Gloves, Symptoms, Potential Causes and Treatment.

Type	Symptoms	Cause	Treatment
Irritant Contact Dermatitis (Not mediated by immune system -Not a true allergy)	Immediate onset Scaling, drying, cracking of skin. Accounts for 80% of all skin reactions	Irritation by gloves, powder, soaps/detergent, incomplete hand washing	Reversible Identify the cause. Avoid irritant. Use alternative product.
Allergic Contact Dermatitis, Type IV delayed hypersensitivity (T cell mediated)	Symptoms usually appear between 6 and 96 hours and include blistering, itching and crusting. Usually confined to areas of direct contact. Looks like poison ivy rash.	Hypersensitivity to residual manufacturing chemicals used in gloves production.	Identify cause (by Patch testing) Use alternative glove that doesn't contain the specific additive. Education. Note: Over 70% of Type IV subsequently have a Type 1 reaction
Immediate Hypersensitivity IgE/ histamine-mediated allergy, Type 1 hypersensitivity	Reaction usually starts between 5 and 30 minutes after contact. Local: hives Systemic: generalised urticaria, Rhinitis, wheezing, asthma, Swelling of mouth, shortness of breath, can lead to anaphylactic shock	Latex proteins- direct contact or inhalation. While reactions can be triggered by direct skin contact, it is contact with mucous membranes that is associated with highest risk of exposure/reaction (Procedures such as obs/gynae, dental, abdominal surgery, Barium enemas, ortho).	Treat symptoms in acute reaction as necessary- e.g. antihistamines, steroids, bronchodilators If severe-treat using an anaphylaxis protocol. Long term treatment is latex avoidance as each subsequent reaction is more severe (Brown1999) Medi-alert bracelet Education of sufferer, co-workers Carry Epipen if had previous serious reaction.

9.0 Modes of Exposure

The ways latex can come into contact with employees or patients are:

- 9.1 Cutaneous – through direct skin contact such as gloves, tape.
- 9.2 Mucus membranes- e.g. from internal examinations, dental treatment, intubations, ingestion (food handled with latex gloves).
- 9.3 Inhalation – breathing aerolised glove powder.
- 9.4 Internal tissue – via latex products used in surgery.
- 9.5 Intravascular – via injection from products stored or drawn up through rubber bungs on medication vial or through injection ports on IV tubing.

Appendix 7

Products Containing Latex (NIOSH Publication 97-135 pg 2)

A wide variety of products contain latex: medical supplies, personal protective equipment, and numerous household objects. The following are examples of products that may contain latex:

1.0 Emergency Equipment

- Blood pressure cuffs
- Stethoscopes
- Disposable gloves
- Oral and nasal airways
- Endotracheal tubes
- Tourniquets
- Intravenous tubing
- Syringes
- Electrode pad

2.0 Hospital Supplies

- Anaesthesia masks
- Catheters
- Wound drains
- Injection ports
- Rubber tops of multi-dose vials
- Dental dams

3.0 Personal Protective Equipment

- Gloves
- Surgical masks
- Goggles
- Respirators
- Rubber aprons

4.0 Office Supplies

- Rubber bands
- Erasers

5.0 Household Objects

- Automobile tires
- Motorcycle and bicycle handgrips
- Carpeting
- Swimming goggles
- Racquet handles
- Shoe soles
- Expandable fabric (waistbands)
- Dishwashing gloves
- Hot water bottles
- Condoms
- Diaphragms
- Balloons
- Baby bottle teats/soothers

6.0 General

Individuals who already have latex allergy should be aware of latex-containing products that may trigger an allergic reaction. Some of the listed products are available in latex-free forms.

Medical supply companies have voluntarily replaced latex components in many products with latex free versions. Latex alternative materials include silicone, Nitrile, Butyl, vinyl which is made from petrochemicals.

7.0 Other Sources of product information

www.lasg.org.uk/information/latest-latex-list

8.0 Labelling

There is new legislation in EU compelling manufacturers to state when a product contains latex.

BS EN 980:2008
EN 980:2008 (E)

Symbol for "CONTAINS OR PRESENCE OF NATURAL RUBBER LATEX"



This symbol should only be used when natural rubber latex is a material of construction within the device or the packaging of a device to warn those people who may have allergic reactions to certain proteins in natural rubber latex. This symbol should not be used for devices containing 'synthetic' rubber.

In the U.S. if a product does contain latex it must state on the packaging if a product does contain latex e.g. Latex gloves or Latex urinary catheters "This product contains natural rubber latex, which may cause allergic reactions including anaphylactic responses".

There is no official symbol for Latex Free but manufacturers use symbols seen below to show that they are latex free.



HSE Procurement should endeavour to supply latex free products as the norm where reasonably practicable.

ALLERGY ALERT

**This patient is allergic
to Natural Rubber
Latex**

ALLERGY ALERT

**This patient is allergic
to Natural Rubber
Latex**

ALLERGY ALERT

**This patient is allergic
to Natural Rubber
Latex**

ALLERGY ALERT

**This patient is allergic
to Natural Rubber
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Latex**

ALLERGY ALERT

**This patient is allergic
to Natural Rubber
Latex**

Important Notice

**Are you allergic or do you react to
any medicines, foods, rubber
gloves or anything else?
Please inform staff before
receiving any treatment.**

ALLERGY ALERT

**This patient is allergic to Natural Rubber Latex
(avoid using latex gloves or other latex products)**