



POLICY NUMBER:	NS-230.000
ISSUING AUTHORITY:	Surgical Care Team
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**SUBJECT: LATEX ALLERGY POLICY**

**BOARD POLICY REFERENCE:**

- Executive Limitation (EL-2) – Treatment of Clients
- Executive Limitation (EL-3) – Treatment of Staff
- Executive Limitation (EL-7) – Asset Protection & Risk Management

**POLICY:**

A patient with a known or suspect latex allergy is placed in a latex safe environment that is prepared and maintained by all employees within Central Region.

**DEFINITIONS:**

**Latex:**

A whitish milky fluid containing protein, starch, alkaloids, etc., that is produced by many plants. Latex materials are produced with natural latex in a concentrated colloidal suspension.

**Natural Rubber:**

Materials made from coagulated, dried or milled latex. Dry natural rubber is less allergenic than latex, but can cause allergic reactions and should not be used in a latex-allergic patient.

**Latex-safe Environment:**

An environment that minimizes the risk of a reaction occurring in individuals sensitized to natural rubber latex.

## PROCEDURE:

### Implementation:

1. For a planned procedure, prior to admission the health care team will assess the patient's severity of latex allergy relative to the facility's resources. The patient should be referred to another facility if a latex-safe environment cannot be assured.
2. Complete an assessment to identify if the patient has a latex allergy or is at high risk for latex sensitivity. (see Important Points to Consider #6)
3. Ensure that all members of the health care team are aware of the latex allergy. Document in red ink.
4. A scheduled admission or procedure: set up a single room the day before.
5. An unscheduled or emergency procedure: use a room that has been vacant for 24 hours.
6. Obtain the Latex-Free Kit.
7. Remove all unneeded equipment and furniture from the room.
8. Make up the bed with double sets of sheets and pillowcases, DO NOT use fitted sheets on bed or stretcher as they may contain latex in the elastic. Cover the wheelchair, chair, footstool, etc. with double cotton barriers (Cotton sheets are used as a barrier; folded to provide double thickness).
9. Post the *Latex Allergy - Latex Precautions Sign* (NS-E00.153) from Latex-Free Kit on the door and over the bed.
10. Set up the room with required equipment, referring to *Latex Allergy - Latex Content of Clinical Equipment and Supplies List* (NS-E00.150.000). Whenever possible, all equipment used for latex sensitive and allergic patient should be left in the patient's room for the duration of his/her stay. If equipment must be shared and moves in and out of the patient's room, the equipment should be cleaned before taking into the latex sensitive/allergic patient's room. Cleaning the equipment will remove latex that may be on the outer surface from being in outside rooms/environment where latex may be used (e.g. surgeon gloves used on the rest of the unit, latex in the glove dust is spread onto surrounding equipment).
11. Leave the room vacant with the door closed overnight if possible.
12. Wash hands after any latex contact to decrease risk of exposure to yourself and the patient.
13. On admission, attach red allergy bracelet on patient and indicate the allergy on the health record and kardex.
14. Notify other departments of patient's latex allergy. This includes Nutrition Services, Environmental Services, Respiratory, Diagnostic Imaging, Pharmacy and others involved in the patient's care.

15. Contact with latex must be avoided during all aspects of care:
  - ◆ Advise patient to bring to the hospital their own undergarments, slippers/shoes, nightwear, pillow, etc.
  - ◆ Avoid direct contact with telephone cords, TV earplugs and electrical cords as these items contain latex.
  - ◆ Cover call bell with latex-free paper tape or tubinet taped at end.
  - ◆ Remove balloon arrangements or other latex/rubber gifts from patient's room.
  - ◆ Do not remove sterilization tape in the room. Sterilizing tape, masking tape and adhesive tape all contain latex.
  - ◆ Leave patient health record, kardex, carts with rubber wheels and other latex products outside the patient's room.
  - ◆ Instruct the patient to avoid touching any hoses in the bath or shower.
  - ◆ Remove rubber backed mats from the bathrooms/shower.
  - ◆ Inform the patient that the baseboards, wall boards and stairwells may contain latex.
  - ◆ Remove rubber garbage cans from the patient room and provide alternate latex-free receptacle.
  
16. Monitor patient for the following symptoms:
  - ◆ Contact dermatitis (skin irritation, redness, rash or eczema) is the most frequent symptom.
  - ◆ Respiratory tract symptoms include runny nose, itchy swollen eyes, sneezing or hay fever.
  - ◆ Systemic reaction presents as hives, conjunctivitis, chest tightness, wheezing, coughing, shortness of breath, asthma, tachycardia, facial edema, flushing, laryngeal edema, or low B/P, anaphylaxis leading to cardiac arrest
  
17. Be prepared to treat patient. Be prepared to stop treatment/procedure.
  - ◆ Airway maintenance: with 100% O<sub>2</sub>
  - ◆ Intravenous Epinephrine: 0.5 – 1.0 ug/kg bolus. May need to repeat dose or give subcutaneous or by continual infusion.
  - ◆ Volume resuscitation: with Ringers Lactate or Normal Saline
  - ◆ Withdraw antigen immediately: if known
  - ◆ Secondary treatment:
    - ◆ Diphenhydramine: 1 mg/kg IV (max. dose 50 mg.)
    - ◆ Methylprednisolone: 2 mg/kg IV (max. dose 125 mg.)
    - ◆ Ranitidine: 0.5 mg/kg IV every 6 hours for 2 – 4 doses (max. dose 50 mg.)
  
18. Observe patient closely for a minimum of 24 hours.
  
19. Whenever possible, treatments and diagnostics should be done in the patient's room to reduce the possible risk of exposure to latex. If the patient must go to another department, phone in advance.
  
20. Patient education should include:
  - ◆ Recognizing signs and symptoms of latex allergy/sensitivity.
  - ◆ Treatment of minor and severe response to latex allergy.
  - ◆ Importance of wearing Medic Alert Bracelet. If the patient does not have a Medic Alert

- ◆ Bracelet, provide information on obtaining one.
- ◆ Identification and avoidance of latex products commonly found in the home and in the community.
- ◆ Focus on reducing, controlling, and eliminating latex in the home and the workplace.
- ◆ Reminder about latex products used in the dental practice.

**Department Specific:**

**1. Operating Room:**

- 1.1 Premedication - may be ordered by the Anesthetist
- A) Oral Regime:
- ◆ Prednisone: 1mg/kg by mouth every 6 hours (max. dose 40 mg/dose) for 12 - 4 hours prior to patient arriving at hospital and 1 hour prior to induction of anesthesia.
  - ◆ Hydroxyzine: 0.7 mg/kg by mouth every 6 hours (max. dose 50 mg/dose) for 12 - 24 hours prior to the patient arriving at the hospital and 1 hour prior to induction of anesthesia.
- B) Intravenous Regime:
- ◆ Methylprednisolone: 1mg/kg IV every 6 hours for 2 – 4 doses (max. dose 125 mg).
  - ◆ Diphenhydramine: 1 mg/kg IV every 6 hours for 2 – 4 doses (max. dose 50 mg)
  - ◆ Ranitidine: 0.5 mg/kg IV every 6 hours for 2 – 4 doses (max. dose 50 mg)
- 1.2 Day Before Surgery
- ◆ Remove all latex products from the theatre (extra padded stools, adhesive tape, "donuts", ulna pad, foam, roller, etc.).
  - ◆ Slate as first patient of the day, whenever possible.
  - ◆ Surgeon is to inform the OR Charge Nurse of all the supplies intended for use during the surgical procedure e.g., drains, catheters, dressings, etc.
  - ◆ Entire team to review possible surgical complications and the supplies that would be necessary to treat those complications e.g., hemorrhage, infection, etc.
  - ◆ Review contents of the Latex-Free Kit and the *Latex Allergy - Products Sterilized with Ethylene Oxide In-House List BTHC (NS-E00.152.000)*
  - ◆ Leave air exchange system on the entire night prior to surgery.
- 1.3 During Surgery
- Remember:
- ◆ All sterilizing tape contains latex. Remove sterilizing tape prior to taking bundle into the theatre. Masking and adhesive tape also contain latex.
  - ◆ If anaphylaxis occurs, it may require aborting the procedure or treatment and removing the patient away from the antigen.
  - ◆ Bring Latex-Free Kit into the theatre.
  - ◆ Latex-free gloves must be available for the surgical team.
  - ◆ Anesthetist to ensure that equipment/supplies/medications to treat respiratory and circulatory problems are available and are latex-free.

- ◆ Circulating and Scrub nurse together assess the sterile field to ensure that it is a latex-free environment.
- ◆ Scrub nurse should have a sterile basin with sterile distilled water to rinse off ETO sterilized equipment (cautery cords and holster). Use sterile glove liners over non-latex gloves to wash off supplies, and then remove the liners.
- ◆ Circulating nurse and anesthetist to continuously assess the patient for signs and symptoms of allergic reaction.

## 2. Ethylene Oxide Sterilization (ETO):

ETO can bind to many products and act as a powerful antigen that may be involved in anaphylaxis. There is a high incidence of cross-reactivity responses to ETO in persons with latex allergies; especially those who have had multiple urinary tract surgeries or have spina bifida. Rinse, with sterile distilled water, all products that have been sterilized in-house with ETO. Refer to enclosed list titled *Latex Allergy - Products Sterilized with Ethylene Oxide (ETO) In-house (BTHC)* (NS-E00.152.000).

## 3. Nursing Units:

- ◆ Have Latex-Free Kit accessible.
- ◆ Assign patient to a private room. If latex powdered gloves are used in the area, have the room damp dusted and all latex products removed at least 2 hours prior to admission whenever possible.
- ◆ Try to keep to a minimum the numbers of people involved in the patient's care.
- ◆ Emphasize thorough hand washing before caring for the patient.
- ◆ Note all precautions regarding IVs, medications and plan procedures accordingly.
- ◆ The Obstetric Unit should notify the OR, PACU, Respiratory and ICU if there is any possibility a C-section may be required.

## 4. Environmental Services

- ◆ Prior to admission, ensure all horizontal surfaces in the room are damp dusted and all latex products are removed preferably 24 hours (but at least 2 hours) prior to admission. Remove rubber backed mats from the bathrooms/shower. Remove rubber garbage cans from the patient room and provide alternate latex-free receptacle. Keep carts with rubber wheels and other latex products outside the patient's room during cleaning. Make bed with flat sheets only—contour sheets may contain latex. Use two flat sheets to cover mattress.
- ◆ During patient's hospital stay, do not bring items containing rubber or latex into patient's room: May include wheels on carts or buckets or gloves
- ◆ After patient's discharge, return any standard items that were removed from the room.

## 5. Nutrition & Food Services

- ◆ Notify Nutrition and Food Services of any food allergies as well as the latex allergy.
- ◆ All food preparation to be done using latex-free gloves.

## 6. Respiratory Technologist And ICU

- ◆ Notify the Respiratory Technologist and the ICU staff if surgery on a latex allergic patient is planned so resuscitation and ventilator equipment is readily available.

## 7. Health Care Workers

- ◆ Health care workers are among those individuals at high risk for latex allergy.
- ◆ Wear non-sterile latex gloves only when there is a risk of contamination from blood and body fluids.
- ◆ Ensure hands are completely dry before donning gloves
- ◆ Remove gloves carefully to avoid upper airway allergies from airborne protein particles.
- ◆ Avoid petroleum-based hand creams to maintain the integrity of the glove.

## 8. Immunizations For Persons With A Latex Allergy

- ◆ Use only latex- free products if possible. Latex may be present in the vaccine or diluent stoppers, syringe plungers or needle-syringe attachment areas. Contact the product manufacturer prior to vaccine administration to ensure product does not contain latex. Manufacturers may change the contents of their products without warning.
- ◆ If latex is present and removable, it should be removed, e.g. a latex containing stopper should be removed before vaccine is withdrawn.
- ◆ Use latex-free syringe to administer the vaccine.
- ◆ Observe for 1 hour following vaccination.
- ◆ If immunization is contemplated in an instance when exposure to latex cannot be completely eliminated, referral to an allergist is recommended.

### IMPORTANT POINTS TO CONSIDER:

#### General Information on Latex Allergy:

1. Latex allergy reactions range from contact dermatitis to anaphylaxis. Symptoms may include: itchy eyes, generalized pruritis, shortness of breath, faintness, feeling of impending doom, nausea, vomiting, cramping, diarrhea, wheezing, tachycardia, hypotension, bronchospasm, flushing and/or edema.
2. Latex allergy results from direct or indirect exposure to true latex or natural rubber (plant source). Man made "latex" (butyl or petroleum source which contains no true latex) may cause an allergic response, but this is not a latex allergy.
3. The degree of latex exposure rises if the latex surface is pierced, broken or has deteriorated.
4. The allergen in latex does not cross barriers of cloth or paper if the latex surface is intact.

5. The highest risk is from serous/blood or mucous membrane contact, e.g. IV injection, urinary catheter insertion, dental dams. Latex particles also become airborne easily. For example in the powder from latex gloves or from latex balloons.
6. Latex allergy patients often have allergies to certain foods and plants, including: apples, apricots, avocados, bananas, carrots, celery, cherries, chestnuts, figs, grapes, hazelnuts, kiwi fruit, melons, nectarines, papaya, potatoes, peaches, pears, pineapple, plums, passion fruit, rye flour, tomatoes, and wheat. Many latex allergy patients are also allergic to the sterilant ethylene oxide.

Latex allergy can be assessed by an allergist: ° Systemic/anaphylactic reactions (immediate hypersensitivity): the *RAST* (Radioallergosorbent Test) through Health Sciences Centre Lab and skin testing. ° Contact dermatitis/cell mediated reactions: by "patch" skin testing

#### **EQUIPMENT / SUPPLIES NEEDED:**

- ◆ Latex-Free Kit
- ◆ Red allergy bracelet

#### **DOCUMENTATION:**

- ◆ NS-E00.149.000 Latex Allergy –Latex-free Kit Contents List
- ◆ NS-E00.150.000 Latex Allergy - Latex Content of Clinical Equipment and Supplies List
- ◆ NS-E00.151.000 Latex Allergy - Latex Content of Injectable Drugs List
- ◆ NS-E00.152.000 Latex Allergy - Products Sterilized With Ethylene Oxide (ETO) In-House List  
Boundary Trails Health Centre
- ◆ Latex allergy is documented in the Patient Record, Kardex and patient armband, plus posted outside the patient room.
- ◆ The nurse records in the Patient Progress Notes that latex precautions were established.
- ◆ Any transfer out of the patient's room is recorded, where and by whom, including the arrangements made with the involved department to provide a latex safe environment.

#### **REFERENCES:**

American Association of Nurse Anesthetists. AANA Latex Protocol. Accessed March 2008 at [www.aana.com](http://www.aana.com)

Farnham, J.J., Tomazic, V.J. Stratmeyer, M.E. Regulatory Initiatives for Natural Latex Allergy: US

Perspectives. *Methods*. May 2002, 27(1), pp. 87-92.

Haynes, L.C., Ludgar, J. Nursing Students' Risk for Latex Allergy: Implications for Nurse Educators). *Journal of Nursing Education*, Vol. 41, No. 11, November 2002.

Hepner, D.L., Castells, M.C. Latex Allergy: An Update (2003). *Anaesthesia & Analgesia*, April 2003, 96(4); 1210-29.

Metules, T. Latex-safe Periop Care. *RN*. March 2003, Vol. 66, No. 3.

Miller, B.A. Minimizing Latex Exposure and Allergy. *Postgraduate Medicine*, 2003, Vol. 113, No. 4.

Occupational Safety & Health Administration. Latex Allergy. U.S. Department of Labor. Accessed March 2008 at <http://www.osha.gov/SLTC/latexallergy/index.html>

Society of Gastroenterology Nurses and Associates. Guidelines for Preventing Sensitivity and Allergic Reactions to Natural Rubber Latex in the Workplace. 2001.

Spina Bifida Association of America. Latex in the Hospital Environment. 2003.

Worthington, K., Wilburn, S. Latex Allergy: What's The Facility's Responsibility and What's Yours? *Nevada Information*, February 2002, 11(1): 24.