

Managing Latex Allergy in the Workplace

PURPOSE:

To educate and manage employees regarding latex allergy or sensitivity.

BACKGROUND:

Workers in the health care industry are at risk for developing latex allergy because they use latex gloves frequently. The National Institute for Occupational Safety and Health (NIOSH) requests assistance in preventing allergic reactions to natural rubber latex among workers who use gloves and other products containing latex. Latex gloves have proved effective in preventing transmission of many infectious diseases to health care workers. But for some workers, exposures to latex may result in skin rashes, hives, flushing, itching, nasal, eye, or sinus symptoms; asthma and (rarely) shock. Reports of such allergic reactions have increased in recent years – especially among health care workers.

Prevalence of latex allergy is estimated at 1-6% of the general public and 6-12% of regularly exposed health care workers. Scientific data at present is incomplete regarding the history of latex allergy. Improvements in methods used to measure proteins causing latex allergy are needed. NIOSH recommends minimizing latex related health problems in workers by: reducing exposures, using appropriate work practices, training and educating workers, monitoring symptoms and substituting non-latex products when appropriate.

Products commonly containing latex:

Blood pressure cuffs	Rubber tops of multi-dose vials	Rubber bands
Stethoscopes	Syringes	Erasers
Disposable gloves	Catheters	Dishwashing gloves
ET tubes	Wound drains	Pacifiers
Airways	Surgical masks	Baby bottle nipples
IV tubing, injection ports		Condoms

Types of reactions:

- **Irritant contact dermatitis** – development of dry, itchy, irritated areas on the skin, usually the hands. It is caused by skin irritation from using gloves and possibly by exposure to other products. This can also result from repeated hand washing and drying, incomplete hand drying, use of cleaners and sanitizers, and exposure to powders added to gloves. **Irritant contact dermatitis is not a true allergy.**
- **Allergic contact dermatitis** – results from exposure to chemicals added to latex during harvesting, processing, or manufacturing. These chemicals can cause skin reaction similar to those caused by poison ivy. As with poison ivy, the rash usually begins 24-48 hours after contact any may progress to oozing skin blisters or spread away from the area of skin touched by the latex.
- **Latex allergy** – is immediate hypersensitivity and can be a more serious reaction to

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latex than irritant or allergic contact dermatitis. Certain proteins in latex may cause sensitization. The amount of exposure needed to cause sensitization or symptoms is not known, but exposures at even very low levels can trigger allergic reactions in sensitized individuals. Reactions usually begin within minutes of exposure to latex but can occur hours later and produce various symptoms.

- Mild reactions to latex involve skin redness, hives, or itching.
- More severe reactions may involve respiratory symptoms such as runny nose, sneezing, itchy eyes, scratchy throat, and asthma. Rarely, shock may occur, but a life threatening reaction is seldom the first sign of latex allergy. These reactions are similar to those seen in allergic persons after a bee sting.

The degree of sensitivity can increase with continued exposure to latex. Proteins responsible for latex allergies have been shown to fasten to the powder used on some latex gloves. When powdered gloves are worn, more latex protein reaches the skin. Also, when gloves are changed, latex protein/powder particles get into the air where they can be inhaled and contact body membranes. Wearing latex gloves during episodes of hand dermatitis may increase exposure and the risk of developing latex allergy. Routes of exposure include cutaneous, percutaneous, mucosal, parenteral, and aerosol.

Who is at Risk?

- Health care workers
- Individuals with a tendency to have multiple allergy conditions
- Individuals with allergies to certain foods: avocado, potato, banana, tomato, chestnuts, pineapples, kiwi, and papaya
- People with spina bifida
- People who have had multiple surgeries, especially genitourinary surgery

Diagnosing Latex Allergy

- Latex allergy should be suspected in anyone who develops certain symptoms after latex exposure: nasal, eye, or sinus infection
- Hives
- Shortness of breath
- Coughing
- Wheezing
- Unexplained shock

Any exposed worker who experiences these symptoms should be evaluated by a physician. A diagnosis is made through medical history, physical examination and tests. FDA approved blood tests are available to detect latex antibodies. Testing is

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also available to diagnose allergic contact dermatitis. In this FDA-approved test, a special patch containing latex additives is applied to the skin and checked over several days. A positive reaction is shown by itching, redness, swelling, or blistering where the patch covered the skin. Test results must be evaluated by a knowledgeable physician.

Treating Latex Allergy

Once a worker becomes allergic to latex, special precautions are needed to prevent exposure. Certain medications may reduce the allergy symptoms, but complete latex avoidance (although quite difficult) is the most effective approach.

POLICY:

1. Develop a list of latex free products available in the facility.
 - a) Ask manufacturers for lists of their products that contain latex, are latex free or low latex allergen products and update regularly; many manufacturers are moving to "latex-free" lines of products.
 - b) It may not be possible to find a latex-free alternative for every product.

NIOSH Recommendations:

2. Employers must provide* health care workers with:
 - a) Non-latex gloves to use when appropriate
 - b) Reduced protein, powder-free gloves
Such gloves reduce exposures to latex protein and thus reduce the risk of latex allergy. So-called hypoallergenic latex gloves do not reduce the risk of latex allergy. However, they may reduce reactions to chemical additives in the latex (allergic contact dermatitis).
*OSHA's 1991 universal precautions states that "powder-free gloves or other similar alternatives are required to be readily accessible to those employees who are allergic to the gloves normally provided"
3. Educate health care workers on work practices to reduce the chance of reactions to latex:
 - a) when wearing latex gloves, do not use oil-based hand creams or lotions (which can cause glove deterioration) unless they have been shown to reduce latex-related problems and maintain glove barrier
 - b) after removing gloves, wash hands with mild soap and dry thoroughly
 - c) recognize symptoms of latex allergy
 - d) become familiar with procedures for prevention
 - e) If symptoms develop, avoid direct contact with latex and see physician experienced in treating latex allergy. Symptoms include: skin rashes; hives; flushing; itching; nasal, eye or sinus symptoms; asthma and shock.
 - f) If an employee has a latex allergy, recommend that they consult a physician and follow these precautions:

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- avoid contact with latex gloves and other latex-containing products
 - avoid areas where they might inhale the powder from gloves worn by others
 - encourage them to alert their employer and health care providers (physician, nurse, dentist, etc.) that they have a latex allergy
 - wear a medical alert bracelet
4. Complete Incident / Quality Assessment Report on any employee who develops a latex allergy.

RESPONSIBILITY

The Clinical Specialist has responsibility for approval of, compliance with, and revisions to this policy.

MODIFICATION/REVISION

This policy is subject to modification or revision in part or its entirety to reflect changes in conditions subsequent to the effective date of this policy.

REFERENCES

1. Infusion Nursing Standards of Practice – Revised 2016; Journal of Infusion Nursing, Supplement to January/February 2016, Volume 39, Number 1S.
2. Infusion Nursing: An Evidence-Based Approach, Third Edition edited by Mary Alexander, Ann Corrigan, Lisa Gorski, Judy Hankins, and Roxanne Perucca.
3. INS (Infusion Nurses Society) Policies and Procedures for Infusion Nursing, 3rd Edition.