

Preventing & Reducing Latex Allergies

This OSACH Fast Fact is intended to help workers, managers, employers and JHSC members become more aware of some of the ways that latex allergies can be reduced in the health care environment.

Natural Rubber Latex (NRL) allergy was recognized as early as 1979. Since this time, there have been increasing numbers of reports of latex allergic reactions, including anaphylaxis, in individuals exposed to latex. This increase may be due to heavy use of latex gloves as a result of adopting Body Substance Precautions (BSP) as part of infection control measures.

What is latex?

Latex is the milky sap of a commercial rubber tree. Natural rubber is derived from latex and is different from synthetic rubber derived from the petrochemical industry (i.e., synthetic rubber does not contain allergy inciting plant proteins). In the manufacturing of latex products, additional chemicals such as accelerators and antioxidants, are added to improve strength, stretch and durability.

Latex is becoming increasingly common. It is particularly abundant in the healthcare environment in items such as medical gloves, IV tubing, multi-dose vials, syringes, catheters, blood pressure cuffs, etc.

What are the symptoms of a latex allergy?

There are three common types of adverse reactions to latex gloves worn as barrier protection: irritant dermatitis, allergic contact dermatitis, and protein contact dermatitis.

Irritant (non-allergic) Dermatitis

This is a non-allergic response to the use of the gloves. It usually results from friction, pore blockage, or wet hands that may occur while wearing gloves. Symptoms include dry, scaly, red, and, possibly, cracked skin.

Allergic Contact Dermatitis

This is an allergic response to the chemical additives in the gloves, such as accelerators and antioxidants. Poor glove manufacturing processes may increase the risk of this type of reaction. It may occur within several hours to days after glove use as a sore or rash where the glove has come in contact with the skin. The symptoms may sometimes be confused with non-allergic dermatitis.

Protein Contact Dermatitis

This is a rare systemic reaction created by exposure to proteins that occur naturally in the latex: a true NRL allergy affecting about 7 to 10 percent of health care providers.

Cornstarch or other powders added to the glove can make this reaction worse. Latex proteins bind to the powder and become airborne when the gloves are handled or removed and can be inhaled or carried into the air and HVAC systems and even onto hair, clothing, documents, etc. Symptoms include rhinitis, conjunctivitis, swelling, respiratory distress, etc. In its most severe form, this type of reaction can be life-threatening.

Who is at risk of a latex allergy?

- Health care providers
- Workers in the rubber industry.
- Workers in the food industry.
- Patients previously exposed to latex.
- Patients who have had repeated bladder catheterisation.
- Patients who have had multiple surgical procedures

In addition, persons with multiple allergies or with known allergies to certain foods like bananas, avocados and chestnuts may be at increased risk.

Possible Indicators of a NRL Allergy

- Rash when using gloves
- Lip or facial swelling after having blown up NRL balloons
- Dermatitis from condom or diaphragm use
- Unexplained anaphylaxis
- Asthma symptoms, rhinitis, or conjunctivitis, especially when they occur immediately after contact with NRL products

What are the strategies to reduce and prevent latex allergies?

- Establish a Latex Allergy Committee to address all concerns associated with the issue of latex allergy with regards to staff, patients and products.
- Establish and implement policies and procedures regarding latex allergies and the use of non-latex substitutes.
- Address, through the Committee, procedures regarding non-medical latex items that find their way into the work environment (e.g., toys, balloons, etc.)
- Include a member of the purchasing department on the Committee to monitor the amount of latex-containing products coming into the work environment.
- Encourage workers with symptoms of latex allergy to report to Occupational Health Services. Delayed diagnosis may make the problem worse.
- Substitute non-latex products wherever possible to minimize latex in the environment.
- Provide non-latex gloves for all staff with documented latex allergies.
- Reassign extremely sensitized workers to latex-safe work areas to prevent their exposure to airborne protein particles.
- If latex gloves must be used, ensure they are high quality and powder-free.
- Establish procedures for the appropriate use of gloves, depending on the task.
- If glove liners are worn, inform workers to use PVC glove liners rather than cotton. Protein particles may migrate through cotton liners.
- Ensure that workers are aware that lotion or barrier creams should not be used under gloves. These products may react with the latex and compromise the integrity of the glove.
- Inform workers that jewelry like rings worn under gloves can lead to irritation.
- Educate staff to identify sources of latex products in their work and home environments.

What are sources of latex in health care and possible substitutes?

Always consult with suppliers regarding the content of their products and suggestions for appropriate substitutes. Here are some suggestions.

Latex-containing Products

- Airways
- Band-aids
- Blood pressure cuff
- Electrode pads
- Endotracheal tubes
- Gloves
- IV tubing ports
- Suction tubing

Latex-free Alternatives*

- Hudson airways, oxygen masks
- Sterile dressing with plastic tape
- Use over sleeve or stockinette
- 3M, Baxter EKG pads
- Sheridan, Mallenckrodt
- Vinyl, neoprene, Tru-touch, Sensicare
- Tubing without ports, use stopcocks for injection
- Mallenckrodt

* This list is not complete. New products are continually being introduced. The products mentioned are possible alternatives and not ones exclusively endorsed by the OSACH



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