



QUINTE HEALTHCARE CORPORATION

Appendix B: Background Information and Types of Reactions to Latex

Environments laden with latex allergens are unsafe for individuals who have been clinically diagnosed as either sensitive or allergic to natural rubber. These individuals should be treated or work in an environment that is latex safe, with additional measures taken for the immediate vicinity in which the individual receives or provides care. Since QHC is not maintained as latex-free, comprehensive latex precautions will be required each time a latex-allergic individual presents for care or services (AORN, 2011).

Risk factors for developing a latex sensitivity/allergy include but are not limited to (ORNAC, 2017):

- Individuals frequently exposed to latex (e.g., patients with spina bifida or genitourinary malformations, patients who have had multiple surgeries, or health care personnel)
- Individuals who have a history of atopy or multiple allergies
- Individuals who have allergies to certain foods (e.g., banana, avocado, kiwi fruit)

Three types of reactions are associated with latex products. In order of frequency of occurrence they are an irritant reaction, a delayed hypersensitivity reaction (i.e., type IV), and an immediate hypersensitivity reaction (i.e., type I) (Table 1). Any individual who experiences any type of latex-associated reaction should be evaluated by a qualified health care practitioner (AORN, 2011).

Table 1

TYPES OF REACTIONS TO LATEX				
Type of Reaction	Cause	Onset	Symptoms	Prevention
Irritant contact dermatitis <i>(Nonallergic irritation; not a true allergy)</i>	Frequent hand washing insufficient rinsing, aggressive scrubbing technique, use of antiseptics, climatic irritation, glove occlusion, glove powder	Reaction develops gradually over a period of days or weeks.	Scaling, drying, cracking of skin may develop as dermatitis on the backs of the hands. Wearing latex gloves when symptoms are present may increase the risk of developing latex allergy	Obtain medical diagnosis, dermatology consultation; avoid irritant product; ensure barrier effectiveness of glove material; consider alternative products, cotton glove liners.
Type IV hypersensitivity: T cell-mediated	Results from exposure to chemicals used	Rash usually begins six to 48 hours after	Red, raised, palpable area with bumps,	Obtain medical diagnosis, dermatology

<i>(Also called delayed cutaneous hypersensitivity; allergic contact dermatitis; chemical allergy)</i>	in latex harvesting, processing, or manufacturing (eg, thiurams, carbamates, benzothiazoles).	contact and may progress to oozing skin blisters or spread away from the area of skin touched by the latex.	sores, and horizontal cracks may extend up the forearm. May occur after a sensitization period resulting from repeated exposure to latex or irritant chemicals.	consultation; identify irritant chemical; use alternative glove material without chemical; ensure barrier effectiveness of glove material; consider alternative products, cotton glove liners.
Type I hypersensitivity; immunoglobulin-mediated <i>(Also called immediate reaction hypersensitivity; latex allergy; protein allergy)</i>	Results from exposure to proteins in latex on glove surface or bound to powder and suspended in the air, settled on objects, or transferred by touch.	Reactions usually begin within minutes of exposure but can occur as much as two hours later. May fade away rapidly after removing the glove.	Mild reactions involve skin redness, hives, or itching on the skin under the glove. The chronic form may mimic irritant and allergic contact dermatitis. More severe reactions may include facial swelling, rhinitis, eye symptoms, generalized urticaria, scratchy throat, respiratory distress, and asthma. In rare cases, anaphylactic shock may occur.	Obtain medical diagnosis, allergy consultation; substitute nonlatex gloves or other nonlatex products; reduce or eliminate exposure to glove powder; clean powder from environment; consider latex-safe environment.

There is no cure for a latex allergy at this time, only prevention. Latex has accounted for 20% of anesthetic related anaphylactic reactions, however the majority are attributed to a hypersensitivity reaction or irritant dermatitis (NHS Plus, 2008). The incidence of reactions to latex is decreasing, thanks to effective avoidance measures (Mertes et al., 2011).