

Infection Control Fact Sheet

Facts About Latex Allergy

In the United States, latex glove usage has increased since 1986 from 1.4 billion to 13.8 billion pairs of gloves used in 1997. Latex gloves have proven to be very effective in protecting healthcare workers from many infectious diseases like HIV and Hepatitis B. However, some healthcare workers exposed to natural latex are developing allergic reactions. *There are three types of reactions to latex: Irritant Contact Dermatitis, Allergic Contact Dermatitis and Immediate Hypersensitivity.*

- ◆ **Irritant Contact Dermatitis** is the most common reaction to latex products. This involves the development of dry, itchy, irritated skin, most often the hands. These symptoms never extend past the contact area. Damage usually occurs after gloves have been worn for long periods of time, thus preventing the skin from exposure to the air.
- ◆ **Allergic Contact Dermatitis** is an allergy that develops over time. Symptoms of allergic contact dermatitis are a skin rash, similar to poison ivy and generally occur from 48-72 hours after exposure. It is usually confined to the areas that have been in direct contact with the latex product. In the case of occupational exposures, the hands are most commonly affected.
- ◆ **Immediate Hypersensitivity** is the most serious reaction. Symptoms usually appear within minutes of exposure, however, they can take up to one hour before they manifest. The localization of symptoms is dependant upon the route of exposure, the degree of allergic sensitivity and the difference between the allergic potential of different organs. Skin that has been in contact with the latex product is usually the first place where the allergy will manifest, because of the frequent and prolonged cutaneous exposure. This can be followed by nasal, ocular and pulmonary symptoms.

Routes of Exposure

In 1987 the Centers for Disease Control and Prevention (CDC) recommended Universal Precautions, the concept that blood and certain body fluids from all individuals should be approached as if potentially infectious. The use of barrier protection was subsequently required by OSHA's bloodborne pathogens standard. The increased use of latex gloves in a variety of settings greatly increased the exposure of healthcare workers to NRL (Natural Rubber Latex).

The two major routes of exposure include **dermal exposure** and **inhalational exposure**. Exposure may also occur by the respiratory route, particularly when glove powder acts as a carrier for NRL protein, which becomes airborne when the gloves are donned or removed. Some investigations have indicated that powder free gloves with reduced protein cannot reduce the risk of development of NRL allergy.

Recommendations

Use non-latex gloves for activities without infectious disease risk (food preparation, housekeeping, etc.). Choose powder-free, reduced-protein latex gloves whenever possible. Wash hands after glove use. Healthcare workers (HCWs) with suspected latex sensitivity/allergy will be provided with information about latex sensitivity/allergy. If after screening by Occupational Health Service, an HCW is documented with latex sensitivity/allergy, a recommendation will be made regarding the HCW's job duties.



Latex Allergy

What is Latex?

Latex is a milky fluid extracted from a rubber tree. Two compounds of latex cause health problems: natural proteins and chemicals added during processing. There are 240 natural proteins in latex. 52 of these proteins are allergenic; 10 are major allergenic proteins.

Who is at Risk?

Groups at risk include: workers with ongoing latex exposure (healthcare workers, lab technicians, housekeepers) and atopic individuals (persons with a tendency to have multiple allergic conditions). Latex allergy is also associated with certain food allergies: avocado, potato, banana, tomato, chestnut, kiwi and papaya.

How common is it?

1-6% of the general population is allergic to latex. 11% of occupationally exposed non-healthcare workers and 8-12% of healthcare workers have this allergy.

Treatment

Take precautions to prevent exposures during medical or dental procedures. Medical treatment may reduce symptoms, but avoidance is the only long-term solution.