

Latex Allergy in 2004

What's Known, What's Now, What's Next

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The first report of allergic reactions to natural latex rubber in children with spina bifida appeared in the medical literature 15 years ago. A year later, doctors in Wisconsin identified a 500-fold risk of life-threatening latex reactions in the operating room for children with spina bifida compared to other surgical patients. Latex allergy was suddenly a public health issue. The US Food and Drug Administration (FDA) issued a Medical Alert in March 1991; the Public Health Service recommended postponing elective surgery for children with spina bifida in July 1991 and the Centers for Disease Control and Prevention (CDC), with others, convened an international meeting on latex allergy in 1992. Finally in 1998 FDA regulations requiring labeling of medical devices containing latex went into effect. Still, the overwhelming response by the medical community was skepticism; how could a natural substance that we counted on to protect us from infectious agents be harmful, even fatal?

In 15 years, our growing understanding about latex allergy has forced changes in healthcare practice and product manufacturing. We've learned that

- People with spina bifida have the highest rates of latex allergy – up to 73 percent. This is probably because of the early, intense and repeated exposure to rubber products through operations and bladder and bowel programs.
- **Sensitization** means that a person has been exposed to antigens (substances that can cause allergies) and has antibodies (that can trigger a reaction when exposed again) circulating in the bloodstream. **Allergy** means that the person has had symptoms.
- The people with spina bifida most likely to develop latex allergy are those with
 - history of multiple operations
 - atopy (hypersensitivity diseases such as asthma, hay fever and eczema)
 - shunted hydrocephalus
- Other people are also at risk for latex allergy, particularly those exposed to natural latex rubber through multiple operations or through their work, especially in hospitals
- Exposure to latex in an allergic person can trigger an immediate, IgE-mediated allergic reaction. **Symptoms can include**
 - rash, hives and itching of the skin and mucous membranes
 - swelling
 - runny nose and tearing eyes, hoarse voice
 - difficulty breathing, stridor, wheezing
 - abdominal cramps, nausea, vomiting, diarrhea
 - dizziness, falling, blood pressure, shock and death
- Exposure can occur through
 - contact with skin or mucous membranes (mouth, rectum, genital, bladder)
 - contact with blood or internal organs, through intravenous or surgery
 - breathing airborne latex-laden powder from gloves, balloons
 - eating food contaminated with latex glove powder
- Natural latex comes from a plant and shares proteins with other plants. Cross-reactions often occur to bananas, tomatoes, avocados, kiwi, chestnuts and poinsettia and other

fruits and vegetables. People with latex allergy should be aware of the possibility of these reactions.

The only way to prevent allergic reactions to latex is by avoiding contact with items containing latex and with the latex-contaminated powder.

The standard of care for people with spina bifida is latex avoidance from birth. This means latex-safe labor and delivery/operating rooms and nurseries, a latex-safe environment at home, at medical and dental offices, at day care and school and work. Avoiding latex, even now with the labeling rules in effect, is not easy to do, since latex is everywhere, and is an often hidden ingredient in many common products – from rubber bands to balloons, from mouse pads to swimming goggles, from elastic in underwear to fast food restaurant playground ball pits.

Research suggests that treating all babies born with spina bifida in a latex-safe environment from birth, particularly during surgery, is effective in greatly reducing latex sensitization and allergy. Once a person is sensitized to latex and has developed the antibodies in his blood, latex avoidance is much less effective. Even with circulating antibodies however, reactions will not occur unless there is exposure to latex.

In addition to educating themselves and their communities about latex allergy, people who have had a significant latex allergy reaction should consider

- wearing a medic-alert bracelet or necklace
- carrying auto-injectable epinephrine
- carrying sterile non-latex gloves and other necessary latex-safe supplies for emergencies

Hopeful new areas of research include desensitization therapies for people with latex allergy and producing natural rubber from other sources, such as the guayule shrub or sunflowers.

There is not yet good research about many aspects of preventing or managing latex allergy. For example, the use of recycled tires for surfacing playgrounds and athletic tracks is controversial. Given the current knowledge about latex allergy, we recommend that

- In the general healthcare environment, non-latex or low-allergen unpowdered gloves should be the standard. This will reduce future sensitization.
- All individuals with spina bifida and related conditions should have a latex-safe environment from birth. This means in hospital, at clinics, in school and camp and in the community at large, including restaurants and shopping malls.

For more information, go to:

<http://www.sbaa.org> <http://www.latexallergyresources.org/>
<http://latexallergylinks.tripod.com>

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