

THE ALERT

Newsletter

Creating Awareness ~ Being Informed

Diagnosis of Latex Allergy

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Background

Products containing natural rubber are found in both medical products: gloves, surgical tubing, masks etc. and everyday products: balloons, sports equipment, etc. Natural rubber products are made from latex from the *Hevea brasiliensis* tree. The crude latex, usually collected in ammoniated solution to prevent microbial growth, contains an array of cellular proteins, lipids, and amino acids. These are the allergens that sensitize and pose a risk for health care workers, rubber industry workers, spina bifida patients and others who have had multiple surgeries.

Although latex allergy prevalence is less than 1% in the general population, its prevalence in health care workers and spina bifida patients remains higher.¹⁻⁴ While both health care workers and spina bifida patients have increased incidence of latex sensitization, the reasons behind the increased risk differ between these groups.⁵

The first case of latex allergy dates back to the 1920s.⁴ Latex sensitization has decreased in recent years, but has not been eliminated. A recent study by Kelly and associates has demonstrated that reducing powdered latex gloves in the health care setting decreased latex sensitization.⁶ In vitro IgE tests and skin prick tests can aid in the diagnosis of latex allergy.

Laboratory Testing

In vitro IgE tests include both the

Phadia ImmunoCAP for latex which contains Natural rubber from *Hevea brasiliensis*, without ammonia treatment,⁷ Hycor's HYTEC 288 Plus system, and other laboratory developed tests such as the Viracor-IBT Latex Radioimmunoassay (RIA) Panel. The Latex RIA Panel IgE tests relies on the following three latex antigen preparations to aid in the identification of patients sensitive to natural rubber products:

1. Ammoniated Latex (AL). Proteins were isolated from Malaysian *Hevea brasiliensis* latex collected in ammonia, the form usually used to manufacture dipped products.

2. Non-Ammoniated Latex (NAL) or Buffered Latex. To preserve the antigenic integrity of all proteins, latex was collected in a neutral pH buffer using the method developed by the FDA to prepare reference extracts.

3. Glove Latex (GL). An aqueous extract prepared from a commercial latex exam glove.

In the latex RIA assay the allergens (NAL, AL, or GL) are independently coupled to microtiter wells. Serum is added and latex-specific IgE bind to the coated allergens. Unbound IgE is washed away and bound IgE is detected with a radio-labeled anti-human IgE. Excess radio-labeled antibody is washed away and bound antibody is measured using a gamma counter. Latex-specific IgE is quantified by comparing the signal in the patient sample to a calibration curve.

In an unselected subset of patients with positive Latex RIA panel test

results, 45 percent were positive to just NAL, 8 percent to only AL, and 5 percent to only GL. Twenty percent were positive against all three allergens; with the remaining patients positive to two of the three allergens (internal data).

Test Interpretation

As with any allergy test (skin test or in vitro), positive test results are sometimes observed in patients with no clear history of an adverse reaction. In addition, patients with clinical disease may not always test positive with one of the latex allergy tests.^{3,8} Some studies suggest that evaluating the patient's total IgE along with latex specific IgE can aid in the evaluation of latex specific IgE. Specifically, patients with a positive history but latex IgE negative who have a total IgE of less than 100 IU/mL are more at risk for a reaction and should have follow-up skin prick tests done.³

References

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Upcoming Event

American Latex Allergy Association Awareness Walk 2012!

**Sunday, October 7, 2012
11:00am**



Join the ALAA as we kick off Latex Allergy Awareness Week and raise awareness on Long Island about Latex Allergies!

Get your team together and start raising money to help spread awareness about Latex Allergies!!

For more information and to register go to:
Latexawarenesswalk.wix.com/home

You can also follow instructions to make donations!!!

Latex Allergy Awareness Packets Now Available

August 24, 2012- October 13, 2012

Request your 2012 Latex Allergy Awareness Week Packets NOW!

Latex Allergy Awareness Week: October 7-13, 2012

LATEX ALLERGY...it's more than just the GLOVES!

Your packet will include:

- 2 Latex Allergy Awareness Posters
- 2 LATEX ALLERGY...it's more than just the GLOVES! Fact Sheets
- Latex Allergy 101 Fact Sheets
- Brochures on Latex Allergy
- Latex Related Materials for you to use or display

Ask The Expert ? ? ?

Here is your chance. You ask the questions -
We will do our best get you the answers.
Send to: alert@latexallergyresources.org

I have a latex allergy and I was wondering if Monk Fruit is a cross reactive fruit?

Answered by Tom Grier, Ph.D. Director, Allergen Product Development www.greerlabs.com

Monk fruits are in the same family as cucumbers, melons, pumpkins and squash, so allergic reactions to proteins from monk fruit are certainly possible. The new McNeil sweetener Nectresse uses an extract from monk fruit that contains mostly modified sugars (hydrocarbon-sugar complexes), with some other stabilizing or bulk sugars added. The nutrition facts state that the product contains 0% protein, but if some trace protein was present, it could produce an allergic reaction if similar chemically to the proteins in related fruits, particularly melons, that are known to cross-react with latex allergens. The key is McNeil's process and whether it removes all of the potential protein allergens from monk fruit during the extraction process. So until McNeil or some investigator can evaluate the contents of the new sweetener for allergen content and latex cross-reactivity, it could be a risk for anyone with latex sensitivity to use it. It would be best to check with your allergist for your allergy.

In the 80's as an LPN, I began having a rash and itchy watery eyes when wearing latex gloves. As a dialysis nurse I was routinely taking several sudafed when working just to breathe. I have had several severe allergic reactions when exposed to latex since then. Recently I had surgery on my arm and prior to surgery I told the Dr. I had latex allergy, he asked if I had been tested and I said I had been told years ago there was no safe test. A blood test was done prior to surgery but the surgery was latex free. When returning for post op exam I was told the blood test was neg. How can that be? I am very concerned that in the future someone will not listen when I say I am allergic and it will cause serious complications. What can I do?

Answered by: Robert G. Hamilton, Ph.D., D.ABMLI Professor of Medicine and Pathology Johns Hopkins University School of Medicine and Director Johns Hopkins Dermatology, Allergy and Clinical Immunology Reference Laboratory

It is not uncommon for individuals who had sensitized and had marked serological levels of IgE anti-latex in the 1980s but who have avoided exposure over years to become serologically negative when tested with our current IgE anti-latex assays. You should continue to request latex safe environments and surgery/dental experiences as exposure to powdered latex products may lead to re-sensitization. As you know, there is no environment that can be made truly "latex free" but most hospitals have adopted latex safe practices. A past history would support your continued request for latex safe medical/dental environments.

With School starting parents and children are looking for school supplies that are latex free.

**Check out Discount School Supply -
they have many latex free school supplies**

www.discountsschoolsupply.com

Search latex free for the supply list.

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Latex/

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Help educate your school about life-threatening allergies for a chance to win a \$2,000 college scholarship.

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Healthy Children Learn Better! School Nurses Make a Difference

How Does Your State Measure Up?

Students per School Nurse	State
1	396 Vermont
2	448 Connecticut
3	454 New Hampshire
4	472 Delaware
5	476 Washington, DC
6	477 OSHNA
7	503 Alaska
8	504 Wyoming
9	514 Maine
10	517 Rhode Island
11	533 New Jersey
12	536 Alabama
13	628 Kansas
14	665 New Mexico
15	696 New York
16	700 Massachusetts
17	732 Missouri
18	776 Maryland
19	779 Pennsylvania
20	784 Louisiana
21	789 South Carolina
22	819 Iowa
23	826 Texas
24	837 Virginia
25	918 Arkansas
26	960 Indiana
27	1,027 South Dakota
28	1,065 West Virginia
29	1,098 Mississippi
30	1,114 Kentucky
31	1,185 North Carolina
32	1,328 Ohio
33	1,403 Nebraska
34	1,416 Arizona
35	1,451 Montana
36	1,625 Wisconsin
37	1,649 Nevada
38	1,773 Minnesota
39	1,774 Tennessee
40	1,788 Colorado
41	1,881 Idaho
42	2,026 Oregon
43	2,031 Washington
44	2,179 Illinois
45	2,187 California
46	2,318 Georgia
47	2,372 Oklahoma
48	2,537 Florida
49	3,637 Utah
50	4,357 North Dakota
51	4,411 Michigan

Student-to-School Nurse (RN) Ratios 2010



www.nasn.org

Q) How do school nurses help children learn?

- A) The school nurses' role includes:
- Assessing student health status and making referrals
 - Identifying vision and hearing problems that impact learning
 - Delivering emergency care
 - Administering medication and vaccines
 - Performing health care procedures
 - Disaster preparedness
 - Providing health counseling and wellness programs

Q) What benefits can I expect from hiring school nurses?

- A)
- Help students manage chronic illness, increasing attendance
 - Improved attendance = academic success
 - Addressing health concerns keeps students at school and parents at work
 - Allows teachers to teach instead of providing health care for children
 - Reducing number of 911 calls
 - Health professional input on wellness programs for the school community

Q) How many school nurses are there in the United States?

- A) According to the Health Resources and Services Administration (HRSA), there are 73,697 registered nurses working as school nurses (HRSA, 2010).

Q) Is school nursing losing ground?

- A) No. School nursing remains a necessary investment for our children's health. Between 1999 and 2009, 38 states improved their number of school nurses

Q) How many school nurses does my district need?

- A) NASN and Healthy People 2010 recommend a needs-based formula approach for determining full-time school nurse-to-students ratio. For example:
- 1:750 WELL students
 - 1:225 in the student populations that may require daily professional school nursing services or interventions such as Special Ed inclusions
 - 1:125 in student populations with complex health care needs
 - 1:1 may be necessary for individual students with multiple disabilities

Q) Is there a shortage of school nurses?

- A) No. There is a shortage of funded school nurse positions

Q) How are school nurses funded?

- A) Local school district budget, state budget, EPSDT, Title I, Medicaid (accessed by only 42% of schools), and community sponsors

Q) Can a secretary, teacher, or paraeducator fill this role?

- A) Not safely, or in some states legally - due to inadequate medical training

Q) What types of health concerns are found among students?

- A)
- 32% of children are obese/overweight
 - 24% of children have vision deficiencies
 - 13% of children are prescribed medication more than 90 days
 - 10% of children have mental/emotional behavioral problems
 - 10% of children have asthma
 - 6% of children missed more than 11 days due to illness/injury
 - 5% of children have food allergies
 - 5% of children have a seizure disorder
 - 5% of children have hearing deficiencies
 - 5% of children have ADHD
 - 47% of 12th grade students report "lifetime" use of an illicit drug
 - 65% of 12th grade students are sexually active

National Association of School Nurses
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(866)627-6767 (301) 585-1791 (fax) www.nasn.org

What's better than balloons for a latex-free party?

TISSUE POM POMS!

Go to a party supply store and get large packs of gift tissue in various colors. The poms can be made in both solid colors or layered. Hang them at different heights from the ceiling. They have been a hit!

If you don't want them to hang, you could also use stiff wire through the middle, leaving a stem. Wrap it with florist tape and use a container with foam in the bottom to hold large bouquets.

Tissue Paper Pom-Poms How-To Tools and Materials

- Tissue paper in desired colors (8 sheets per pom-pom), by Martha Stewart Crafts, available at Michaels
- 24-gauge white cloth-covered floral wire
- Scissors
- Monofilament

These dahlia like pom-poms appear to float in the air; in reality, they are hung from the ceiling with monofilament, imparting a cheerful radiance to any party.

You can also buy a Tissue Paper Pom-Pom Kit from Martha Stewart Crafts.

Step 1

Stack eight 20-by-30-inch sheets of tissue. Make 1 1/2-inch-wide accordion folds, creasing with each fold.

Step 2

Fold an 18-inch piece of floral wire in half, and slip over center of folded tissue; twist. With scissors, trim ends of tissue into rounded or pointy shapes.

Step 3

Separate layers, pulling away from center one at a time.

Step 4

Bend wire into a loop to fit around napkin, and twist end around loop to secure.



FYI...



www.allergyeats.com