CSHP SEMINAR
2016
TRANSITIONS
IN PHARMACY
DISNEYLAND® RESORT • OCTOBER 27th – 30th
Latex Allergy 101:
A Primer for Pharmacy Students and Technicians

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California Society of Health-System Pharmacists
Disclosures

Financial:
The speaker has no financial disclosures to report

Member of:
American Latex Allergy Association
Allergy & Asthma Network
American Society of Health-System Pharmacists
California Society of Health-System Pharmacists
Latex Allergy Advocacy
Learning Objectives

At the end of this presentation, the participant will be able to:

- List at least 3 occupations which have high risk for developing latex allergy
- Identify medications used in managing latex allergy
- Differentiate between type I and type IV allergic response to latex
- Identify 5 common items in the pharmacy that may contain natural rubber latex
- List 4 foods that can cause cross-reactions in people allergic to latex
Goals

- Harm reduction!
- To provide latex-safe care for patients with latex allergy
- To provide a latex-safe environment for workers
What products have natural rubber latex?

Over 40,000 consumer products contain natural rubber latex!
Latex Allergy Awareness Week
October 2-8, 2016

More Than Just Gloves And Balloons!
Natural Rubber Latex (NRL): What is it?

- Harvested from the milky sap of the rubber tree *Hevea brasiliensis* (Hev b)

- Malaysia, Thailand, Indonesia, & South America
NRL Proteins

- Over 250 different proteins identified
- Currently 16 known Hev b allergens that can trigger an IgE antibody response
- Prevalence of various Hev b allergens depends on manufacturing process and nature of latex used
NRL processing

- Processed with ammonia, sulfur, phenylenediamine, thiuram, carbamates, and preservatives for strength, elasticity, rigidity
- Accelerators, activators, vulcanizing agents, and antioxidants may cause some reactions rather than the latex itself
Dip vs. Vulcanization

- Lower temps to process and ‘dip’ molds for thin, stretchy products like gloves, condoms, balloons, catheters – higher levels of Hev b allergens

- Heat vulcanization for durable medical equipment, syringe plungers, shoes, tires, floor mats, and hard rubber products – lower level of allergens
Powder-free

- Powders such as cornstarch or talc added to prevent stickiness which aerosolizes latex particles

- March 2016 FDA proposal to ban powdered latex gloves
Not to be confused with …

Latex does not include synthetic (man-made) products such as nitrile, vinyl, polyvinyl chloride, isoprene, or neoprene

Does not include latex paint or plastics
<table>
<thead>
<tr>
<th>Latex allergen</th>
<th>Molecular weight, kDa</th>
<th>Protein name, biological function or physiological role</th>
<th>Significance as an allergen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hev b 1</td>
<td>14</td>
<td>Rubber elongation factor</td>
<td>Major allergen for spina bifida (Major allergen)</td>
</tr>
<tr>
<td>Hev b 2</td>
<td>34</td>
<td>ß-1,3-Glucanase</td>
<td>Major allergen for spina bifida</td>
</tr>
<tr>
<td>Hev b 3</td>
<td>24</td>
<td>Small rubber particle proteins</td>
<td>Minor allergen</td>
</tr>
<tr>
<td>Hev b 4</td>
<td>53–55</td>
<td>Lecithinase homolog</td>
<td>Major allergen for spina bifida as well as for health care workers</td>
</tr>
<tr>
<td>Hev b 5</td>
<td>16</td>
<td>Acidic structural protein</td>
<td>Major allergen (the dominant IgE-binding epitope is Hev b 6.02)</td>
</tr>
<tr>
<td>Hev b 6.01</td>
<td>20</td>
<td>Prohevein (hevein precursor)</td>
<td>Major allergen</td>
</tr>
<tr>
<td>Hev b 6.02</td>
<td>4.7</td>
<td>Hevein</td>
<td>Minor allergen</td>
</tr>
<tr>
<td>Hev b 6.03</td>
<td>14</td>
<td>C-domain of prohevein</td>
<td>Minor allergen</td>
</tr>
<tr>
<td>Hev b 7</td>
<td>44</td>
<td>Patatin-like protein (esterase) from latex B- and C-serum</td>
<td>Minor allergen</td>
</tr>
<tr>
<td>Hev b 8</td>
<td>14</td>
<td>Profilin (actin-binding protein)</td>
<td>Minor allergen</td>
</tr>
<tr>
<td>Hev b 9</td>
<td>51</td>
<td>Enolase</td>
<td>Minor allergen</td>
</tr>
<tr>
<td>Hev b 10</td>
<td>26</td>
<td>Manganese superoxide dismutase</td>
<td>Minor allergen</td>
</tr>
<tr>
<td>Hev b 11</td>
<td>30</td>
<td>Class I chitinase</td>
<td>Minor allergen</td>
</tr>
<tr>
<td>Hev b 12</td>
<td>9</td>
<td>Non-specific lipid transfer protein</td>
<td>Minor allergen</td>
</tr>
<tr>
<td>Hev b 13</td>
<td>42</td>
<td>Esterase</td>
<td>(Major) allergen</td>
</tr>
<tr>
<td>Hev b 14</td>
<td>30</td>
<td>Hevamin</td>
<td>Minor allergen</td>
</tr>
</tbody>
</table>

Allergens indicated as being ‘major’ within parentheses are important in this discussion.
History

- Allergic reactions reported in early 1900s
- HIV panic in early ’80s
- ‘Universal precautions” to treat all blood and bodily fluid as potentially infectious – increased glove use
- 1991: 16 deaths associated with latex barium enema tip led to latex allergy awareness
Patients at risk of latex allergy

<table>
<thead>
<tr>
<th>Patient Risk Groups</th>
<th>Prevalence of Latex Sensitization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patients with spina bifida and congenital genitourinary abnormalities</td>
<td>18-73%</td>
</tr>
<tr>
<td>Health care workers (housekeepers, lab workers, dentists, nurses, physicians)</td>
<td>3-17%</td>
</tr>
<tr>
<td>Rubber industry workers</td>
<td>11%</td>
</tr>
<tr>
<td>Atopic patients (asthma, rhinitis, eczema)</td>
<td>6.8%</td>
</tr>
<tr>
<td>Patients who have undergone multiple procedures</td>
<td>6.5%</td>
</tr>
</tbody>
</table>

Source: ACAAI.org
Who is at risk for latex allergy?

- 1-6% of the general population (CDC)

- People with history of food allergy (especially in banana, avocado, passion fruit, chestnut, kiwi fruit, melon, tomato, celery)
Healthcare Workers

- Nursing
- OR techs
- Physicians
- Pharmacy staff
- Laboratory staff
- PT and OT staff
- Dental office staff
- Veterinary staff

2% of healthcare workers develop occupational asthma from latex exposure
Anyone regularly exposed to latex

- Elderly
- Food service workers
- Emergency response
- Painters / artists
- Plumbers
- Environmental services
- Greenhouse workers
- Hair stylists
- Day care workers
- Military
Latex-Fruit Syndrome

- Certain foods have cross-reactivity due to resemblance to various Hev b latex proteins
- May cause symptoms ranging from oral itching (oral allergy syndrome) to anaphylaxis in latex allergic people
- In general, no need to avoid these foods unless have had a reaction
Latex-Fruit Syndrome

High incidence
Banana, avocado, chestnut, kiwi

Moderate incidence
Apple, carrot, celery, papaya, potato, tomato, melons

Lower incidence
Apricot, buckwheat, cassava/manioc, castor bean, cherry, chick pea, citrus, coconut, cucumber, dill, eggplant, fig, goji/wolfberry, grape, hazelnut, Indian jujube, jackfruit, lychee, mango, nectarine, oregano, passion fruit, peach, peanut, pear, pepper (cayenne, sweet, bell), persimmon, pineapple, pumpkin, rye, sage, strawberry, shellfish, soybean, sunflower seed, tobacco, turnip, walnut, wheat, zucchini
Molecular association of latex-fruit syndrome – allergens probably responsible for cross-reactivity

- *Ambrosia artemisiifolia*
- Birch pollen
- Chestnut

- Ficus benjamina

- Hev b 6.01/02
- Hev b 11

- NRL
  - Hev b 1
  - Hev b 2

- Hev b 3
  - Hev b 5
  - Hev b 6.01/02

- Hev b 4
  - Hev b 11
  - Hev b 8

- Hev b 9
  - Hev b 7
  - Hev b 12

- Molds

- Fruits/vegetables
Am I allergic to Christmas and restaurant food, too?

Latex allergic patients may also react to:

- Poinsettia
- Ficus tree (weeping fig)
- Ragweed, mugwort, Timothy grass
- Marijuana and more....

Restaurants and food processors may contaminate food with latex gloves or other sources of latex (conveyor belts)
Latex Protein: A Hidden ‘Food’ Allergen

Donald Beezhold, et al

- Latex glove use by food service workers
- Direct transfer of latex proteins to cheese, lettuce
- Recommended that food handlers avoid the use of latex gloves to avoid exposing latex-sensitive people
Can you tell which food was prepared with latex gloves?

No?

Neither can we!

When you are allergic to latex, your next meal could be your last. Latex proteins transfer onto food (both through contact and through the air) and then stay there for at least 24 hours. Latex residue on food can cause severe allergic, anaphylactic reactions.

We need to come together and BAN LATEX GLOVES.
Believe your patient....

Listen to the patient, he is telling you the diagnosis.
—Sir William Osler, MD
Types of exposure to latex

- Direct patient contact with a latex product
- Inhalation of latex particles (e.g., airborne particles from gloves snapped on/off, balloons)
- Indirect contact (e.g., caregiver touches latex product then touches patient)
# Symptoms of Allergic Responses to Latex

<table>
<thead>
<tr>
<th>General / Neurological</th>
<th>Skin</th>
<th>Respiratory</th>
<th>Gastrointestinal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feeling of faintness</td>
<td>Generalized itching</td>
<td>Running nose</td>
<td>Nausea</td>
</tr>
<tr>
<td>Impending sense of doom</td>
<td>Hives</td>
<td>Sneezing</td>
<td>Vomiting</td>
</tr>
<tr>
<td>Crying</td>
<td>Angioedema</td>
<td>Scratchy throat</td>
<td>Abdominal cramps</td>
</tr>
<tr>
<td>Agitation</td>
<td>Flushing</td>
<td>Coughing</td>
<td>Diarrhea</td>
</tr>
<tr>
<td>Unexplained restlessness</td>
<td>Facial edema (lip and mucosa)</td>
<td>Wheezing</td>
<td></td>
</tr>
<tr>
<td>Confusion</td>
<td>Itchy eyes</td>
<td>Shortness of breath</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Bronchospasm</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Laryngeal edema</td>
<td></td>
</tr>
</tbody>
</table>
Diagnosis

- Complete clinical history: reactions to balloons, condoms, gloves, cross-reactive foods as well as medical/surgical history and occupation
- Blood testing – not 100% accurate
- Skin prick testing
3 Types of Latex Allergy

- Irritant Contact Dermatitis
- Type IV Hypersensitivity - Allergic Contact Dermatitis
- Type I IgE Hypersensitivity - Immediate
Irritant Contact Dermatitis

- Not a true latex allergy, but a non-allergic skin rash

- Redness, dryness, cracking, scaling, itching that disappears when source is removed

- Initially can appear as eczema

- May be a hypersensitivity to glove powder or chemicals used in processing
Irritant Contact Dermatitis
Type IV Hypersensitivity

- Delayed
- Requires T lymphocytes to infiltrate area over 24-48 hours
- Eczema-like, red weepy skin, itching, swelling, red/itching eyes, runny nose, coughing
- Rash may become chronic or symptoms may occur at work then disappear at home
- Can have Type IV and Type I at the same time
- Predisposes patient for true Type I latex allergy
Type IV Hypersensitivity
Type I Hypersensitivity (Immediate)

- Immediate IgE-mediated reaction with histamine release in response to latex protein
- Usually occurs within 15 – 60 minutes
- Mast cell involvement
- May be life threatening
- True latex allergy
Type I Hypersensitivity (Immediate)

Cardiovascular
- Hypotension
- Tachy/bradycardia
- Respiratory/cardiac arrest

Skin
- Flushing
- Facial edema (lips & oral mucosa)

Respiratory
- Wheezing
- Bronchospasm
- Laryngeal edema

Gastrointestinal
- Nausea
- Cramping, diarrhea
Reaction photos
Medications used for latex allergy

- Antihistamines (H-1 blockers)
- Epinephrine
- Mast cell stabilizers
- Leukotriene-receptor antagonists
- Oral corticosteroids
- Bronchodilator / corticosteroid inhalers
- H-2 blockers
- Anti-IgE therapy
- Topical steroid creams
- Topical diphenhydramine
# Epinephrine Dosing

<table>
<thead>
<tr>
<th>Epinephrine</th>
<th>Patient Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.3 mg (0.3 mL, 1:1000)</td>
<td>≥ 30 kg (≥ 66 lb)</td>
</tr>
<tr>
<td>0.15 mg (0.3 mL, 1:2000)</td>
<td>15-30 kg (33-36 lb)</td>
</tr>
</tbody>
</table>
Epinephrine - If in Doubt…

- Too little epinephrine or
- Too much epinephrine or
- Expired epinephrine is better than NO epinephrine!

- In an emergency, give whatever epinephrine you have
Anaphylaxis in the Community

Reasons Epi Auto-Injectors were not used to treat Anaphylaxis

<table>
<thead>
<tr>
<th>Reason</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antihistamine was used</td>
<td>38%</td>
</tr>
<tr>
<td>Did not receive a prescription for epinephrine auto-injector</td>
<td>28%</td>
</tr>
<tr>
<td>Allergic reaction was mild</td>
<td>13%</td>
</tr>
<tr>
<td>Asthma puffer used</td>
<td>8%</td>
</tr>
<tr>
<td>Did not have an epinephrine auto-injector available</td>
<td>8%</td>
</tr>
<tr>
<td>Unsure when to give injection</td>
<td>8%</td>
</tr>
<tr>
<td>In previous reaction no treatment was needed</td>
<td>8%</td>
</tr>
<tr>
<td>Afraid to inject epinephrine</td>
<td>6%</td>
</tr>
</tbody>
</table>

In a separate survey (Anaphylaxis in America), 28% only self-administered an antihistamine to treat anaphylaxis signs and symptoms.

2 WOOD RA ET AL. J ALLERGY CLIN IMMUNOL. 2014; 133(2):461-467
Epinephrine Auto-Injectors

Adrenaclick (Amedra)

Epinephrine Injection USP (Lineage)

EpiPen, EpiPen Jr (Mylan)

Auvi-Q (Sanofi) – DC’d

- Strengths: 0.3 mg, 0.15 mg
- Copay discount cards
- Latex-free
- Training pens *

* DC’d: Discontinued
Epinephrine auto-Injectors – EpiPen by Mylan
Epinephrine injection, USP auto-injector (Lineage)

Remember: Use of epinephrine auto-injector must be followed by emergency medical care.²

Epinephrine auto-injector is designed for self-administration. The press-and-hold technique - press hard, hold in the middle of the outer side of the thigh (upper leg) for 10 seconds - is designed to deliver the full dose of epinephrine.²
Epinephrine Auto-Injectors – Adrenaclick (Amedra)

- Labeled end caps to guide you through administration.
- Color-coded and numbered instructions, printed on the side of the auto-injector, to remind you how to use it.
- A red injector tip to show which end to inject.

(Call 911)
### Table 4. SOURCES OF LATEX IN THE HOSPITAL

<table>
<thead>
<tr>
<th>Adhesive strips</th>
<th>Instrument pads</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bag-Valve masks (Ambu® Bag™)</td>
<td>IV solutions and tubing systems</td>
</tr>
<tr>
<td>Band-aid™ and similar bandage products</td>
<td>Latex injection ports, IV tubing ports, stopcocks</td>
</tr>
<tr>
<td>Balloon catheters</td>
<td>Masks</td>
</tr>
<tr>
<td>Bed protectors</td>
<td>Mattresses on stretchers</td>
</tr>
<tr>
<td>Blood pressure cuffs (inner bladder and tubing)</td>
<td>Medication syringes</td>
</tr>
<tr>
<td>Breathing circuits, containing rubber</td>
<td>Medication vial stoppers</td>
</tr>
<tr>
<td>Bulb syringes</td>
<td>Multi-dose vial stoppers</td>
</tr>
<tr>
<td>Casts</td>
<td>Nasogastric tubes</td>
</tr>
<tr>
<td>Catheters, indwelling, condom, rectal pressure, suction</td>
<td>Occupational/physical therapy equipment</td>
</tr>
<tr>
<td>Certain epidural catheter injection adapters</td>
<td>OR masks, hats and shoe covers</td>
</tr>
<tr>
<td>Chest tubes and drains</td>
<td>Patient-controlled analgesia syringes</td>
</tr>
<tr>
<td>Cold packs/hot packs</td>
<td>Peak flow meters</td>
</tr>
<tr>
<td>Colostomy pouches</td>
<td>Protective sheets</td>
</tr>
<tr>
<td>Condom urinary collections devices</td>
<td>Reservoir breathing bags, disposable oxygen masks, nasal cannulae</td>
</tr>
<tr>
<td>Dental bite blocks</td>
<td>Spacers for metered-dose inhalers</td>
</tr>
<tr>
<td>Dental dams</td>
<td>Specimen traps</td>
</tr>
<tr>
<td>Elastic wraps, e.g. ACE™ bandages</td>
<td>Steroscope tubing</td>
</tr>
<tr>
<td>Electrocardiogram and peripheral nerve stimulator contact pads</td>
<td>Stomach and intestinal tubes</td>
</tr>
<tr>
<td>Endoscopes</td>
<td>Surgical glue</td>
</tr>
<tr>
<td>Endotracheal tubes</td>
<td>Surgical drapes</td>
</tr>
<tr>
<td>Enemas — including tubing in kits</td>
<td>Syringes, all types</td>
</tr>
<tr>
<td>Eye shields</td>
<td>Thera-Bands® / resistance bands</td>
</tr>
<tr>
<td>Gloves (examination and sterile)</td>
<td>Tourniquets</td>
</tr>
<tr>
<td>Gastrostomy tubes</td>
<td>Ventilator hoses and bellows</td>
</tr>
<tr>
<td>Fluid circulating thermal blankets</td>
<td>Wound care products</td>
</tr>
<tr>
<td>Head straps</td>
<td>Wound drains</td>
</tr>
</tbody>
</table>
Table 5. Sources of Latex in Inpatient and Outpatient Pharmacies*

| In addition to items listed in Table 4, the following may be potential sources
| of latex in pharmacies and of concern for latex-sensitive staff or patients: |
| Adhesives, glues, tapes | Foam or materials in furniture |
| Artificial plants and flowers (e.g., latex dipped stems) | Gloves, medical/cleaning |
| Baby products (e.g., pacifiers, bottle nipples) | Glues, adhesives |
| Balloons | Grips/tips on crutches, canes and walkers |
| Blood pressure cuffs | Heating pads |
| Braces/splints for injuries | Hot water bottles |
| Carpeting, rugs | Medications |
| Condoms | Medical supplies |
| Dental products (e.g., toothbrush handles, rubber tips/stimulator) | Mouse pads |
| Diaphragms | Office supplies, various |
| Diapers | Orthodontic elastic bands |
| Elastic in any product | Pens with comfort grips |
| Erasers | Rubber bands |
| Fatigue mats | Rugs with latex rubber backing |
| Feminine products | Telephone and computer key pads |
| First aid kits | Tennis balls on walkers |

Note: Latex-free alternatives are available for the above items

*This list is not deemed to be comprehensive, but helpful in caring for patients or for accommodating employees

Caution: This product contains natural rubber latex which may cause allergic reactions

Caution: The packaging of this product contains natural rubber latex which may cause allergic reactions

This product contains dry natural rubber

Not made/manufactured with natural rubber latex

** Can no longer state ‘latex-free’
Injectable medications

**Depo-Medrol®**

(methylprednisolone acetate injectable suspension, USP)

_Not For Intravenous Use_

Material Safety Data Sheet

<table>
<thead>
<tr>
<th>NDC</th>
<th>Potency</th>
<th>Package Size</th>
<th>Packages Per Case</th>
<th>Prescribing Information</th>
<th>Fact Sheet</th>
<th>Other Information</th>
<th>Allergy Information</th>
<th>Amerisource Bergen</th>
<th>Cardinal</th>
<th>HD Smith</th>
<th>McKesson</th>
<th>Morris Dickson</th>
</tr>
</thead>
<tbody>
<tr>
<td>00009-3073-01</td>
<td>40 mg/mL, 1 mL SDV</td>
<td>1's</td>
<td>48</td>
<td></td>
<td></td>
<td></td>
<td>Gluten Free</td>
<td>10020643</td>
<td>1347475</td>
<td>2395945</td>
<td>1605443</td>
<td>476937</td>
</tr>
<tr>
<td>00009-3073-03</td>
<td>40 mg/mL, 1 mL SDV</td>
<td>25's</td>
<td>12</td>
<td></td>
<td></td>
<td></td>
<td>Gluten Free</td>
<td>10021060</td>
<td>1347988</td>
<td>2396166</td>
<td>1429786</td>
<td>476770</td>
</tr>
<tr>
<td>00009-3475-01</td>
<td>80 mg/mL, 1 mL SDV</td>
<td>1's</td>
<td>48</td>
<td></td>
<td></td>
<td></td>
<td>Gluten Free, Latex Free</td>
<td>10020660</td>
<td>1346998</td>
<td>2395937</td>
<td>1712587</td>
<td>476945</td>
</tr>
<tr>
<td>00009-3475-03</td>
<td>80 mg/mL, 1 mL SDV</td>
<td>25's</td>
<td>12</td>
<td></td>
<td></td>
<td></td>
<td>Gluten Free, Latex Free</td>
<td>10021063</td>
<td>1347756</td>
<td>1716604</td>
<td>1946730</td>
<td>476788</td>
</tr>
</tbody>
</table>
Vaccines

Latex in Vaccine Packaging

“If a person reports a severe (anaphylactic) allergy to latex, vaccines supplied in vials or syringes that contain natural rubber, or whose product information does not say “not made with natural rubber latex” should not be administered unless the benefit of vaccination outweighs the risk for a potential allergic reaction. In these cases, providers should be prepared to treat patients who are having an allergic reaction. For latex allergies other than anaphylactic allergies (e.g., a history of contact allergy to latex gloves), vaccines supplied in vials or syringes that contain dry natural rubber or rubber latex may be administered.” (ACIP General Recommendations on Immunization. 2011)

The following table is accurate, to the best of our knowledge, as of April 2016. **If in doubt, check the manufacturer’s package insert that came with the vaccine you are using.**

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Latex?</th>
<th>Source Manufacturer’s PI* Dated:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adenovirus (Adenovirus Type 4 and Type 7)</td>
<td>NO</td>
<td>April 2014</td>
</tr>
<tr>
<td>Anthrax (Biothrax)</td>
<td>YES</td>
<td>November 2015</td>
</tr>
<tr>
<td>DTaP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Daptacel</td>
<td>NO</td>
<td></td>
</tr>
<tr>
<td>Infanrix</td>
<td>YES – Syringe, NO – Vial</td>
<td>*</td>
</tr>
<tr>
<td>DT (Sanofi)</td>
<td>NO</td>
<td>*</td>
</tr>
</tbody>
</table>
Would you stick a needle through a peanut before injecting into a peanut allergic patient?
Latex corks in injectable medications

- 12 latex-allergic and 11 non-allergic volunteers
- Puncture and ID skin testing with 5 vials, 2 with NRL stoppers and 3 synthetic stoppers
- 2 LA volunteers had reactions when stopper was not punctured
- 5 LA volunteers had reactions when stopper punctured 40 times before testing
- Non-allergic individuals had no reactions
One-Stick Rule

1. All medication vials are punctured once, regardless of latex vs. synthetic cork
2. Latex-free syringe
3. RN observes patient for 30 minutes to 2 hours after med administration

** True latex allergy: Best practice is latex-free medication, supplies, admin **
What can pharmacy do?

- Harm prevention!
- Use latex-free gloves in pharmacy
  - [www.latexfreedrugs.com](http://www.latexfreedrugs.com) BUT verify latex content with manufacturer
- Make purchasing latex-free meds a priority
- Therapeutic substitutions or special order
- Latex-free med kits in OR, ER, life-flight, ambulances
- Latex-free meds in crash carts
- Pharmacy staff on hospital latex-allergy committee, policy
- No latex rubber bands to meds/charts to attach information, tubing, etc.
- Do not present latex-grip pens, mouse pads, rubber bands to patients
- Residual latex particles on healthcare staff can be a concern
Education

- Encourage person to carry 2 emergency epinephrine auto-injectors
- Encourage person to wear medical alert bracelet/necklace
- Encourage people to see a board-certified allergist to develop an anaphylaxis action plan
Knowing what you do not know…

- Physicians, nurses, and even some pharmacy staff assume medications and injectable vials are latex-free.

- Healthcare workers in progressive hospitals wrongly assume ‘everything is latex-free’ these days.

- Our goal is ‘latex-SAFE’.
What can pharmacy do? Educate!
LATEX BALLOONS PROHIBITED!

Due to life threatening allergies all latex products are banned from this campus at all times.
Latex gloves

*Can I just have latex-free gloves available?*
Latex proteins remain airborne for 6 hours
Proteins can be transferred from caregiver to patient

*Can I just use low-protein gloves?*
Low protein is not NO protein
What if I think I have symptoms?

- Keep a journal … home, work, foods, clothing
- Do you have risk factors?
- Do other family members have latex allergy or other allergies?
- Avoid natural rubber latex
Got diagnosis?

- Avoid latex products – research!
- Wear medical alert bracelet or necklace
- Epinephrine PRN
- Anaphylaxis action plan
- Latex allergy is avoidable, progressive, and has no cure
Accommodating the Latex-Allergic Worker

- Serious allergies (such as latex allergy) may be covered by the Americans with Disability Act (ADA) and employers must make ‘reasonable accommodations’
- Protected from discrimination
- Must be provided equal employment opportunities
- Ask human resources for assistance with reasonable accommodations
Quiz

1. A patient may experience anaphylaxis from inhaling airborne latex particles.
   a. True
   b. False
1. A patient may experience anaphylaxis from inhaling airborne latex particles.
   a. True
   b. False
2. Which of the following common pharmacy items can be assumed to be latex-free?

- Fatigue mats
- Syringes
- Flu vaccines
- Injectable steroids
- Shoe covers
- Blood pressure cuffs
- Bandages
- Pens with comfort grips
- Mouse pads
- Grips/tips on canes, crutches and walkers
- None of the above
- All of the above – everything is latex-free these days
Which of the following common pharmacy items can be assumed to be latex-free?

- Fatigue mats
- Blood pressure cuff
- Syringes
- Bandages
- Flu vaccines
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- Injectable steroids
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- Shoe covers
- Grips/tips on canes, crutches and walkers

**None of the above**

**All of the above – everything is latex-free these days**
3. The following medications are commonly prescribed to treat patients with latex allergy except:
   
a. Albuterol inhaler
b. Hydrocortisone cream
c. Montelukast (Singular)
d. Propranolol
e. Emergency epinephrine auto-injector
3. The following medications are commonly prescribed to treat patients with latex allergy except:

a. Albuterol inhaler
b. Hydrocortisone cream
c. Montelukast (Singular)
d. Propranolol

e. Emergency epinephrine auto-injector
There is no human circumstance more tragic than the persisting existence of a harmful condition for which a remedy is readily available.

- Martin Luther King
Resources

- American Latex Allergy Association  www.latexallergyresources.org
- Allergy & Asthma Network  www.allergyasthmanetwork.org/?s=latex
- American College of Allergy, Asthma & Immunology  www.acaai.org
- CDC: Latex Allergy A Prevention Guide  www.cdc.gov/niosh/docs/980113
- Job Accommodation Network  www.askjan.org/media/LATEX.html
- NIOSH: Preventing Allergic Reactions to NRL in the Workplace  www.cdc.gov/niosh/docs/97-135
- OSHA  www.osha.gov/SLTC/latexallergy.html
- Spina Bifida Association  www.spinabifidaassociation.org
- Facebook support groups
Administering Pharmaceuticals to Latex-Allergic Patients from Vials Containing NRL Closures. Hamilton R et al

How We Got Rid of Latex Gloves Once and for All. Brown R.

How Should CSPs be Prepared for Patients with a Latex Allergy? Kastango E
Pharmacy Purchasing & Products. April 2012   www.pppmag.com

Latex Allergy and the Pharmacist: An Ever-Present Opportunity for Clinical Improvement. Miller TA & Hespe C
Acknowledgements

- Sue Lockwood, American Latex Allergy Association
- The team of patient advocates at Latex Allergy Advocacy
- Travis Miller, MD, Medical Director, The Allergy Station
- Wayne, Ben and Brett, my personal latex allergy cops
Session Code:

1. Write down the course code. Space has been provided in the daily program-at-a-glance sections of your program book.

2. To claim credit: Go to www.cshp.org/cpe before December 1, 2016.