### FAST FACTS FOR BOARD REVIEW

**Series Editor:** William W. Huang, MD, MPH

**Allergic Contact Dermatitis, Part 4**

Laura Doerfler, MD; William W. Huang, MD, MPH

Dr. Doerfler is from the Department of Dermatology, Wake Forest University, Winston-Salem, North Carolina. Dr. Huang is Assistant Professor and Associate Program Director of Dermatology, Wake Forest University School of Medicine.

The authors report no conflict of interest.

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<th>Allergen</th>
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<tr>
<td>Lanolin (wool alcohol)</td>
<td>Found in cosmetics, ointments, moisturizers, soaps, facial masks, sunscreens, moist towelettes, diaper lotions, hemorrhoid preparations, shaving creams, furniture and shoe polishes, waxes, lubricants, and coolant in metalworking processes.</td>
<td>Rarely positive, as some sensitized patients only react to parabens when applied to skin with active dermatitis; may cross-react with PABA and PPD.</td>
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<td>Paraben mix</td>
<td>Nonformaldehyde-releasing preservative found in cosmetics (e.g., foundations, lipsticks, mascaras, eyeliners), topical medications (e.g., eye, ear, and nose drops; bandages; local anesthetics), food, textiles, and antiperspirants.</td>
<td></td>
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<tr>
<td>Potassium dichromate</td>
<td>Mineral found in cement, ceramics, paint, sutures, green tattoo ink, and green textile dyes (e.g., green felt on pool/card tables); many leather shoes and gloves are tanned with chromates; occasionally found in cosmetics.</td>
<td>Concrete and construction workers at risk.</td>
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<td>PPD</td>
<td>Blue-black dye found in permanent hair dye, black synthetic henna tattoos, dark-colored cosmetics, black rubber, photographic developer baths, printing inks, gasoline, oils, and greases.</td>
<td>Reaction typically presents as dermatitis on the eyelids, ear helices, and/or hairline; cross-reacts with PABA, parabens, ester anesthetics, sulfa medications, and azo dyes.</td>
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<tr>
<td>p-tert-Butylphenol formaldehyde resin</td>
<td>Resin used in glues for bonding leather; leather shoes, handbags, watchbands, belts, gloves, and hats; also used in the manufacture of plywood, insulation, and fiberglass.</td>
<td>Most common allergen in shoe dermatitis, cause of occupational vitiligo.</td>
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<tr>
<td>Quaternium-15</td>
<td>Formaldehyde-releasing preservative found in cosmetics, skin moisturizers, hair care products, sunscreens, and soaps.</td>
<td>Most common cosmetic preservative allergen, cross-reacts with other formaldehyde releasers (e.g., imidazolidinyl urea, diazolidinyl urea, DMDM hydantoin, bronopol) in 50% of patients with sensitivity, preparations that are left on the skin for an extended period of time are most likely to cause an allergic reaction.</td>
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### Allergen Common Sources Other Information

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<tr>
<td>Quinoline mix</td>
<td>Synthetic antibacterial agents found in topical antibiotic and antifungal creams, lotions, ointments, and paste bandages</td>
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<tr>
<td>Thimerosal</td>
<td>Antiseptic and preservative found in contact lens solution; vaccines (eg, flu, tetanus, diphtheria); intradermal testing; eye cosmetics; eye, ear, and nose drops; and antiseptic sprays</td>
<td>False-positive intradermal testing to tuberculosis can occur if material is preserved with thimerosal, patients with thimerosal sensitivity also can have photosensitivity with piroxicam</td>
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<tr>
<td>Thiuram mix</td>
<td>Rubber additives known as accelerators found in rubber gloves, elastic bands, rubber-handled kitchen utensils, rubber boots, rubber soles of shoes, earphones, stethoscopes, erasers, and condoms</td>
<td>Most common rubber additives to cause type IV hypersensitivity reaction, thiuram mix cross-reacts with disulfiram</td>
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<tr>
<td>Tixocortol pivalate</td>
<td>Topical cortisone cream and ointment, nasal sprays containing cortisone</td>
<td>Used to test for allergy to group A steroids (hydrocortisone, prednisone)</td>
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Abbreviations: PABA, para-aminobenzoic acid; PPD, p-phenylenediamine.
Practice Questions

1. The most common allergen of hand dermatitis in hairdressers can cross-react with which of the following allergens?
   a. benzocaine
   b. para-aminobenzoic acid
   c. procaine
   d. sulfanomides
   e. all of the above

2. Patients with a documented allergy to quaternium-15 should avoid all of the following ingredients except:
   a. bronopol
   b. diazolidinyl urea
   c. DMDM hydantoin
   d. imidazolidinyl urea
   e. paraben mix

3. Which of the following is a screening agent for hydrocortisone allergy?
   a. budesonide
   b. clobetasol
   c. desoximetasone
   d. paraben mix
   e. tixocortol pivalate

4. This allergen often is found in black synthetic henna tattoos:
   a. paraben mix
   b. potassium dichromate
   c. PPD
   d. quaternium-15
   e. thimerosal

5. A patient with a documented allergy to paraben mix also should avoid the following agent:
   a. bronopol
   b. diazolidinyl urea
   c. DMDM hydantoin
   d. PPD
   e. thiuram mix

Fact sheets and practice questions will be posted monthly. Answers are posted separately on www.cutis.com.