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Allergic Contact Dermatitis, Part 4

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Allergen	Common Sources	Other Information
Lanolin (wool alcohol)	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	
Paraben mix	Nonformaldehyde-releasing preservative found in cosmetics (eg, foundations, lipsticks, mascaras, eyeliners), topical medications (eg, eye, ear, and nose drops; bandages; local anesthetics), food, textiles, and antiperspirants	Rarely positive, as some sensitized patients only react to parabens when applied to skin with active dermatitis; may cross-react with PABA and PPD
Potassium dichromate	Mineral found in cement, ceramics, paint, sutures, green tattoo ink, and green textile dyes (eg, green felt on pool/card tables); many leather shoes and gloves are tanned with chromates; occasionally found in cosmetics	Concrete and construction workers at risk
PPD	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	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
<i>p</i> - <i>tert</i> -Butylphenol formaldehyde resin	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	Most common allergen in shoe dermatitis, cause of occupational vitiligo
Quaternium-15	Formaldehyde-releasing preservative found in cosmetics, skin moisturizers, hair care products, sunscreens, and soaps	Most common cosmetic preservative allergen, cross-reacts with other formaldehyde releasers (eg, 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

(continued)

Allergen	Common Sources	Other Information
Quinoline mix	Synthetic antibacterial agents found in topical antibiotic and antifungal creams, lotions, ointments, and paste bandages	
Thimerosal	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	False-positive intradermal testing to tuberculosis can occur if material is preserved with thimerosal, patients with thimerosal sensitivity also can have photosensitivity with piroxicam
Thiuram mix	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	Most common rubber additives to cause type IV hypersensitivity reaction, thiuram mix cross-reacts with disulfiram
Tixocortol pivalate	Topical cortisone cream and ointment, nasal sprays containing cortisone	Used to test for allergy to group A steroids (hydrocortisone, prednisone)

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. thimerosol

- 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.