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Allergic Contact Dermatitis, Part 1

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Allergen	Common Sources	Other Information
Bacitracin	External antibiotics including those in skin, ophthalmic, and otic preparations	Can possibly cross-react with polymyxin; can co-react with neomycin; found in double-antibiotic and triple-antibiotic products; allergen of the year 2003 ^a
Balsam of Peru (<i>Myroxylon pereirae</i> , <i>Myroxylon balsamum</i>)	Topical products including cosmetics, personal care products, and medications; foods and beverages	From the resin of the tree <i>M balsamum</i> ; contains numerous allergens including cinnamic acid, cinnamyl cinnamate, benzyl benzoate, benzoic acid, vanillin, isoeugenol, and resin
Black rubber mix (<i>N</i> -isopropyl- <i>N'</i> -phenyl paraphenylenediamine, <i>N'</i> -cyclohexyl- <i>N'</i> -phenyl paraphenylenediamine, <i>N,N'</i> -diaphenyl paraphenylenediamine)	Rubber products such as tires, cables, gloves, boots, masks, goggles, and sporting equipment	Can cross-react with paraphenylenediamine found in some hair dyes, inks, and henna tattoos
Bronopol (2-bromo-2-nitropropane-1,3-diol)	Topical products including cosmetics and personal care products	Antimicrobial, formaldehyde-releasing agent; can cross-react with other formaldehyde-releasing agents (eg, diazolidinyl urea, DMDM hydantoin, imidazolidinyl urea, tris nitro, quaternium-15)
Budesonide	External corticosteroids including those in skin, ophthalmic, nasal, otic, and inhalational preparations	Class B corticosteroids; tests for allergy to class B and class D corticosteroids (eg, triamcinolone, fluciclonide, desonide, fluciclonide)
Caine mix (benzocaine hydrochloride, dibucaine hydrochloride, tetracaine hydrochloride)	External analgesics including those in skin, ophthalmic, otic, and oral preparations	Can cross-react with paraphenylenediamine, sulfonamides, PABA, sulfonyleureas, and benzoic acid; some benzoic acid derivatives include procaine, butacaine, and cocaine
Carba mix (diphenylguanidine, zincdibutylthiocarbamate, zincdiethylthiocarbamate)	Fungicides and pesticides used in gardening; rubber products such as gloves, shoes, boots, swimwear, sporting equipment, rubber bands, and headphones; personal care products including soaps, shampoos, and adhesives	Can cross-react with thiuram; patients can react to disulfiram
Cobalt dichloride (cobalt chloride)	Metal-containing products such as jewelry, medical and dental implants, and keys; products that use cobalt as a pigment such as ceramics, certain hair dyes, makeup, certain tattoos, paints, and inks	Can coreact to nickel and gold
Cocamidopropyl betaine	Topical products including shampoos, conditioners, cosmetics, hand soaps, and toothpastes	Suspected allergic reactions to cocamidopropyl betaine may be due to amidoamine; allergen of the year 2004 ^a

Abbreviation: PABA, *p*-aminobenzoic acid.

^aAllergen of the year is awarded by the American Contact Dermatitis Society.

Practice Questions

- 1. Patients with a documented contact allergy to caine mix should avoid all of the following except:**
 - a. benzocaine
 - b. butacaine
 - c. lidocaine
 - d. procaine
 - e. tetracaine
- 2. A patient with atopic dermatitis whose condition is worsening with the use of topical steroids is referred for patch testing and found to have positivity to budesonide. Which of the following would be an appropriate topical steroid to prescribe to this patient?**
 - a. desonide
 - b. desoximetasone
 - c. fluocinolone
 - d. fluocinonide
 - e. triamcinolone
- 3. A patient with a documented contact allergy to carba mix should avoid which of the following systemic medications?**
 - a. ciprofloxacin
 - b. disulfiram
 - c. gold sodium thiomalate
 - d. hydroxyzine
 - e. piroxicam
- 4. Bronopol (2-bromo-2-nitropropane-1,3-diol) can cross-react with all of the following except:**
 - a. diazolidinyl urea
 - b. DMDM hydantoin
 - c. imidazolidinyl urea
 - d. *p*-aminobenzoic acid
 - e. quaternium-15
- 5. Allergy to cocamidopropyl betaine is thought to be secondary to which of the following?**
 - a. amidoamine
 - b. benzoic acid
 - c. bronopol
 - d. *Myroxylon pereirae*
 - e. *N*-isopropyl-*N'*-phenyl parapheylenediamine

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