

Parabens

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PARABENS are the most commonly used preservatives in cosmetic, pharmaceutical, and industrial products. Parabens allergy is rare; less than 1% of patients patch-tested by the North American Contact Dermatitis Group react to paraben mix.¹

Parabens are popular preservatives because they are colorless, odorless, stable, and inexpensive; have low toxicity; and have a broad spectrum of antibacterial activity. Parabens are a family of alkyl esters of parahydroxybenzoic acid; the five most common esters are methylparaben, ethylparaben, propylparaben, butylparaben, and benzylparaben. Parabens are often combined with other preservatives.^{2,3}

Cross-reactions between paraben esters are fairly common. However, there are conflicting reports of cross-reactions with “para” compounds such as p-phenylenediamine. It is also important to be aware of the “paraben paradox,”¹ which refers to the following observations:

1. paraben-sensitive individuals have false-negative patch-test reactions when parabens are patch-tested on normal intact skin.
2. patients with positive patch-test reactions to parabens may continue to use paraben-containing products on uninvolved skin without any difficulty, but the same products applied to skin with an impaired barrier function on the same patient may induce dermatitis.

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Allergen Avoidance provides clinicians with high-quality up-to-date practical information to supply to patients about specific contact allergens.

References

1. Cashman AL, Warshaw EM. Parabens: a review of epidemiology, structure, allergenicity, and hormonal properties. *Dermatitis* 2005;16: 57–66.
2. Marks JG, Elsner P, DeLeo V. *Contact & occupational dermatology*, 3rd ed. St. Louis: Mosby; 2002. p. 121–3.
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Reprints not available.

Parabens

What are they?

Parabens are among the most widely used preservatives in cosmetic, pharmaceutical, and industrial products. The five most common parabens are methylparaben, ethylparaben, propylparaben, butylparaben, and benzylparaben.

Where are they found?

The following products may contain parabens:

Cosmetics	Medications	Foods	Industrial Products
Acne preparations	Anesthetics	Artificial sweeteners	Glues
Deodorants	Corticosteroid creams	Candies	Industrial oils
Soaps	Eye, ear, and nose drops	Syrups	Shoe polishes
Depilatories	Impregnated paste bandages for wounds	Frozen dairy products	Textiles
Emollients	Oral or injectable medications	Jellies and jams	
Creams	Prescription and over-the-counter	Ketchup	
Ointments	medicated creams, ointments,	Mustard	
Facial makeup	and solutions	Pickles and relishes	
Hair rinses and lotions	Rectal suspensions and suppositories	Soft drinks	
Suntan preparations	Vaginal medications	Fruit juices	
Toothpastes			

How can they be avoided?

Most paraben allergies occur when paraben-containing products are applied to damaged or irritated skin (eg, leg ulcers, dermatitis). Many corticosteroid *creams* contain parabens, but most corticosteroid *ointments* and *gels* are paraben free. Avoiding parabens in personal care products (shampoo, moisturizers, hair styling products, makeup, soaps, etc) can be difficult because parabens are the most commonly used preservatives in these products. Fortunately, many paraben-sensitive individuals can tolerate products containing parabens when they are applied to healthy skin.

A “use test” can help determine if you can tolerate a product containing parabens. This involves applying a small amount of the product to the same area of normal skin (normally the upper inner arm) twice daily for 2 weeks. If no reaction develops, then it is probably safe for you to use the product.

Avoidance of parabens in foods is usually not necessary because reactions are very rare.

Your dermatologist may give you a list of products that are safe for you to use. Be careful to purchase these exact products, and avoid products and ingredients with similar-sounding names.