

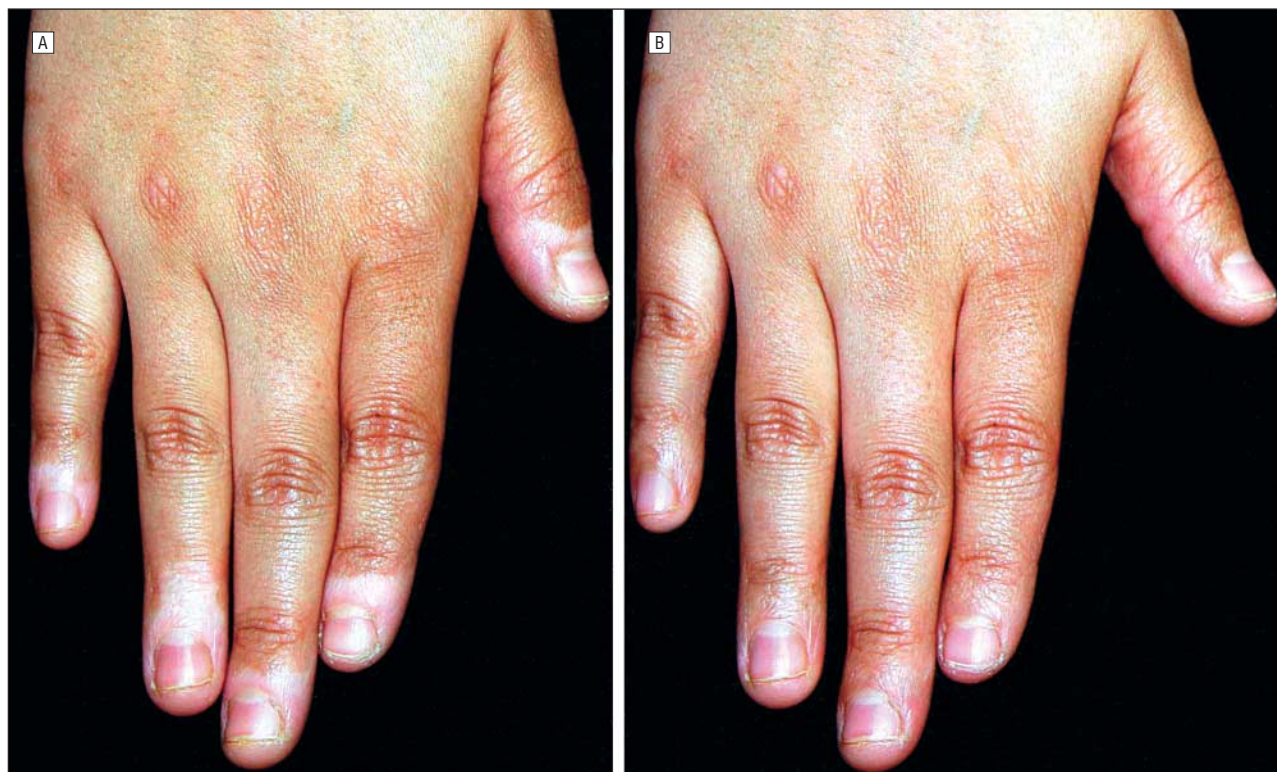


Figure. Before (A) and after (B) the application of makeup to camouflage vitiligo of the fingertips. We could not discern where she had vitiligo after the makeup had been applied.

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Contact Dermatitis to Pentylene Glycol in a Prescription Cream for Atopic Dermatitis: Case Report

According to the package insert, MimyX Cream (Stiefel Laboratories Inc, Coral Gables, Florida) is a "fragrance-free, preservative-free, water-based emulsion formulated for the management and relief of the burning and itching experienced with various types of dermatoses, including atopic dermatitis, allergic contact dermatitis and radiation dermatitis."¹ The MimyX Cream package label lists the following ingredients: purified water, olive oil, glycerin, pentyleneglycol (PTG), palm glycerides, vegetable oil, hydrogenated lecithin, squalane, betaine, palmitamide monoethanolamine (PEA), sarcosine, acetamide monoethanolamine, hydroxyethyl cellulose, sodium carbomer, carbomer, and xanthan gum.¹ The PEA is an endogenous bioactive fatty acid that is deficient in atopic skin and is reported to be replenished by MimyX Cream.² The cream is also said to restore the disrupted skin barrier characteristic of atopic dermatitis.²

Report of a Case. A 44-year-old woman with atopic dermatitis presented with a 20-year history of hand dermatitis and 2 episodes of a disseminated scaling erythematous dermatitis for 1 month. She had recently applied MimyX Cream to her hands and body and experienced initial improvement. Subsequent use was associated with flaring of her dermatitis.

Patch testing was performed with the North American Contact Dermatitis Group (NACDG) standard series and the patient's personal products and gloves, including MimyX Cream, according to NACDG methods.³ Patch test results were interpreted with the following scale: negative reaction (–); macular erythema (questionable, ?); erythematous papules (weak, +); vesicles (strong, ++); or a spreading reaction with crust and ulceration (extreme, +++).³ Patch test readings on day 3 and day 7 were as follows: fragrance mix (++/+), paraphenylenediamine (–/+++), and neomycin (–/+). MimyX Cream was applied on day 3 and caused a strong reaction (++) on day 7. At day 3, a weak positive reaction was noted to oxidized tea tree oil (+) and a questionably positive reaction to ylang-ylang oil (?); both tested negative at day 7.

Six months later, further patch testing was performed with the ingredients of the MimyX Cream provided by the manufacturer, and strong (++) to extreme (+++) reactions were noted at day 2 and day 6 to PTG, 5% and 10% petrolatum (pet) (+++/+++ each); a proprietary blend other than MimyX Cream, 10%, 20%, and 30% pet (+++/+++ each); and to MimyX Cream (+++/++) (**Figure**). Of note, the other proprietary blend is a formula that contains some of the Mi-

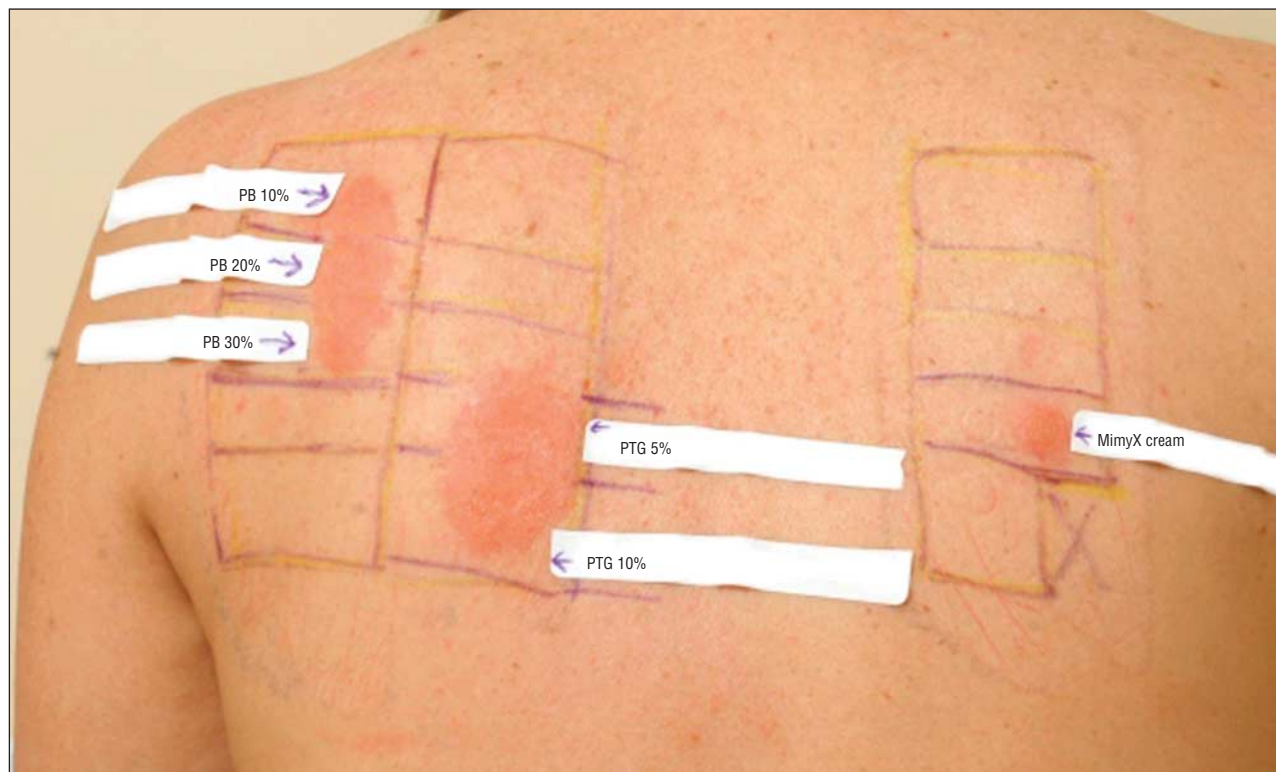


Figure. Positive patch test results to MimyX Cream (Stiefel Laboratories, Coral Gables, Florida); a different proprietary blend (PB) (10%, 20%, and 30%) containing some MimyX Cream ingredients, including pentylene glycol (PTG); and PTG alone, 5% and 10%.

Table. Results of Patient Patch Testing With Individual MimyX Cream^a Ingredients

Chemical	Concentration	Results ^b
Acetamide monoethanolamine	05% pet	-/-
Acetamide monoethanolamine	1% pet	-/-
Betaine	05% pet	?/-
Betaine	1% pet	?/-
Carbomer	1% pet	-/-
Other proprietary blend	10% pet	+++ / +++
Other proprietary blend	20% pet	+++ / +++
Other proprietary blend	30% pet	+++ / +++
Glycerin	10% aq	-/-
Hydrogenated lecithin	1% pet	-/-
Hydrogenated lecithin	2% pet	-/-
Hydrogenated cellulose	5% aq	-/-
Hydrogenated cellulose	10% aq	-/-
Olive oil	As is	-/-
Palm glycerides	5% pet	-/-
Palm glycerides	10% pet	-/-
PEA	05% pet	-/-
PEA	1% pet	-/-
Pentylene glycol	5% pet	+++ / +++
Pentylene glycol	10% pet	+++ / +++
Sarcosine	05% pet	-/-
Sarcosine	1% pet	-/-
Sodium carbomer	1% pet	-/-
Squalane	10% pet	-/-
Squalane	20% pet	-/-
Vegetable oil	5% pet	-/-
Vegetable oil	10% pet	-/-
Xanthan gum	10% aq	-/-
MimyX Cream	As is	+++ / +++

Abbreviations: aq, aqueous; PEA, palmitamide monoethanolamine; pet, petrolatum; -, negative; ++, strong reaction; +++, extreme reaction; ?, questionable reaction.

^aMimyX Cream is manufactured by Stiefel Laboratories Inc, Coral Gables, Florida.

^bData reported are from readings at day 2 and day 6 (day 2/day 6).

myX Cream ingredients, including PTG. Patch test concentrations were determined by best estimate or according to published data (**Table**).

In 10 controls, patch test reactions were negative to proprietary blend, 30% pet; PTG, 5% and 10% pet; and MimyX Cream.

Comment. Pentylene glycol (1,5-pentanediol) is a solvent, humectant, and preservative that is likely to share, at least in part, the reactivity pattern of propylene glycol (PG) (1,2-propanediol). Propylene glycol and PTG share the same chemical structure with the exception of a longer carbon chain on the PTG molecule and the relative position of the alcohol groups. Although PTG is considered to pose a lower risk of allergic and irritant skin reactions than PG, it might be expected to cross-react with PG.⁴ In MimyX Cream, the PTG acts primarily as a humectant.

To our knowledge, this is the first case of allergic contact dermatitis to MimyX Cream and is likely related to our patient's contact allergy to PTG. Gallo et al⁴ describe a patient with allergic contact dermatitis to PTG from Resvelife (Nuova ICT, Cologno, Italy), a resveratrol-containing emollient cream that is no longer available in Europe. In that case, the patch test findings were positive to PTG, 10%, 5%, and 0.5% aqueous, each with strong (++) reactions, while the PG reaction was negative. Reaction to PG was negative in our case as well.

Our patient's reactions to paraphenylenediamine and neomycin were "past relevant," with no current use of either chemical. We initially suspected a possible cross-reaction between her positive reaction to fragrance mix and the botanical ingredients in MimyX Cream, but her patch test results were negative to these ingredients.

As with PG, the reported prevalence of allergic reactions to PTG is low. This may be because PTG is used in topical formulations less frequently than PG. However, as new products containing PTG are introduced, an awareness of the risk for contact dermatitis secondary to PTG exposure is warranted.

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& Gamble. Mr Reynolds is an employee of Stiefel Laboratories Inc, which supplied the individual ingredients of the MimyX Cream for patch testing.

Additional Contributions: On written request, Stiefel Research Institute provided Dr Taylor with all MimyX ingredients for patch testing.

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Torsemid-Induced Pseudoporphyria

Pseudoporphyria is an infrequent blistering skin disease. The occurrence of this entity has been attributed to exposure to UV radiation, chronic kidney failure associated or not with dialysis, and use of multiple drugs including diuretics.¹ To our knowledge, torsemide has not been reported as a cause of pseudoporphyria; likewise, cross-reaction with furosemide had been suspected theoretically but not observed in any patient.

Report of a Case. A 64-year-old man with chronic renal failure attended our dermatology service in October 2006 for evaluation of blistering lesions on the backs of his hands and scalp since July 2006. He had had no changes in his treatment in the preceding year except for starting treatment with torsemide in May 2006, which had been replaced later with furosemide in September of the same year.

Clinical examination revealed blistering lesions, crusts, erosions, and hypopigmented scars on the backs of his hands (**Figure 1**) and his scalp. Urinary porphyrin levels were within normal ranges. The histologic study showed dermoepidermal detachment and thickening of the walls of the vessels of the upper dermis. Under periodic acid-Schiff stain, these vessels showed a reduplication of the basement membrane with diastase-resistant material (**Figure 2**). Under direct immunofluorescence, weak deposits of IgG and IgA in the vessels



Figure 1. Bullae, crusts, erosions, and hypopigmented scars on the backs of the hands.