

TABLE I. Der p 1 levels on garments according to fabric type. Results are means (dust weight) or geometric means (Der p 1) with 95% confidence intervals in parentheses

Fabric type	n	Dust weight (gm)	Der p 1	
			µg/gm	Total µg
Cotton	40	0.025* (0.019-0.030)	3.60 (2.74-4.73)	0.069† (0.049-0.097)
Polyester/ cotton	60	0.061‡ (0.052-0.070)	2.09‡ (1.67-2.62)	0.105† (0.079-0.139)
Polyester	47	0.080 (0.071-0.090)	2.62§ (2.08-3.30)	0.184 (0.137-0.249)
Wool	19	0.078 (0.063-0.092)	4.51 (3.05-6.66)	0.296 (0.172-0.508)

$p < 0.05$ compared with *polyester/cotton, †polyester and wool, ‡cotton and wool, §wool.

Confidence intervals are given in parentheses.

recovered in the 3-minute sampling period according to the fabric type.

Results from this study indicate that the type of fabric influences the amount of allergen on garments. We cannot exclude the possibility that woolen garments contain higher levels of Der p 1 because they are washed less frequently, but we did not ascertain when garments were last washed. The difference in Der p 1 could also be due to differences in electrostatic charges retaining allergen or differences in mite infestation of different fabric types.

More puzzling is why girls' clothing contains higher levels of Der p 1. There was no significant difference in the type of garment worn between girls and boys ($p = 0.66$), and the difference between boys and girls remained significant when fabric type was incorporated into a two-factor analysis of variance ($p = 0.0007$). It is possible that the girls' garments were washed less frequently. It could also be that girls spend more time in direct contact with carpets, furniture, and bedding, which are the main sources of mites and allergens.

We concur with Tovey et al. that clothing is an underrecognized source of house dust mite allergen exposure. Levels of Der p 1 found in our study are, however, considerably lower than those found in their study, even though Wellington bedding and floor allergen levels are similar to those in Sydney.³ The subjects the study by Tovey et al. were adults, there were some differences in the types of garments worn, and it seems likely that children's clothing would be washed more frequently than the adults' clothing. Patients allergic to house dust mite allergens should perhaps avoid woolen garments to further minimize their exposure to Der p 1.

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Reply

To the Editor:

We agree with the authors that clothing may be an unrecognized source of allergen exposure—particularly considering factors such as constant proximity to the source, thermal body drafts, and body movement disturbing dust. In our study higher allergen levels were associated with a lower frequency of washing. Such washing is less frequent for adult clothing used in formal occupations than for children's school clothing, which is subject to more activity, soiling, and regular washing. Studies in which aeroallergen measurements are used to compare the relative importance of different proximal sources of mite allergens are needed.

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Absence of modification of endogenous soy allergens

To the Editor:

We were interested to read Dr. Burks's assertions on the absence of modification of endogenous soy allergens in the genetically treated soybean varieties. He and Dr. Fuchs were able to demonstrate that immunoblots reveal similar IgE-binding patterns with normal soybeans and new varieties, meaning that the natural allergens are not modified.

However, they do not seem to share the need for awareness that such products might be noxious for

human nutrition. These varieties include a new protein: 5-enolpyruvylshikimate-3-phosphate-synthase. One may fear that no natural tolerance to this protein has ever been developed. We have to postulate a risk of sensitization to this new kind of protein, which could become a new allergen. Was this risk of immunogenicity and allergenicity studied in animals before large-scale farming was done?

Moreover, the possibility of allergies in the future to this variety of soy has to be kept in mind, the more so as clinical researchers will be at risk, when testing ordinary soy, of missing an allergy exquisitely aimed at this protein. We would read Dr. Burk's reply with most interest.

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Reply

To the Editor:

In response to an article published in *The Journal of Allergy and Clinical Immunology* (1995;96:1008-10) entitled, "Assessment of the endogenous allergens in glyphosate-tolerant and commercial soybean varieties," Prof. Moneret-Vautrin and Dr. Kanny raised a question concerning the allergenic potential of the 5-enolpyruvylshikimate-3-phosphate-synthase (EPSPS) protein expressed in the glyphosate-tolerant soybeans. The article intentionally addressed the specific question regarding any changes in the endogenous soybean allergens resulting from the introduction of the glyphosate tolerance trait, establishing that there were no detectable changes in the endogenous allergens. The question regarding the allergenic potential of the EPSPS protein expressed in the glyphosate-tolerant soybeans was addressed in a separate article, recently published in *The Journal of Nutrition* (Harrison et al. 1996;126:728-40). In this article the EPSPS protein expressed in glyphosate-tolerant soybeans was shown not to pose any toxic or probable allergenic concerns. A combination of genetic and physicochemical approaches was used to reach this conclusion. We trust that the information in this article fully addresses the concern raised by Prof. Moneret-Vautrin and Dr. Kanny.

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Hand dermatitis: A risk factor for latex hypersensitivity

To the Editor:

Three groups of patients have been described to be at significant risk for developing allergic reactions to latex products: children with spina bifida who have undergone multiple surgical procedures, health care workers who are frequently exposed to latex gloves, and workers exposed to latex on the job.¹ Described are two patients with hand eczema and no risk factors for latex allergy who have experienced significant latex allergic symptoms.

Patient 1 is a 31-year-old homemaker with a 6-year history of eczema of her fingers of uncertain cause. She consulted with a dermatologist and was advised to wear latex gloves for dishwashing and while bathing her children to lessen the drying effect to her hands from repeated exposure to water. She was also advised to apply Temovate cream and Lac-Hydrin lotion to her hands. Within a few months of using latex gloves, the patient noted ocular swelling, itching, sneezing, throat irritation, and hives after contact with the latex gloves. She reported no history of food allergies. She had had a tonsillectomy performed approximately 2 years before the onset of her latex allergy symptoms.

Patient 2 is a 38-year-old postal worker with a 17-year history of seasonal allergic rhinitis, conjunctivitis, and atopic dermatitis. Her eczema primarily involved her arms, neck, and hands. She had been advised by her dermatologist to wear latex gloves for dishwashing and while bathing her children. In addition, she applied Temovate cream and various moisturizers to her hands. Approximately 6 years after she began using latex gloves, she noted swelling and itching of her hands after wearing the latex gloves. Soon thereafter, she noted sneezing and facial swelling during dental examinations performed with latex gloves. She denied any history of food allergies. Thyroid surgery had been performed more than 10 years before the onset of her symptoms.

Latex-specific IgE, as determined by RAST, was positive in both patients.

These two cases demonstrate that patients with a history of hand dermatitis, unrelated to latex allergy, appear to be another group of patients who are at risk of developing latex allergy. Patients with hand dermatitis, caused by latex glove exposure, have previously been shown to be at increased risk of developing systemic reactions to latex products.² Advising patients with hand dermatitis to wear latex gloves to prevent the drying effect of water exposure may result in sensitization to latex proteins. A disrupted cutaneous barrier appears to be the route of sensitization in these patients. The role of both topical cortisone creams and moisturizers may have also enhanced the sensitization to latex as well. Both of these patients had been advised by their dermatologists to begin using latex gloves, which in turn resulted in latex allergy symptoms. As allergists-immunologists, we should advise our colleagues to recom-