

of "very mild skin irritancy". In the guinea pig maximization test, "only random reactions were observed", and the dye was not "considered to cause delayed contact hypersensitivity".

Work-related respiratory and skin symptoms are not uncommon among hairdressers. So far, only two cases of allergic reaction to Basic Blue 99 have been reported, de Groot & Weyland described contact allergy of the scalp, forehead, and upper eyelids with significant hair loss (19). Peters et al. reported the case of a hairdresser with occupational allergic rhinitis and urticaria caused by Basic Blue 99 and azo dyes (20).

Since it cannot be decided at this stage whether the low frequency of allergies to Basic Blue 99 is due to a low allergenic potential or to a lack of screening for reactions to this substance, we recommend that this allergen be included in patch and prick test screening series for hairdressers, at least on an experimental basis.

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Prevention of latex allergy

IN A RECENT study, 18% of preoperative anaphylactic reactions were found to be related to IgE-mediated allergy to natural rubber latex (1). During the last decade, latex allergy has developed into a factor of great importance worldwide in the diagnosis of glove intolerance reactions, occupational asthma, and anaphylactic conditions.

It is now an urgent task for physicians and researchers studying latex allergy to assist colleagues and hospital staff to reduce the risk of sensitization of personnel and patients.

In hospital and dental care, natural rubber latex gloves and special devices such as catheter balloons cannot easily, in a short time, be replaced by synthetic materials. Economic as well as quality-control aspects cause problems. As long as latex products with allergenic properties are in common use, buyers and consumers must be informed of the possibility of allergy and the importance of choosing latex products with as low an allergen content as possible, and also of using unpowdered latex gloves to prevent the airborne spread of latex allergens.

The allergen content in extracts from medical gloves and devices has been studied for latex allergy prevention (2, 3), and the use of unpowdered gloves has been shown to be effective in preventing occupational asthma (4).

In a Swedish study, we have determined the latex allergen content by using the EAI inhibition method (5) on extracts from randomly sampled medical and surgical gloves used in 1994-5 at two Swedish university hospitals. Latex antigens (not certainly equal to relevant latex allergens) were also measured with the commercial Guthrie LEAP assay (Guthrie Research Institute, USA), and the protein concentration was measured by the modified Lowry method. We are aware that the allergen content may differ in different lots of gloves and thus that

samples for allergen determination should ideally be taken regularly to reflect accurately the allergenicity of different manufacturers' products. However, we believe the results of our pilot study should be considered when hospital gloves are purchased in bulk (Table 1).

In this pilot study, there is no complete correlation between the results of the EAI inhibition method and the Guthrie LEAP assay. Obviously, the two methods do not measure the same agents. Only the EAI assay, which relies on immunologic techniques using sera from clinically latex-allergic patients with a known amount of latex-specific IgE antibodies, measures latex allergens. Thus, there are strong reasons to prefer the IgE-dependent EAI assay.

Various procedures in rubber manufacturing such as leaching (6) affect the amounts of allergen residuals in the final products. Various powdering processes may also affect the allergen contamination of the donning powder and thus also the conditions for allergen spread in workplaces (5). Thus, today, when the allergen content can be measured, we find

it vital that the buyers of dental and hospital gloves and devices be informed of the availability of gloves free of natural rubber latex or at least products with documented low allergen content. Unpowdered gloves should be preferred to avoid the airborne spreading of latex allergens.

In the USA and Europe (CEN, TC 205, WG3), the standardization of medical gloves now includes the labeling of latex content and of the biocompatibility of gloves, including their allergenicity. Until these standards are in effect, buyers of gloves can ask for labeling of latex content, be aware that one can measure latex allergen content by IgE-dependent immunologic methods, and ask for documentation of how manufacturers handled the problem of aller-

Latex allergy must be prevented – an urgent task for buyers and manufacturers of latex medical gloves and devices.

Table 1. EAI-inhibition units and LEAP $\mu\text{g/ml}$ in randomly sampled medical and surgical gloves used in 1994 by two Swedish university hospitals and their glove consumption

Manufacturer/brand name		Consumption 1994 (n)	Latex allergen (units/ml)	LEAP ($\mu\text{g/ml}$)
Examination gloves				
Powdered	Ansell Medical			
	Conform	5 800 000	0.1	6.8
	Solefatrade			
	Goldenhand	1 776 500	53.0	—
Powder-free	Solefatrade			
	Everguard	390 000	0.1	0.5
Surgical gloves				
Powdered	Ansell			
	Gammex	186 000	0.1	4.5
	Öste	24 300	—	—
	Johnson & Johnson			
	Neutrolon	9700	0.3–1.5*	0.5–2.9*
	Micro-touch	750	11.9	113
	Baxter (Lichy)			
	Triflex	67 600	70	19
	Solefatrade			
	Derma	17 600	86	224
	Smith & Nephew			
	Perry-Microapt	1100	44	73
	Perry	1600	22.4	42.8
Powder-free	Ansell			
	Nutex	6240	0.1	5.6
	Reagent/Gibcock			
	Biogel	40 800	<0.1–2*	0.03–0.25*
	Smith & Nephew			
	Perry-Encore	27 450	7.5	6.6
	Solefatrade			
	Mediglove	17 800	0.1	0.03

* Two different lots examined.

genic latex proteins in their products. In the glove purchase process, this information has been given to the locally responsible employees in our region.

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Improper treatment of anaphylaxis

I WAS DISTURBED and dismayed to read in two separate case reports in your issue of June 1995 (vol. 50, no. 6) that in two of the three patients, the treatment of the anaphylactic episodes did not include the most fundamental of all, i.e., epinephrine.

In the first case report, that by Novembre et al. entitled "Skin-prick-test-induced anaphylaxis", the patient, upon developing anaphylaxis, was treated by administration of intravenous corticosteroids and oral antihistamines. Both have an onset of action taking hours. The fact that the symptoms disappeared in a few minutes was more a matter of luck than management.

Fortunately, in the second case, the patient was indeed treated with subcutaneous epinephrine.

Then, in a different case report by Dechamp et al. entitled "First report of anaphylactic reaction after fig (*Ficus carica*) ingestion", it was noted that a 77-year-old woman developed itching, urticaria, angioedema, asthma, and gastrointestinal complaints. Yet, at the hospital emergency ward where she was sent, the patient was given only a 4-mg injection of betamethasone. Fortunately, she recovered despite the treatment, which could not have been effective.

Anaphylaxis may be life-threatening. A major cause of death is shock and/or airway obstruction.

Blood pressure support and relief of airway obstruction by subcutaneous epinephrine, intravenous normal saline to maintain intravascular volume, and supplemental oxygen would be the first line of treatment. H₁-

blocking antihistamines are perhaps second line and corticosteroids probably third line in this situation.

If the authors in the second report chose not to use epinephrine because of the older age of the patient or were concerned by the presence of chest pain, it behooves them to explain that this was the reason for withholding epinephrine rather than ignoring its use altogether.

Perhaps the Journal should have reconsidered publishing these papers submitted without proper emphasis on the appropriate pharmacotherapy for this dangerous condition.

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Allergic contact dermatitis to chloramphenicol

CONTACT with topical medicaments applied to the skin or mucosa can give rise to various clinical manifestations of immunologic and non-immunologic origin. The list of topical drugs most likely to elicit contact dermatitis changes over the years. Apart from neomycin, the incidence of sensitization, caused by topical use, to other antibiotics has diminished. That incidence depends mainly on the intrinsic sensitizing power of the medicament and secondarily on its frequency of use in clinical

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