weeks instead of allowing one signature to last a patient's lifetime. Unfortunately, lack of published follow up data makes it impossible to find out what health authorities actually do as a result of the service's visits and recommendations.

The future and the Health Advisory Service

It is of concern that there seems to be little improvement in the frequency and types of problems regularly reported by visiting teams from the Health Advisory Service. What could be done to remedy this? Several options are possible: firstly, give the service executive power and agree guidelines for standards of care for patients in both public and private sectors; secondly, raise the profile of the service by highlighting problem areas, increasing the number of visits, and publishing follow up reports; and, thirdly, establish a research unit within the service to quantify and tabulate the very considerable amount of information collected by the service.

The service has a well established infrastructure, and if strengthened it could easily expand its work to help other medical specialties whose services are not easily assessed by current performance indicators. To avoid rivalries between specialties the director could be a general manager, advised by appropriate medical deputy directors.

The prospects for the future of the service seem exciting, especially as its continued existence was supported by two recent reviews.[3,4] There are two important dark clouds on the horizon, however, in the form of the Audit Commission and the National Audit Office, which appear to be vying with each other to take over the work of the service.[5] Both already assess and apply value for money judgments to many functions of the NHS. Such judgments are fairly easy to apply to standards of input but are difficult to apply to the attitudes of the staff and their patterns of practice, which can lead, for example, to patients being put on commodes in full view of others on the ward. Such practices may be detected only by night visits, which are a normal part of the routine of the service's teams. The Audit Commission and the National Audit Office seem to lack sufficient expertise in peer review to make judgments on the staff's attitudes and practices, which can have a large impact on patients' quality of life. Furthermore, the Audit Commission has been strongly criticised for presenting its facts in a way that makes it difficult to check or challenge them.[6] The regional health authorities could also be groomed to take over the role of the service. Such an action would be costly, however, and would cause immense reduplication, be likely to have varying standards, and be unlikely to be truly independent. Surely what is needed is not a take over but a more authoritative higher profile service with executive power, which really would be working for patients in exactly the way the government intended.

1 Martin JP. *Hospitals in trouble*. Oxford: Blackwell, 1984.
2 Health Advisory Service. *Annual report*. Sutton: NHS Health Advisory Service, 1987.
3 Day P, Klein R, Tipping S. *Inspecting for quality*. Bath: University of Bath, Centre for the Analysis of Social Policy, 1988.
4 Henkel M, Kogan M, Parkwood T, Whitaker T, Youll P. *The Health Advisory Service: an evaluation*. London: King Edward's Hospital Fund, 1989.
5 Hudson R. Auditing's new issues. *Health Service Journal* 1989;**99**:1012-3.
6 McSweeney B. Accounting for the Audit Commission. *Political Quarterly* 1988;**59**:28-43.

(Accepted 14 May 1990)

Labelling cosmetics with their ingredients

Anton C de Groot

Dermatologists often see patients with contact dermatitis caused or worsened by cosmetic products. Adequate diagnosis, treatment, and advice are possible only if the offending ingredients can be identified. European Community regulations do not require cosmetics manufacturers to list all ingredients on their products; only about 30 groups of chemicals must be declared on the label. As an almost invariable consequence little information is provided on the product or package label. Doctors, therefore, often have to contact the manufacturers of the cosmetics used by their patients, which usually takes time and sometimes results in undesirable delays in diagnosis or no diagnosis at all. After the allergens responsible for the dermatitis have been identified patients need advice on which products to avoid and on those that can be used without risking a recurrence of dermatitis. Currently, this is virtually impossible.

The solution to this problem is simple: all ingredients of cosmetics and toiletries must be listed on the products or the package labels, or both.[1,2]

Who would benefit?

Listing the ingredients on the label would benefit patients who are allergic to cosmetics, dermatologists, and ultimately the cosmetic industry itself. It would allow dermatologists to use the appropriate tests to pinpoint the cause of contact dermatitis, and when a specific sensitiser had been identified they could advise the patient on which chemicals to avoid. This would apply not only to the causative allergens but also to cross reacting substances. Labelling would then allow the patient to choose cosmetics that would not provoke recurrences of allergic dermatitis. Labelling could also benefit patients presenting with complaints unrelated to cosmetics but who were found to be allergic to chemicals that are used in cosmetic products.

Furthermore, listing the ingredients of cosmetics would stimulate scientific investigations as it has done in the United States,[3,4] where labelling has been mandatory for over a decade.[1] It would allow the dermatological community to identify promptly new ingredients of cosmetics that cause problems. The lack of knowledge of the ingredients of cosmetics may delay the recognition of potential allergens for several years.[5] Many patients are unnecessarily sensitised during this delay. Data generated by scientific studies on the allergens in cosmetics[6] can be used by the cosmetics industry to make their products safer.

How many would benefit?

The number of patients allergic to cosmetics or their ingredients who would benefit from listing of the ingredients on labels seems to be sufficient to warrant the time and costs entailed in adapting European Community legislation.

ALLERGY TO COSMETICS IN PATIENTS SEEN BY DERMATOLOGISTS

In dermatological practice allergy to cosmetics has been diagnosed in 0·6% of all referrals and in approximately 5·5% of all patients patch tested for

Anton C de Groot, MD, *dermatologist*
On behalf of the working party European Community Affairs of the European Contact Dermatitis Society: a full list of members is given at the end of the paper

Correspondence to:
Dr de Groot, Department of Dermatology, Carolus Hospital, PO Box 1101, 5200 BD 's-Hertogenbosch, The Netherlands.

Br Med J 1990;**300**:1636-8

Listing ingredients on cosmetic products is already mandatory in the United States

suspected allergic contact dermatitis.[6] These figures seem to be increasing: of 576 patients patch tested in 's-Hertogenbosch during 1987-8, 57 (9·9%) were allergic to one or more of the cosmetics used (A C de Groot, unpublished data), and of 1317 patients tested in Bologna during 1987-8, 188 (14·3%) were sensitised to their cosmetics (A Tosti, unpublished data). In addition, many patients who do not react to cosmetic products as such show positive patch test reactions to allergens that are commonly used in cosmetic products.

The European standard series, which is routinely used to test patients suspected of having allergic contact dermatitis, contains seven such allergens: *p*-phenylenediamine (dye), colophony (resin), parabens (preservative), wool alcohols (emollient, emulsifier), balsam of Peru (resin, indicator for fragrance sensitivity), formaldehyde (preservative), fragrance mix (cinnamic alcohol, cinnamic aldehyde, eugenol, hydroxycitronellal, amylcinnamaldehyde, geraniol, isoeugenol, oak moss absolute), and quaternium-15 (preservative). The table shows the results obtained in patients suspected of having allergic contact dermatitis who were tested with the European standard series by members of the working party European Community Affairs and their coworkers. A high prevalence of sensitisation was observed with several of the ingredients of cosmetics: fragrance mix (7·0%), balsam of Peru (5·8%), colophony (3·4%), wool alcohols (2·8%), and formaldehyde (2·2%). After metals ingredients of cosmetics were the commonest cause of contact allergy. Among 20 791 patients tested, there were 14 399 positive reactions to the patch test; 5147 (36%) were to ingredients of cosmetics.

Patients showing positive test reactions to ingredients of cosmetics may have become sensitised to these chemicals primarily from other products—for example, medicaments or chemicals that they have been exposed to at work. The percentage of patients with contact allergies who were allergic to ingredients of cosmetics was even higher: of 576 patients tested in 's-Hertogenbosch during 1987-8, 237 had one or more positive reactions to the patch test; 106 (45%) were allergic to cosmetics or ingredients of cosmetics (A C de Groot, unpublished data). During 1983-6, 1808 patients in High Wycombe, England, were patch tested; 757 had at least one positive reaction, and 305 (40%) were allergic to cosmetics or ingredients of cosmetics (J D Wilkinson, unpublished data).

Several other ingredients of cosmetics that were not included in the European standard series at the time of the investigation are also common causes of allergy. The preservative system methylisothiazoline-methylchloroisothiazolinone (Kathon CG; Euxyl K 100) has recently produced contact dermatitis in many patients in various European countries. This preservative is such a common cause of contact allergy[5] that it has been added to the European standard series.[7] A similar situation occurred in the United Kingdom with the biocide quaternium-15.

Toluenesulfonamide-formaldehyde resin is another important cause of allergy to cosmetics. No prevalence studies have been published, but of the 576 patients investigated in 's-Hertogenbosch in 1987-8, eight (1·4%) were allergic to this resin, which is found in nail lacquer and hardener (A C de Groot, unpublished data). Other less common causes of allergy to cosmetic products have recently been reviewed.[6]

ALLERGY TO COSMETICS IN THE GENERAL POPULATION

Only two studies have been published on the prevalence of allergy to cosmetics in the general population.[8,9] The British Consumers' Association interviewed 1022 people over 16 years of age about side effects of cosmetics.[8] Eighty five people claimed adverse reactions, of whom 44 attended a clinic for patch testing. They were patch tested with the suspected products and at least 25 cosmetic allergens. A positive reaction was found to cosmetics or ingredients of cosmetics in 11 people. In a Dutch study 982 clients of beauticians were interviewed about adverse reactions to cosmetics.[9] Of the 254 who claimed such reactions, 150 were patch tested with the European standard series and 15 cosmetic allergens. In 10 subjects the side effects were attributed to an allergy to cosmetics. Because only some of the subjects in these two studies were patch tested the percentages probably

Results obtained in patients suspected to have allergic contact dermatitis tested with European standard series

	No of patients tested	No (%) of positive reactions
Metals:		
Cobalt chloride	20 791	1319 (6·3)
Nickel sulphate	20 791	3536 (17·0)
Potassium dichromate	20 791	1049 (5·0)
Chemicals to process rubber:		
Black rubber mix	20 791	163 (0·8)
Carba mix	20 791	523 (2·5)
Mercapto mix	20 791	156 (0·8)
Thiuram mix	20 791	492 (2·4)
Pharmaceuticals:		
Benzocaine	20 791	435 (2·1)
Neomycin sulphate	20 791	676 (3·3)
Quinoline mix	20 791	191 (0·9)
Miscellaneous:		
p-tert-Butylphenol formaldehyde resin	18 454	188 (1·0)
Epoxy resin	20 791	168 (0·8)
Ethylenediamine dihydrochloride	20 791	292 (1·4)
Primin	8 335	64 (0·8)
Ingredients of cosmetics:		
Balsam of Peru	20 791	1199 (5·8)
Colophony	20 791	699 (3·4)
Formaldehyde	20 791	455 (2·2)
Fragrance mix	18 822	1319 (7·0)
Parabens	20 791	230 (1·1)
p-Phenylenediamine dihydrochloride	20 791	588 (2·8)
Quaternium-15	8 979	82 (0·9)
Wool alcohols	20 791	575 (2·8)

Unpublished data from the Belgian Tri-Contact Dermatitis Group (1978-88), the Dutch Contact Dermatitis Group (1984-8), the Danish Contact Dermatitis Group (1985-6),[11] A Tosti (Italy, 1987-8), N Hunziker (Switzerland, 1987), J D Wilkinson (United Kingdom, 1985-8).

underestimate the actual prevalence of allergy to cosmetics.

The percentage of the general population that is allergic to cosmetics or ingredients of cosmetics is unknown. The few data available suggest that roughly 2% of the adult population in The Netherlands is allergic to one or more cosmetic products. This does not include people who present with allergies unconnected with cosmetics but are allergic to substances present in cosmetic products. Taking all the data together, we estimate that about 2-3% of the adult population of The Netherlands is allergic to at least one ingredient found in cosmetics and would therefore benefit from ingredients being listed on cosmetic products. There are few reasons for assuming that the percentage of people with allergies to cosmetics in The Netherlands is appreciably different from that in other countries in the European Community. Dermatologists, epidemiologists, industry, and governments should cooperate in large scale prospective studies to collect data on prevalence.

Objections to labelling

The cosmetics industry will certainly object to mandatory listing of ingredients on labels. It will argue that the formulations are valuable trade secrets in a competitive market. A good cosmetics chemist, however, can copy another company's product even without knowing its composition, and this may also apply to perfumes. Companies claiming trade secrets that can factually prove to the competent authority that the compound is a true trade secret could get approval for non-disclosure of this ingredient's identity. In the United States fewer than 24 such exemptions were granted up to 1988 (H J Eiermann, Food and Drug Administration, Washington, DC, personal communication).

Other objections to labelling are likely to be costs, the loss of space on the label, and the loss of flexibility in reformulating products because of the need to coordinate reformulation with changing the packaging. Loss of space on the label seems to be the only valid issue. This could be overcome, however, by defining a minimum size of product that has to have its ingredients listed on the product itself. Small products could be labelled only on the outer container or, alternatively, on a tab, tape, or card attached to the outer container, or on a package insert, or both.

Problems with labelling

We are aware that listing the ingredients of cosmetics on labels will cause some inconvenience for the cosmetics industry but think that the problems could be solved without major continuing difficulties, bringing benefit to patients, consumers, and doctors.

A possible problem could be the choice of the language in which to list the ingredients. The European Community is heterogeneous (as are other European countries that are not member states); the open market, which already exists but will be consolidated in 1992, makes it impractical, if not impossible, for all the ingredients to be listed in all the languages of the countries where the products are marketed. Uniformity is essential. It is not necessary for inhabitants of all countries in the European Community to be able to pronounce the names of the ingredients correctly; it is sufficient that they recognise the name of the substance they have been advised to avoid.

A suitable and practical option, therefore, is to use the dictionary of the United States' Cosmetic, Toiletry, and Fragrance Association as a guideline.[10] This system is ready to hand, though some additions would be needed. For instance, many sunscreens are not listed in the dictionary as they are regarded as over the counter drugs rather than as cosmetics in the United States.

We want to emphasise that disclosing only a limited number of ingredients—namely, those that most commonly cause adverse reactions (partial ingredient labelling)—as suggested by the cosmetics industry has several important disadvantages and may be misleading. Selective labelling would fail to solve the problem of "occasional" allergens, and the detection of new important allergens would be delayed. It would also lead to practical problems: which ingredients would have to be declared and which would not. In addition, the list of ingredients to be declared would have to be changed as new causes of allergy were identified. Listing the ingredients of cosmetics should, therefore, imply declaration of all ingredients of cosmetic products.

Conclusions

Listing the ingredients of cosmetics on labels would be of great benefit to dermatologists (who could identify the causative allergens); to patients with allergies to cosmetics and to those sensitised to ingredients used in cosmetic products (who could continue using cosmetics without the risk of allergic contact dermatitis); and to cosmetic science and the cosmetics industry (which would be provided with data to make its products safer). In the United States labelling cosmetics with their ingredients has already been of great benefit to patients, doctors, and the cosmetics industry (H J Eiermann, personal communication). The cosmetics industry would suffer no major long term disadvantages from compulsory listing of ingredients, and slight inconveniences could readily be overcome. The Cosmetic, Toiletry, and Fragrance Association's dictionary (with a European supplement) could be used as a guideline to nomenclature.

Members of the working party European Community Affairs of the European Contact Dermatitis Society were An Dooms-Goossens (Belgium), Peter J Frosch (West Germany), Nicole Hunziker (Switzerland), Torkil Menné (Denmark), Antonella Tosti (Italy), and John Wilkinson (Britain).

1 Greif M, Maibach HI. United States cosmetic ingredient labelling. *Contact Dermatitis* 1977;**3**:94-7.
2 Larsen WG. Why is the USA the only country with compulsory ingredient labelling? *Contact Dermatitis* 1989;**20**:1-2.
3 North American Contact Dermatitis Group and Food and Drug Administration. Prospective study of cosmetic reactions: 1977-1980. *J Am Acad Dermatol* 1982;**6**:909-17.
4 Adams RM, Maibach HI. A five-year study of cosmetic reactions. *J Am Acad Dermatol* 1985;**13**:1062-9.
5 de Groot AC, Herxheimer A. Isothiazolinone preservative: cause of a continuing epidemic of cosmetic dermatitis. *Lancet* 1989;i:314-6.
6 de Groot AC. Adverse reactions to cosmetics. The Netherlands: State University of Groningen, 1988, pp 69-181. (Thesis.)
7 International Contact Dermatitis Research Group (ICDRG) and the European Environmental and Contact Dermatitis Research Group (EECDRG). Notice. *Contact Dermatitis* 1988;**19**:391.
8 Consumers' Association. *Reactions of the skin to cosmetic and toiletry products.* London: Consumers' Association, 1979.
9 de Groot AC, Beverdam E, Tjong Ayong C, Coenraads PJ, Nater JP. The role of contact allergy in the spectrum of adverse effects caused by cosmetics and toiletries. *Contact Dermatitis* 1988;**19**:195-201.
10 Estrin NF, Crosley PA, Haynes CR, eds. *CTFA cosmetic ingredient dictionary.* 3rd ed. Washington: Cosmetic, Toiletry and Fragrance Association, 1982.
11 Christophersen J, Menné T, Tanghoj P, *et al.* Clinical patch test data evaluated by multivariate analysis. *Contact Dermatitis* 1989;**21**:291-9.

(Accepted 16 March 1990)