

Allergy to cosmetics and perfumes: will European legislation improve consumer safety?

Allergie aux cosmétiques et aux parfums : est-ce que la législation européenne améliore la sécurité des consommateurs ?

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Abstract

Exposure regulation is the basis for primary prevention of contact allergy due to consumer products. Fifteen to twenty percentage of the general population are contact sensitized to small chemicals, most frequently to perfumes, preservatives, hair dyes, metals (nickel and chrome) and rubber additives. Exposure to most of the important contact sensitizing small chemicals in consumer products is currently regulated either by industrial recommendation or by national and/or EU legislation. The effect of the regulation of exposure to these common haptens can be recognized by clinical and epidemiological studies. Significant data already exist for preservatives, fragrances and nickel.

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Résumé

La prévention primaire des allergies de contact est principalement basée sur des règles d'utilisation. 15 à 20 % de la population générale présente une sensibilisation de contact à des produits chimiques tels que les parfums, les conservateurs, les teintures capillaires, les métaux (nickel et chrome) et les additifs présents dans le caoutchouc. L'exposition à la plupart des agents chimiques à l'origine de sensibilisation par contact est en général réglementée par les recommandations des industriels ou par des lois nationales et/ou européennes. Les effets de la réglementation concernant l'exposition à ces haptènes communs peut être appréciée par des études cliniques et épidémiologiques. Des données significatives existent déjà pour les additifs, les fragrances et le nickel.

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Exposure regulation is the basis for primary prevention of contact allergy from consumer products. Product labelling secure secondary prevention. The skin disease allergic contact dermatitis is caused by domestic and occupational exposure to small chemicals. Decisive for induction of allergic

contact sensitization and elicitation of allergic contact dermatitis is the inherent potency of haptens and the exposure concentration (dose per unit area).

Knowledge on the epidemiology of contact sensitization comes from background population studies and patch test studies in hospital referral centres. Approximately, 15–20% of the general population are contact sensitized to small chemicals; most predominantly perfumes, preservatives, hair

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dyes, metals (nickel and chrome) and rubber additives. Frequency of allergy to the individual haptens differs depending on the sampling methodology. Background population studies mostly reflect the induction of contact allergy depending mainly on historical exposures. Patients patch tested at hospital centres because of recent severe contact dermatitis will disclose contact allergens related to recent exposure and also contact allergies of past relevance. Taken together, such data gives a clear indication of frequency of contact allergy to individual haptens and gives a tool to follow changes in prevalence and incidence over time.

Exposure to most of the important contact sensitizing small chemicals from consumer products are, today, regulated either by industrial recommendation and national or EU legislation. A significant part of fragrances are regulated by industrial self-governance. The EU cosmetic directive regulates all preservatives. A special directive exists for nickel release from consumer items designed to be in direct and prolonged contact with the skin.

Recent epidemics of allergic contact sensitization from nickel, perfumes and certain preservatives (isothiazolones and methyl dibromoglutaronitril) illustrates what happens when industry and public risk assessment fails. In the end-point evaluation of the permitted exposure concentration to contact sensitizers present in consumer products, data reflecting human clinical experience is crucial as in the evaluation of drugs. Risk assessment relying on premarketing animal data and limited human data (HRIPT) have caused severe flaws in the past (isothiazolinones) and present (methyl dibromoglutaronitril) [1,2].

The clinical effect of exposure regulations by legislation should be based on the extensive clinical experience, experimental studies conducted on clinical exposure, clinical observational studies, and epidemiological studies including both background population and hospital materials. The positive effect of exposure regulation will be illustrated for preservatives, fragrances, and nickel [3–6].

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