

Hydroxyisohexyl 3-cyclohexene carboxaldehyde (Lyr[®]) is still a frequent allergen

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Hydroxyisohexyl 3-cyclohexene carboxaldehyde (HICC) also known as Lyr[®] is a widely used fragrance ingredient. Over the past decade, routine patch testing has shown that 1.5–3% of eczema patients have positive patch tests to HICC, making it a common contact allergen throughout Europe (1–3). HICC has, therefore, been included in the European baseline patch test series (4).

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The use of HICC in cosmetic products was unrestricted until 24 April 2003. At that time, a limit of 1.5% in both leave-on and rinse-off products were set by the International Fragrance Association (IFRA) (5). The rationale behind this limit is unknown. An implementation date of 24 April 2003 was given for new submissions, 24 April 2004 for existing fragrance compounds, and neither of these restrictions applied to products already on the market place. The aim of this industry 'standard' was described to 'prevent induction of sensitization so that elicitation in presensitized people will decline' (5).

The aim of this study was to describe the frequency of contact allergy to HICC among patients patch tested by the Danish Contact Dermatitis Group (DCDG) following implementation of the limitations set by IFRA in 2003.

The DCDG is a network of hospital departments and dermatologists in private practices distributed throughout Denmark. The network has collected information on 18 789 eczema patients, 12 301 women and 6488 men, and patch tested with HICC (Lyr[®]) 5% in petrolatum over the past 5 years, that is 2003–2007. Finn Chambers[®] (Epitest, Tuusula, Finland) on Scanpor[®] (Norgesplaster A/S, Venne-sla, Norway) were used, and the patches were left in place for 2 days, and readings were performed at a minimum on D3. A positive patch test reaction was defined as a minimum homogeneous erythema and infiltration covering the test area, corresponding to a one plus (+) reaction.

The prevalence of HICC patch test-positive eczema patients ranged from 2.1% (2003) to 2.8% (2007). In 2003, 2.5% of female eczema patients were tested positive to HICC and 3.2% in 2007. The male prevalence fluctuated more ranging from 1.3% to 2.4% (Fig. 1). No decreasing trend in contact allergy to HICC was seen. In 49% of cases, the reaction was judged to be of current relevance.

HICC is one of the most frequent allergens. Many cases are of current relevance. There is no indication that the intervention made by IFRA in 2003 has had any effect. Effective, evidence-based interventions should be made to address the problem of allergic contact dermatitis to HICC in consumers (6).

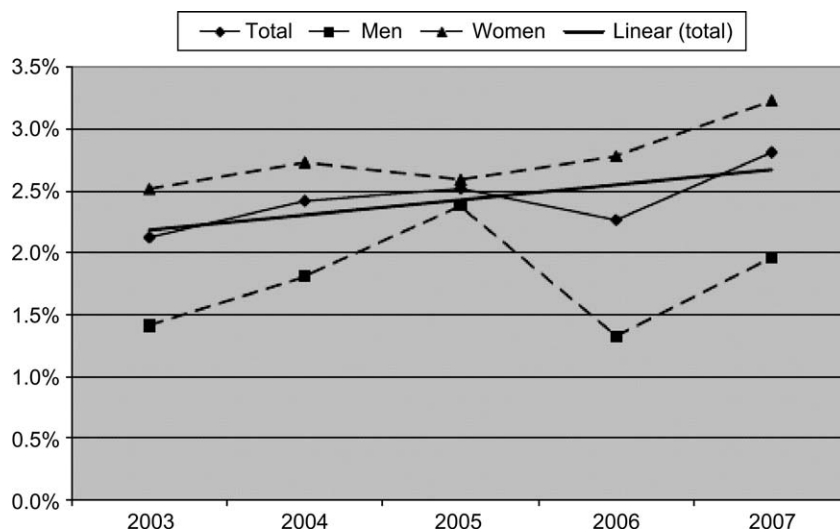


Fig. 1. Frequency of positive reactions to hydroxyisohexyl 3-cyclohexene carboxaldehyde 5% in pet. among eczema patients tested by the Danish Contact Dermatitis Group.

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