

**COST Action TD 1206 “StanDerm”
Seminar on**



“Etiology and prevention of occupational contact dermatitis: New challenges”

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ABSTRACT

Title: Lifestyle factors in occupational contact dermatitis

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Hand eczema (HE) is the most common variant of occupational contact dermatitis. Its aetiology is often multi-factorial and includes environmental as well as predisposing individual factors. Lifestyle factors may modify the prevalence, severity and course of the disease. The adverse cutaneous effects of tobacco smoking are well known. In line with this, several studies have demonstrated that smokers have a higher risk to develop hand eczema than non-smokers. However, the influence of tobacco smoking on the prognosis of occupational HE has not been studied yet. Therefore, in a prospective multi-centre cohort study 1,608 patients with occupational HE from Germany taking part in an interdisciplinary tertiary individual prevention programme (TIP) were recruited and followed-up for 3 years. The clinical and self-reported outcome data of smokers and non-smokers was compared. The severity of HE decreased significantly ($p < 0.001$) during TIP independent from the smoking behaviour. However, at all time-points HE was significantly more severe in smokers than in non-smokers. The severity of HE was not dependent on the self-reported number of cigarettes smoked per day. Tobacco smoking was significantly associated with more days of absence from work due to occupational HE in the year before TIP ($p = 0.001$) and in the year afterwards ($p = 0.023$). After TIP significantly more smokers gave up their occupation ($p = 0.021$) than non-smokers.

In conclusion, occupational HE is more severe and persistent in smokers than in non-smokers. Tobacco smoking is associated with a higher number of days of absence from work and with not staying in the workforce due to occupational HE. Thus, smoking confers a worse prognosis and interferes with the outcome of prevention programmes.

The results of this study have been published: Brans R et al. (2014) Association between tobacco smoking and prognosis of occupational hand eczema: a prospective cohort study. Br J Dermatol (Epub ahead of print).