

ALLERGY TO PSOCIDS

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In the last 20 years there have been occasional references in the literature to Psocoptera, especially liposcelids, being allergenic. A small Swiss study demonstrated that of 20 people tested 2 were positive for *Liposcelis pubescens*, and a study in Wiesbaden revealed that of 35 atopic patients, 9 had IgE antibodies and reacted positively to *Liposcelis bostrychophila*.

In the UK, *Liposcelis bostrychophila* is a common inhabitant of houses and based on the numbers of complaints to the food industry, this psocid has been numerically increasing during the last 30 years. During the same time period there has been a parallel increase in the incidence of allergy in general in the UK. Our main objectives have been to estimate the prevalence of allergy to liposcelids in the UK public (measured by skin testing and serology), to define the proportion of households containing liposcelid allergens, and to characterise immunochemically the antigens extracted from liposcelids that are recognised by IgG and IgE antibodies.

Blood serum samples from 27 atopic (house dust mite positive HDM+) and 18 non-atopic patients were tested against *Liposcelis bostrychophila* antigen extract. 81% of HDM+ and 55% of the non-atopic samples had IgG antibodies by ELISA. There were significant correlations between the levels of IgG to liposcelids and IgG to the mites, *Dermatophagoides pteronyssinus* ($r^2=59.5\%$) and *Tyrophagus putrescentiae* ($r^2=60.3\%$) in these samples. In a separate study, skin testing with the liposcelid antigen revealed reactions in 7% of patients tested, presumed to be due to IgE antibodies.

SDS gel electrophoresis of the *Liposcelis bostrychophila* allergen separated 5 proteins with the most abundant having an MW of 30Kd. The gel was then Western blotted and reacted with antibodies (isotyped as IgG₁, IgG_{2A} & IgM) raised to the allergen solution in rats. The only position of reactivity was at 30Kd.

This identifies a presumptive major antigen to *Liposcelis bostrychophila*. We conclude that allergy to psocids occurs in a significant group of atopic patients.