Factor Associated with the Limited their use to research settings to date. Food and Drug Administration approval, their cost has evolving asthmatics. Although eNO devices have received eNO may be a useful screening test for asthma, and per- matics, but this study demonstrated an association be- studies to be a useful marker of inflammation among asth- sted and peanut allergy, soy protein fractions have shown homology to major peanut proteins and cross-sensitization could result from exposure to a common T cell epitope. Reviews’ Comments. With the increase in peanut al- lergy and other food allergies, elucidation of risk factors for prevention of sensitization offers new strategies to com- bat this food allergy epidemic. Allergic sensitization through the skin has also been proposed for the develop- ment of asthma and has been demonstrated in mouse models of atopic dermatitis. Additional studies are needed to determine whether topical peanut oil treatment is defi- nitely a risk factor for peanut allergy; however, it seems prudent to avoid the topical use of peanut oil-containing products among children with atopic dermatitis. The find- ing of soy consumption being associated with peanut al- lergy may be attributable to the increased likelihood of food-allergic children receiving soy products, rather than a specific association with peanut allergy. Confirmation of this association is needed.

FOOD ALLERGY

FACTORS ASSOCIATED WITH THE DEVELOPMENT OF PEANUT ALLERGY IN CHILDHOOD


Purpose of the Study. Because peanut allergy has in- creased in prevalence and is an important cause of life- threatening reactions, the authors sought to investigate possible determinants of peanut allergy.

Study Population. Data were obtained from the Avon Longitudinal Study of Parents and Children. This geo- graphically defined cohort included 13,971 preschool-aged children. Forty-nine of those children had a history of peanut allergy. Thirty-six of those 49 underwent skin test- ing, and 29 demonstrated positive results. Peanut allergy was confirmed for 23 children with double-blind, placebo- controlled, food challenge.

Methods. Pregnant women were enrolled and ques- tioned about their allergy history before delivery and were given serial questionnaires throughout their children’s infancy and childhood. The authors prospectively identified 49 children with a history of reactions to peanuts. Twenty- three children were then confirmed as being allergic to peanuts with skin testing and double-blind, placebo-con- trolled, food challenge. There were 2 control groups, in- cluding children with eczema in the first 6 months of life whose mothers also had eczema and 140 children without peanut allergy who were randomly selected from the cohort. Cord blood samples stored at birth were retrieved and analyzed for peanut-specific and total immunoglobulin E (IgE) antibody, TNX-901, raises the threshold of sensitivity to peanuts among patients with peanut allergy.

Study Population. Eighty-four patients between 12 and 60 years of age, with a history of allergic reactions to peanuts, total IgE levels between 30 and 1000 IU/mL, positive skin prick tests for peanuts, and documented re- actions with formal peanut challenge at the start of the study, were studied.

Methods. A randomized, double-blind, placebo-con- trolled, dose-range study was performed. During the screening process, peanut allergy was confirmed and the threshold for reactivity was determined with a double- blind, placebo-controlled, oral food challenge with encapsulated peanut flour. Patients were subsequently random- ized to receive subcutaneous injections of placebo or TNX- 901 (150, 300, or 450 mg) at 4-week intervals, for a total of 4 doses. Two to 4 weeks after the final injection, a final peanut challenge was performed, to determine the threshold of reactivity to peanuts after the treatments. Serum samples were obtained at 4-week intervals, to monitor trough total IgE levels.

Results. From mean baseline thresholds of sensitivity of 178 to 436 mg of peanut flour in the various groups, the mean increases in the oral food challenge threshold were 710 mg in the placebo group, 913 mg in the group given 150 mg of TNX-901, 1650 mg in the group given 300 mg of TNX-901, and 2627 mg in the group given 450 mg of TNX-901 (P < .001 for comparison of the 450-mg dose with placebo; P < .001 for trend with increasing dose). Patients who received 450 mg had a mean threshold of reactivity of 2805 mg of peanut protein (equivalent to ~9 peanuts), compared with 178 mg (equivalent to one half of a peanut) before the injections.

Conclusions. Subcutaneous administration of TNX-901 increases the threshold of reactivity to peanuts in a dose- dependent manner, which may translate into protection against most accidental ingestions of peanuts.
## Factors Associated with the Development of Peanut Allergy in Childhood

Jordan Scott and Lynda C. Schneider

*Pediatrics* 2004;114;523

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