such as pollens can exacerbate atopic eczema in susceptible individuals. Physicians should remember to discuss this with their atopic patients before the start of pollen season.

CONCLUSIONS. *S aureus* is ubiquitous and was detected in dust samples from almost all homes regardless of disease state. However, house dust from participants with severe AD contained the most *S aureus* DNA. The correlation between *S aureus* DNA levels and AD severity is driven by proximity to the patient, as shown by the fact that the bed and bedroom floors from the patients with AD yielded the highest levels of *S aureus* DNA. In the home and especially the bedroom, higher levels of *S aureus* may contribute to disease severity and persistence in patients with AD.

**Reviewer Comments.** This is the first study to examine the environmental burden of *S aureus* in the homes of patients with AD. This study concludes that patients with severe AD have higher environmental burdens of *S aureus*. The source of the *S aureus* may be shed bacteria from the skin of the patient with AD, and if live organisms persist in house dust, then they may be the source of recolonization of patients’ skin. However, to prove whether the relationship between high environmental load of *S aureus* and severe AD is cause or effect, additional studies need to be performed, including quantification of bacterial load on the patient’s skin as correlated with home environmental burden and quantification of live bacteria in house dust.

**Severe Atopic Dermatitis Is Associated With a High Burden of Environmental *Staphylococcus aureus***


**Purpose of the Study.** It has been established that *Staphylococcus aureus* worsens atopic dermatitis (AD) by a variety of mechanisms. The purpose of this study was to quantify *S aureus* burden in the homes of participants with AD of varying severity.

**Study Population.** There were 62 volunteers aged 1 to 40 years. Participants were categorized as having mild (*n* = 18), moderate (*n* = 14), severe (*n* = 15), or no (*n* = 15) AD.

**Methods.** Participants completed questionnaires about their asthma, allergies, and home environment. Patients with AD completed a Lung-Browder diagram, documenting the area and intensity of erythema, excoriation, papulation, and lichenification. From these diagrams, AD severity was calculated by using the Eczema Area and Severity Index (EASI). Subjects collected dust samples from their bed, the floor next to their bed, and the home vacuum bag and sent them to the laboratory for analysis. *S aureus* DNA was extracted, and quantitative reverse-transcription polymerase chain reaction for the *femB* gene (an *S aureus*-specific genomic marker) was performed. Data were log-transformed and then analyzed with analysis of variance, student’s *t* test, and Spearman’s *r*.

**Results.** Bed dust yielded the highest *S aureus* concentrations. Participants with severe AD had significantly more *S aureus* DNA (14.67 pg/mg dust) in bed dust than those with moderate (0.41 pg/mg dust; *P* < .0001), mild (1.42 pg/mg; *P* = .0051), and no (0.09 pg/mg; *P* < .0001) AD. The concentration of *S aureus* DNA in bed dust strongly correlated with EASI scores. Similar patterns were observed for dust from bedroom floors for both DNA concentrations and EASI scores. The quantity of *S aureus* DNA from the vacuum samples was significantly higher in participants with severe AD versus moderate, mild, and no AD. However, there was no correlation between EASI scores and concentrations of *S aureus* DNA from vacuum dust samples.

**IgE Food Sensitization in Infants With Eczema Attending a Dermatology Clinic**


**Purpose of the Study.** Because community-based studies, which report immunoglobulin E food sensitization (IgE-FS) in >80% of infants with moderate atopic eczema, may be influenced by referral bias, the researchers assessed the prevalence of IgE-FS in a cohort of infants with moderate atopic eczema who were attending a dermatology department clinic.

**Study Population.** Consecutive infants (*n* = 51 [39 boys]; median age: 34 weeks [range: 20–51 weeks]) with moderate atopic eczema severity were studied prospectively.

**Methods.** Clinical history and eczema severity were documented. IgE-FS was assessed by the skin-prick test (SPT) (*n* = 51) and food-specific serum IgE antibody levels (CAP-FEIA test; *n* = 41). IgE-FS was diagnosed if the SPT or CAP-FEIA level exceeded the >95% predictive reference cutoff for positive food-challenge results.
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