

Correspondence

Epidemiology of latex sensitization

To the Editor:

In their recent article Garabrant and Schweitzer¹ concluded that “the epidemiologic studies do not support a conclusion that health care workers are at clearly increased risk of latex sensitization or type I allergies compared to other occupations in the United States. The role of latex gloves in causing latex sensitization and type I allergic symptoms remains poorly defined because of the inconsistent results across studies.”

Garabrant and Schweitzer cite one of our publications² in Table II, column “SPT response.” Their notion concerning “results not stated” in our article is not correct because we gave the information that of the 195 health care workers (HCWs), “...22 (15%) showed positive latex-specific IgE antibodies and positive skin responses to latex proteins.”

A remarkable misleading presentation of other results of our investigation is in Table VI, column “Type I allergic symptoms”: “Subjects with symptoms more likely to use non-latex gloves.” It is obvious in our study, as is known by every clinician, that HCWs with latex allergy frequently use nonlatex gloves as a secondary preventive measure. It seems likely that this bias, as well as selection, are the reason for Garabrant and Schweitzer’s unexpected finding of an odds ratio of 2.61 in HCWs who do not currently use latex gloves, as well as the absence of an association between duration/surrogates of exposure and frequency of sensitization.

Furthermore, Garabrant and Schweitzer did not consider that HCWs are chronically exposed to airborne latex allergens in their workplace, which is obviously more important to the development of latex sensitization than wearing gloves.²

Garabrant and Schweitzer did not adequately refer to the latest intervention studies, which all demonstrate that replacing powdered allergenic latex gloves with powder-free low-allergen latex gloves or synthetic gloves is associated with a decrease in the aeroallergen load and a significant reduction of latex sensitization and allergy.

One of the most important shortcomings in interpreting the literature is that Garabrant and Schweitzer¹ refer to results of serologic tests with a rather low specificity. It is well-known on the basis of studies using the gold standard for latex sensitization, the standardized skin prick test, that the frequency of sensitization in the general population is in the range of 1% or less and not in the range of 18%, as found in the Third National Health and Nutrition Examination Survey, whereas the frequency of latex sensitization among HCWs is, on average, approximately 5%, with frequencies up to 17%. This topic has been recently addressed by Charous et al.,³ who stated: “Working with data collected from the Third National Health and Nutrition Examination Survey, some industry-sponsored papers have suggested that

allergic NRL sensitization is common (estimated at 18%) in the general population.... However, these studies rely on a serological test for which the specificity is at best only 95%. As a consequence, when the test is used for screening in low-prevalence populations, the true prevalence rates might be significantly overestimated.”

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Reply

To the Editor:

We appreciate Dr Baur’s letter regarding our article.¹ Our Table II correctly cites Dr Baur’s article,² in which he states “...our preliminary results showed no significant association between the duration of exposure and latex related symptoms and the prevalence of seropositive IgE antibodies to latex.” In his article Dr Baur did not report the results of any analyses of skin prick test (SPT) response on the basis of duration of exposure. Dr Baur now indicates that his analysis of duration of exposure on the basis of IgE seropositivity also applies to SPT responses. As he now points out, he found no significant association between the duration of exposure to latex and SPT responses to latex. His article did not say whether there were subjects who had positive SPT responses and negative IgE results in addition to the 22 who had positive IgE and SPT results and did not provide adequate information for us to draw conclusions about the SPT responses on the basis of duration of exposure.

Our Table VI correctly reports Dr Baur’s findings as he gave them in his article. Furthermore, Dr Baur’s article contained no data or analyses that indicate that health care workers with latex allergy frequently use nonlatex gloves as a secondary preventive measure. Many of the cross-sectional studies of latex sensitization among health care workers (including Dr Baur’s study) cannot differentiate between selection bias (sensitized subjects preferentially leaving exposed jobs) and lack of an association between exposure and response and do not support a conclusion that the association must really exist. As our article shows, there is scant evidence that latex glove use is associated with increased risk of sensitization.