Letters to the Editor

Natural Rubber Latex Aeroallergen Exposure

Received 16 April 2002

We read with interest the account by Sri-Akajunt et al. (2000) of their measurement of personal exposure to latex airborne allergens in three occupational exposure groups. We were, however, surprised to note that in citing Swanson et al. (1994) and Liss et al. (1997) they misquoted the units of exposure. Swanson recorded a range of 8–978 ng/m³; this is reported as 8–978 µg/m³ by Sri-Akajunt et al. Similarly, Liss gives a range of 5–616 ng/m³ and this is reported by Sri-Akajunt et al. as µg/m³.

The levels reported by Sri-Akajunt et al. (100–2740 ng/m³) were also significantly higher than previous reports in healthcare workers. Baur et al. (1998) reported a range of 0.4–205 ng/m³, and not having found any cases of latex allergy above a level of 0.6 ng/m³ suggest that this figure should be the threshold limit value for latex. One possible explanation for the variation in ranges found by these different studies is that all used a RAST inhibition assay for measurement of airborne latex allergen. The difficulty inherent in this method is that it is dependent on the avidity of the pooled patient sera, and that once this supply has been exhausted, it is not readily reproducible. Furthermore, these observations highlight the need for inter-centre comparison of methods and standardization of latex extracts for use as reference standards in these assays.

Hence, although exposure–response relationships are indeed important in establishing occupational standards, Baur is incorrect in identifying a level produced by this method as being sufficiently reproducible to use in standard setting. A method which could be used to overcome this deficiency is by the development of an ELISA method using monoclonal antibodies against major latex allergens, as described for airborne flour exposure (Wiley et al., 1997) and for fungal alpha amylase (Elms et al., 2001).

DAVID BEAUMONT1, PAUL TATE2, ANDREW CURRAN2 and DAVID FISHWICK2
1Business Healthcare Ltd, Occupational Health Solutions, Leeming Lane South, Mansfield Woodhouse, Nottinghamshire NG19 9AQ;
2Health and Safety Laboratory, Broad Lane, Sheffield S37HQ, UK

REFERENCES


DOI: 10.1093/annhyg/mef085

Reply

Received 17 July 2002

We would like to thank David Beaumont and his team for their comments and important observations. We should first clarify that the exposure units cited in our manuscript from Swanson et al. (1994) and Liss...