

Allergenicity of guayule latex

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To the Editor:

In reviewing the April issue of *OR Manager* (Vol. 24, No. 4), we would like to clarify a few points regarding the allergenicity of guayule latex (sidebar: “New natural rubber enters the scene”).

The article states that “...(guayule latex) is inherently low in the safe type of protein.” We are unclear as to the meaning of this statement. As Dr. Robert Hamilton noted in the February 4, 2008 edition of *Greenwire*, “...because there is no data categorically stating how low protein content has to be to eliminate allergic reactions, Johns Hopkins decided it was not worth the risk.”

It’s encouraging that the guayule latex is low in total protein, as Dr. Robert Hamilton states: “Adverse reactions can happen from many different things, so we don’t have solid numbers on this,” Hamilton said. But, he continued, “the fact that we don’t know how low levels have to be to reduce allergens” means the hospital does not want to take chances.” (*Greenwire*, February 4, 2008)

The article states that testing done shows that “guayule latex is safe for people who have a Type 1 allergy to traditional natural rubber latex ...”. While cross-reactivity test results may be encouraging along this line, we question the validity and safety of such a sweeping statement until large-population, longitudinal studies are conducted on guayule latex.

Studies published in the *Journal of the American Oil Chemists’ Society*, (78(2), 2001) and *Science* (211(4489), 1981), note that guayule latex contains a family of potent contact allergens, the guayulins, which can cause Type IV contact dermatitis. While Type IV allergies are not typically systemic, they can still be serious. According to the literature, these contact allergens can survive the vulcanization process used in the manufacture of dipped rubber products.

Your article also notes that Dr. Hamilton (Johns Hopkins) “tested commercial grade guayule using serum with IgE antibodies from persons allergic to *Hevea* latex. The results with guayule were the same as those with the synthetic neoprene control, while the *Hevea*-based latex showed elevated levels of allergen.” While this study may demonstrate that people with *Hevea* latex allergy may tolerate guayule latex since it is a natural plant protein, it does not eliminate the potential for another segment of the population becoming sensitized to guayule latex and developing guayule latex allergy.

The article notes that ASTM standard D1076 added a new category 4, and “at present, Martin says Yulex is the only natural rubber latex that meets this standard.” In fact, this standard addresses three other categories of natural latex, and commercial *Hevea* latex

can meet any of these other three categories. Category 4 is specific to guayule latex or other natural rubber latex.

Respectfully submitted,

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