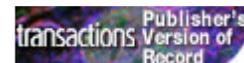


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The latex-fruit syndrome.

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Abstract

Approximately 30-50% of individuals who are allergic to natural rubber latex (NRL) show an associated hypersensitivity to some plant-derived foods, especially freshly consumed fruits. This association of latex allergy and allergy to plant-derived foods is called latex-fruit syndrome. An increasing number of plant sources, such as avocado, banana, chestnut, kiwi, peach, tomato, potato and bell pepper, have been associated with this syndrome. The prevailing hypothesis is that allergen cross-reactivity is due to IgE antibodies that recognize structurally similar epitopes on different proteins that are phylogenetically closely related or represent evolutionarily conserved structures. Several types of proteins have been identified to be involved in the latex-fruit syndrome. Two of these are plant defence proteins. Class I chitinases containing an N-terminal hevein-like domain cross-react with hevein (Hev b 6.02), a major IgE-binding allergen for patients allergic to NRL. A beta-1,3-glucanase was identified as an important latex allergen which shows cross-reactivity with proteins of bell pepper. Another important NRL allergen, Hev b 7, is a patatin-like protein that shows cross-reactivity with its analogous protein in potato. Furthermore, patients with allergy to plant-derived foods and associated pollinosis show a high frequency of IgE reactivity to the pan-allergen profilin, which may cause positive serum IgE determinations to NRL. Although there is much information about the plant-derived foods and some data about the allergens involved in the latex-fruit syndrome, it is not always clear whether latex sensitization precedes or follows the onset of food allergy.

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