American Latex Allergy Association

Latex Cross?reactive foods Fact Sheet

By Tom Grier *for Latex Allergy 101*

Latex allergens

Allergic reactions to products containing natural rubber latex often result from exposure of sensitized individuals to one or more proteins that occur naturally in raw latex preparations. At least 13 distinct proteins have been identified and associated with latex sensitivities in health care workers, spina bifida patients, and children or adults within the general population, with most allergic patients reacting to multiple latex proteins that vary somewhat between these groups.

Structure?function?activity relationships

The biological functions or enzymatic activities associated with most latex allergens have been determined. Several of these proteins are active enzymes involved in defending the latex plant from microbial attacks, particularly colonization and growth of numerous fungi. In general, proteins that serve similar functions in different plants (whether genetically related or not) usually contain highly conserved sequences and three?dimensional structures, so it is not surprising to find plant defense or pathogenesis?related proteins with activities comparable to those found in latex in a wide variety of plants that include many common foods.

Cross?reactivity with foods

These relationships are relevant to latex allergy because a number of these common plant defense proteins are potent allergens. The tendency of latex?sensitive individuals to express allergic reactions after ingestion of certain foods has been recognized for many years, and subsequent clinical and laboratory studies have confirmed both the sources of the offending allergens and their relevance to the allergic condition. Our immune systems recognize particular antigen structures as foreign without regard to the origin of these molecules. Close structural similarities between any two allergens from divergent sources can produce similar allergic reactions in sensitive patients, and is termed cross?reactivity or cross?sensitization. Ingestion of some foods produce allergic symptoms in patients sensitive to latex inhalation or contact due to the presence of these common or cross?reactive protein allergens.

This association between latex sensitivity and food allergy is often referred to as the latex?fruit syndrome, although many vegetable foods have also been identified as possessing clinical and/or immunologic cross?reactivities with latex proteins. The foods shown below have been linked allergenically to latex in published reports and are grouped based on high, moderate or low/undetermined degrees of association to latex or prevalence of allergic reactions. It is likely that other foods not yet identified also possess some allergenic similarities to latex.

High (4)

Avocado, Banana, Chestnut, Kiwi

Moderate (7)

Apple, Carrot, Celery. Melons, Papaya, Potato, Tomato

Low/undetermined (33)

Apricot, Cherry, Citrus fruits, Fig, Grape, Lychee, Mango, Nectarine,
Passion fruit, Peach, Pear, Persimmon, Pineapple, Strawberry,
Buckwheat, Rye, Wheat, Coconut, Hazelnut, Walnut,
Castor bean, Chick pea, Peanut, Soybean, Dill, Oregano, Sage,
Peppers (Cayenne, Sweet/bell pepper), Shellfish, Sunflower seed

It is important to note that some of the foods on listed above may not produce clinically important reactions in latex?sensitive individuals, for numerous reasons. However, recognition of the foods that are known to share some major or minor allergens with latex can help patients and their families minimize exposures to possible sources of provocative allergens and understand the risks associated with inclusion of these foods in their diets.

Latex Allergy 101 Fact Sheet?Cross-Reactive Foods[1]

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