

SPECIAL REPORT

WHERE THE SOYS ARE

By Kaayla T. Daniel, PhD, CCN

HIDDEN DANGER

People allergic to soy protein face danger 24/7. Hidden soy exists in thousands of everyday foods, cosmetics and industrial products such as inks, cardboards, paints, cars, and mattresses. Four fatalities documented in a major Swedish study are the best known of thousands of reported cases of people who experienced severe allergic reactions to tiny amounts of soy after inadvertently eating foods that contained soybean proteins.

Those who are allergic to soy must exclude *all* soy from their diets. This can be a challenge. Soy lurks in nearly everything these days even in products where we would not reasonably expect it. It's in Bumblebee canned tuna, Chef Boyardee Ravioli, Hershey's chocolate, Baskin Robbins ice cream, some brands of orange juice, McDonald's and other fast food burgers, Pizza Hut pizza, many luncheon meats, most bread, muffins, donuts, lemonade mixes, hot chocolate, some baby foods, and tens of thousands of other popular products.

If you absolutely must keep soy out of your life or that of your children, memorize the following:

- **Soy goes by many aliases.** Food processors are less likely to list the three letter word "soy" than a technical term such as "textured vegetable protein (TVP)," "textured plant protein," "hydrolyzed vegetable protein (HVP)," "vegetable protein concentrate," "vegetable oil" or "MSG (monosodium glutamate)." Ingredient lists also include words such as "lecithin," "vegetable oil," "vegetable broth," "boullion," "natural flavor" or "mono-diglyceride" that do not necessarily come from soy, but are likely to.

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- **Food labels and ingredient lists change.** Check them every single time. Manufacturers can switch the ingredients used in food products without warning. Allergic consumers need to check the labels every time they make a purchase and ask about ingredients every time they eat at a restaurant or purchase food at a deli. To make things easier, many allergic people carry cards listing foods on their “no” lists.
- **Products may be mislabeled or contain undeclared soy.** The only solution here is to hope, pray, and make your own food from scratch using known ingredients.
- **Cross contamination occurs.** Improperly cleaned pans, plates, utensils, cutting boards at restaurant or delis, bins at a health food stores, or vats at the factory can contaminate food with traces of soy. All it takes is a bit of old soy oil or soy protein residue to trigger severe reactions in people who are highly susceptible.
- **Soy may be in the package as well as its contents.** Soy protein isolate used in the manufacture of paperboard boxes can flake off and migrate into food. In the future, some foods may be shrink wrapped in an edible soy-based plastic.
- **Soy can be breathed as well as eaten.** Expect soy dust in some bakeries, shipyards, and the bulk bin aisle of your health food stores.
- **Soy may be in your pills.** Vitamins, over-the-counter drugs and prescriptions may contain an unwanted dose of soy. Beware of pills with soy oil bases, Vitamin E derived from soy oil, and soy components such as isoflavones. The inhaler Atrovent is just one of many drug-store products containing unexpected soy. A new type of aspirin called “aspirin cocholeates” made with “all natural” soy-derived phospholipids will soon be on drug store shelves.

- **Soy is the latest thing in just about everything.** Soy inks, paints, plastics, carpets, mattresses, cars, etc. are just a few of the industrial products that may be green for the environment but deadly for highly allergic persons. Several “green” laundry detergents now contain soy-based fabric softeners.
- **Kiss with care.** Finally, someone who is exquisitely sensitive to soy could die from contact with the lips of someone who has just eaten soy. Unlikely as this might seem, it has happened with peanuts, soy’s even more allergenic relative.

PROCESSING MATTERS

The ways that the soybean are grown, harvested, processed, stored and prepared in the kitchen can all affect its degree of allergenicity.

- Raw soybeans are the most allergenic
- Old-fashioned, fermented products (miso, tempeh, natto, shoyu and tamari) are the least.
- Modern soy protein products processed by heat, pressure and chemical solvents lose some of their allergenicity, but not all.
- Foods like partially hydrolyzed proteins or soy sprouts, which are quickly or minimally processed, remain highly allergenic.
- Highly refined oils and lecithin are not safe for allergic consumers despite industry claims of safety. If soy oil and lecithin were 100 percent free of soy protein, they would not provoke allergic symptoms. Variable conditions, quality control and processing methods used when the vegetable oil industry separates soy bean protein from the oil make the presence of at least trace amounts of soy protein possible, even likely.
- Cold-pressed soy oils sold in health food stores can pose a greater hazard for the allergic consumer than the highly refined soy oils sold in supermarkets because they may contain as much as 100 times the amount of trace protein

- Be aware that margarines and spreads probably contain soy protein. Above and beyond any stray protein that remains after the processing of the soy oil, food manufacturers commonly use soy protein isolates or concentrates to improve the texture or spreadability. This occurs most often in low-fat or “low *trans*” products.

INFORMATION GAP

Even when soy-containing ingredients are accurately listed on food labels, many consumers miss the soy connection. A study of 91 parents of children allergic to peanuts, milk, egg, soy, and/or wheat revealed that most parents failed to correctly identify allergenic food ingredients, and that milk and soy presented the most problems. Only 22 percent of the parents with soy allergies correctly identified soy protein in seven products. The researchers concluded: “These results strongly support the need for improved labeling with plain-English terminology and allergen warnings as well as the need for diligent education of patients reading labels.

HELP AT HAND

Help for the consumer came in Spring 2004 with the passage of the Food Allergen Labeling and Consumer Protection Act (S. 741). The bill requires food manufacturers to state if a product contains soy or the other seven major food allergens. While the law is big step in the right direction – and a major victor for the Food Allergy Initiative’s public policy campaign -- consumers are still at risk from mislabeling, processing mishaps, cross contamination and other errors. For more information about this new law, visit www.foodallergyinitiative.org

Where the Soys Are is a special report condensed from *The Whole Soy Story* by Kaayla T. Daniel, PhD, CCN (New Trends, 2005). For more in-depth information and references, see Chapters 24 and 25 of *The Whole Soy Story*.