

Pesticides and Children

Pesticides commonly encountered across the country in food as well as around the home are significantly increasing children's risk of developing attention deficit hyperactivity disorder (ADHD), and could be causing an increase in the number of children living with the condition, according to new research published in the journal *Pediatrics*.

"It's mainly exposure through food. Diet is the driver," says pediatrician and public [health](#) expert Phil Landrigan, MD, professor and chair of the department of community and preventive medicine at Mount Sinai School of Medicine in New York City. "For most people, diet is the predominant source. It's been shown that people who switch to an organic diet knock down the levels of pesticide by-products in their urine by 85 to 90 percent."

What it means: Canadian researchers used data collected from nearly 1,140 children participating in the United States Centers for Disease Control and Prevention's National Health and Nutrition Examination Survey, including pesticide by-products found in urine. They found that in that group, 119 children met the criteria for ADHD.

Children with substantially higher levels of a breakdown product of neurotoxic organophosphate pesticides were twice as likely to be diagnosed with ADHD. The university researchers conclude that parents should buy organic for their kids. Numerous other researchers stress the importance of women eating organic at least six months before conception and throughout pregnancy, too.

This isn't the first study that has linked this class of pesticides to human [health problems](#). However, other studies looked at farmers or others who work closely with pesticides day in and day out. This study is the first to look at everyday exposure levels in children from around the country. And as it turns out, U.S. kids are exposed to harmful levels of pesticides in their food, day in and day out.

This study looked at organophosphates in particular, ones designed to attack the [neurological](#) systems of pests (unfortunately, they harm humans, too). There are about 40 organophosphate pesticides registered with the U.S. Environmental Protection Agency (EPA), and most people's exposure to them comes through food, drinking water, and residential pesticide use, according to the EPA.

Pesticides and Children

The harmful chemicals are widespread: A 2008 U.S. Pesticide Residue Program Report found detectable concentrations of one organophosphate alone, malathion, in 28 percent of frozen blueberries, 25 percent of strawberries, and 19 percent of celery sampled. (Malathion is also commonly sprayed out of airplanes and onto communities as part of mosquito-control programs. Organophosphate pesticides, also found in some flea and tick products, have been tied to childhood leukemia, and are believed to be partially responsible for colony collapse disorder, which is killing off honeybees (who pollinate our [food](#) crops) at unprecedented rates.

How to protect yourself, and your family:

- Eat whole organic. Environmental Working Group's "Dirty Dozen" list names the produce varieties contaminated with the most different pesticides. It's best to buy those fruits and vegetables organic whenever possible. However, other produce and grains also contain harmful pesticides of them, too. In fact, processed foods may contain higher pesticide levels because two common ingredients—genetically engineered corn and soy—have been genetically manipulated to withstand higher pesticide sprayings (which, as it turns out, isn't working, and is actually causing superweeds). Use our tips to save money when buying organic.
- Beware of other exposures. Pesticides, by nature, are designed to kill, and the ones homeowners used around the house are dangerous, too, Dr. Landrigan explains. Instead of spraying your lawn or home, use organic gardening methods and practice nontoxic bug control.