

New reasons for eating organic?

Study finds pesticide-free diet may be beneficial for children

By Francesca Lyman

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SEATTLE - If you include organic foods in your holiday menu, you'll be in step with the latest food trends, according to industry polls. And you may also be doing your children's health a favor. Parents who feed their children organically grown food can substantially lower the levels of pesticide residues to which their kids are exposed, according to a new study.

Even before the U.S. Department of Agriculture's "organic" seal went into effect last October, which certifies foods grown free of pesticides, synthetic fertilizers, growth hormones and genetically-engineered substances, Alexandra Ramdin decided to give organic foods a try.



Elaine Thompson / AP file

"Nothing had been conclusively proven showing organic food to be healthier or more nutritious," says Ramdin, a Seattle mother of two daughters, ages 2 and 5. "But I decided to give organic the benefit of the doubt."

Now, having enrolled in a study that tested children to determine whether eating organic food reduced their exposure to pesticides, Ramdin is even more certain about her choice.

She and a neighbor, whose family eats a conventional diet, were among 40 households who kept food diaries of their children for three days, then collected their kids' urine for analysis. The study by researchers at the University of Washington concluded that children fed a diet of organic foods were exposed to far fewer — six to nine times less — toxic pesticides than children fed a conventional diet.

"Buying organic makes me feel good, that I'm doing something good for the land," says Ramdin. "But it's great to hear that there are real differences in what chemicals my children were exposed to."

Study compares diet

While other studies have documented the presence of pesticide metabolites, or breakdown products of the synthetic chemicals, in children's bodies, this is the first study to document the difference in exposures to pesticides offered by an organic versus a conventional diet, says Richard Wiles of the Environmental Working Group, a non-profit research organization based in Washington, D.C.

The researchers measured six metabolites that derive from some 39 organophosphorus pesticides, the most commonly used in the United States and also some of the most toxic. They compared a group of 18 organic-eating children with 21 conventional food-eating children all roughly the same age (2-to-5-years-old on average), gender, and of similar family income. The children with primarily organic diets had far lower levels of the metabolites in their bodies.

The study was in the National Institute of Environmental Health Sciences' journal "Environmental Health Perspectives" and will be forthcoming in its print edition this spring.

"It's definitely a big step ahead," says Wiles. "It proves what we've said all along — that eating food with more pesticide residues can make a difference in what actually gets into the body."

Now Wiles and his group are hoping to convince the USDA to inform consumers of the findings.

"USDA has always insisted that organic is no safer, but it is safer with respect to pesticide exposure, as this study shows ...," Wiles said in a statement on the group's Web site.

Industry downplays results

Representatives of the agricultural chemical industry downplayed the significance of the study.

"We can speculate all day about the possibilities of what those pesticide exposures might mean for children, but these researchers haven't proven that these children are having their health harmed in any way," said Ray McAllister of Crop Life America, a trade association representing manufacturers and distributors of agricultural chemicals. "In fact, those metabolites are not toxic to the children."

But some scientists familiar with the study disagree.

"The sheer presence of a metabolite shows exposure to these toxic pesticides," said Dr. Philip Landrigan, director of the Children's Center for Health and the Environment at Mount Sinai Hospital in New York. "This study contributes to public understanding of the importance of eating organic food and changes the

perception that it's no safer than conventional food — at least with respect to chemical exposures.”

Just how toxic those exposures were to the children is difficult to say, said Richard Fenske, one of the researchers involved in the study. The metabolites in question could derive from any of a number of organophosphorus compounds in use on fruits and vegetables, some of which are more toxic than others.

“What we do know is that chronic exposures to low levels of pesticides could very well be significant,” said Cynthia Curl, another researcher involved with the study. Children exposed to high levels of organophosphate pesticides are at risk for bone and brain cancer, neuroblastoma and childhood leukemia, she added.

The researchers did not conclude that children eating conventional diets were being exposed to higher levels of toxins than those set by the EPA.

“That they were being exposed is a grey area of concern,” said Curl.

“Their metabolites were higher than the adult averages found in some of the most recent Center for Disease Control human exposure studies,” added Fenske.

In light of the uncertainty over how much pesticide is on food and how it might affect children, the researchers concluded that one way parents can take steps to reduce their children’s exposure is to feed them organic food.

Francesca Lyman is an environmental and travel journalist and author of “Inside the Dzanga-Sangha Rain Forest” (Workman, 1998).

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