## Study Shows an Organic Diet Lowers Pesticide Exposure

I'm thankful that choosing organic foods can quickly and profoundly reduce children's exposure to toxic pesticides.

On September 1, 2005, Chensheng Lu at School of Public Health at Emory University, along with colleagues at the CDC's National Center for Environmental Health and at the University of Washington, released an important study that will soon appear in the NIH journal, *Environmental Health Perspectives*. At the beginning, every child in the study was found to have pesticides in the urine everyday, in every urine sample. The children were healthy American, suburban, elementary school kids. The pesticides were organophosphorus pesticides commonly used in food production – malathion and chlorpyrifos (Dursban) – both known to cause neurologic problems in animals and in humans. After establishing the baseline pesticide exposure, the researchers made the simplest of changes: the kids were switched to organic versions of the foods they were eating anyway. They didn't make any changes in the types of foods they enjoyed. They didn't make any other changes, such as in home gardening or insect control. With this simple diet change alone, the pesticides virtually disappeared from every child's urine – within 24 hours! They enjoyed a pesticide-free holiday for 5 days, and then went back to their 'normal' diets. Within 24 hours the pesticides returned. They were again seen in 100% of urine samples, twice a day, in 100% of the children. Health outcomes were not followed in this study, but the authors believe intuitively that, "children whose diets consist of organic food items would have a lower probability of neurological health risks," a known toxicity of these pesticides. For people who want to decrease chemical exposures in their kids, the many possible interventions that one could take can feel overwhelming. This study is the strongest evidence ever published that one simple change can make a difference, that "an organic diet provides a dramatic and immediate protective effect." The study was supported by the EPA's Science to Achieve Results (STAR) program – and I am very thankful to learn these results.

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