

# Organic Produce: Is It Worth the Price?

By Mary Hernandez, CHC

These days it seems that every purchase decision is a matter of weighing “pros” versus “cons,” and the higher price of organic produce is a major tally in the “con” column. For many of us with children with special needs, buying organic produce lies in the balance against the cost of therapy hours, motivational rewards that could promote positive behavior, or any hope of respite for mom and dad. Buying organic can also limit the types of produce you buy to a very small selection in nearby supermarkets. Is it worth the expense and restriction?

## Some Reasons in the “Pro” Column

Most of the over 80,000 chemicals commonly used today haven’t ever been studied to see if they cause harm to children’s brains or immune systems. The studies that have been done are small, yet seem to show significant connection between pesticide exposure and autism and other neurological problems. They beg for broader research on the subject. While correlation is not causation, the research implicates pesticide exposure as at least one significant factor in the rise of autism incidence. Research has shown that persons with ASD have higher levels of various toxins in their bodies as well as impaired ability to detoxify, so they may be even more vulnerable to further damage than the general population.

## Pesticides in California Agricultural Linked to Autism

In July of 2007 an exploratory study in California’s Central Valley demonstrated a direct link between pregnant women’s proximity to use of agricultural pesticides and the rate of autism spectrum disorder in children born between 1996 and 1998. This analysis of 249 possible compounds found four commonly used organochlorine pesticides (the same class to which DDT – banned long ago —belongs) to be definitively associated with risk of Autism Spectrum Disorders (ASDs). If a woman was exposed to these chemicals during her first three months of pregnancy, she was six times as likely to have a child with ASD as someone who was not. Her risk rose with the amount of organochlorine used and decreased with the distance of her residence from the application site.

In addition to its known neurotoxicity, one of the implicated organochlorines, Dicofol, is also suspected to be carcinogenic and an endocrine disruptor. Another one, Edosulfan, is considered to be highly toxic and was proposed for inclusion in the Rotterdam Convention’s list of problematic chemicals that would require special import notification by global treaty. It has also been proposed to be banned worldwide under the international Stockholm Convention.

## Shattock’s Research Demonstrates How Pesticides Can Provoke Autism

A 2008 study at the University of Sweden suggested that exposure to PCBs and *pesticides* early in life impacts immune system development in a manner that underlies autism spectrum disorders. Paul Shattock of the Autism Research Unit at the University of Sunderland in the United Kingdom has done extensive research



Reprinted from Hope Magazine Online, April 2010

See: [www.hopemagazineonline.com](http://www.hopemagazineonline.com)

For further information, contact Mary Hernandez at 718-442-2577

that points to herbicides and pesticides containing paraquat, methylphenylpyridinium and phenylpyridinium having neurotoxic effects. Shattock's studies indicate these chemicals inhibit enzymes and impede tryptophan metabolism — leading to high levels of Indolyl Acryloyl Glycine (IAG). In England, about 80% of those with autism or ADD/ADHD have elevated IAG which can provoke a leaky gut, and weaken the blood-brain-barrier – allowing toxins to enter the system from the gastrointestinal tract and more readily travel to the brain. These pesticides can also thwart the transport of vitamin A and thyroid hormone from storage sites to locations where they are needed, hindering capacity to combat bacteria, fungus and viruses.

What risk does ingesting these pesticides on produce pose for pregnant woman and their children? The organochlorine pesticides implicated in that Central Valley study are used today on tomatoes, lettuce, grapes, alfalfa, citrus, beans, and other fruit, nut, and vegetable crops.

### **The Dirty Dozen<sup>1</sup>**

It turns out that not all produce bears the same amount of pesticides even if it was not organically grown. The Environmental Working Group has published a list of the 12 most contaminated produce.<sup>1</sup> Juices and other packaged and processed foods containing these fruits and vegetables and also contain high levels of pesticide residue. Even if we can't go totally organic, this "Dirty Dozen" would be the ones to avoid unless you can find them in organic form.

Peaches	Apples	Sweet Bell Peppers
Celery	Nectarines	Strawberries
Cherries	Pears	Grapes (Imported)
Spinach	Lettuce	Potatoes

### **The Clean Fifteen<sup>1</sup>**

Environmental Working Group has also published a "Clean Fifteen". These fruits and veggies tend to have natural resistance to bugs and upon testing have little to no evidence of pesticide residues, even if not grown by organic methods.

Asparagus	Avocados	Bananas
Blueberries	Mango	Papaya
Onions	Pineapple	Broccoli
Shelling peas	Cabbage	Sweet corn
Garlic	Kiwi	Watermelon

So avoid the Dirty Dozen or find them organically grown, and worry less about the Clean Fifteen. Fortunately, we are seeing more and more organic produce in supermarkets. Talk to your local store manager about ordering more varieties, especially of the Dirty Dozen. Join a local food co-op, scout out the farmer's markets, and take advantage of seasonal sales on fruits and veggies. If you have the space, grow your own.

Meryl Streep is not only a talented actress but a mom and activist dedicated to building a healthy world for our children. In her introduction to the book "Healthy Child, Healthy World" she asks the question, "Why is the truth like organic food?" 'Because,' she responds, 'It's a little harder to find and a little more expensive than the alternative, but as demand for it grows, the price you have to pay for it comes down...' Let's hope that with more awareness of its benefits, it easier to find, and the price comes down."

<sup>1</sup> See: Environmental Working Group website: <http://www.foodnews.org/methodology.php>

*Our Nutrition Editor Mary Hernandez is a Holistic Health Counselor and Liaison to the Staten Island Branch of the National Autism Association NYC Metro Chapter . She lives in Staten Island, NY with her husband James, son Luis, age 11, daughter Ana who will soon turn 10, and stepdaughter Crista. She can be contacted at [maryhernandez@verizon.net](mailto:maryhernandez@verizon.net)*