



# THE NEXT STEP Toward a Healthier Future

A BI-MONTHLY NEWSLETTER OF THE SEBASTOPOL TOXICS EDUCATION PROGRAM

## ADD, Toxics, & Mainstream Foods

ADD/ADHD (Attention Deficit/Hyperactivity Disorder) is one of the most common neurobehavioral disorders in American children, currently impacting an estimated 4.5 million kids from ages 5 to 17. With symptoms that include uncontrolled impulses and difficulty paying attention, ADD creates rippling financial and emotional costs for children, families, schools, and communities. (More about the impacts is at [www.cdc.gov/ncbddd/adhd/data.html](http://www.cdc.gov/ncbddd/adhd/data.html).)

Now a new study, published in the May 2010 *Pediatrics* journal, reveals a connection between ADHD and a child's level of exposure to organophosphate (OP) pesticides, including through mainstream food. When researchers tested a representative sample of children ages 8 to 15 for OP markers in their urine, they discovered that, with each ten-fold increase in OP markers, ADHD rates rose by more than half. Overall, children with above-average levels of OP exposure had twice the ADHD rates as those with undetectable levels.

According to the report, "These findings support the hypothesis that organophosphate exposure, at levels common among U.S. children, may contribute to ADHD prevalence." Research team leader Maryse Bouchard added that she was surprised that ADHD risks increased even at low levels of exposure.



Another recent study, published in *Environmental Health Perspectives*, found a similar connection. It discovered that mothers with higher OP levels in their body while pregnant were more likely to bear children with ADHD. For instance, a ten-fold increase in pesticide metabolites in the mother's urine correlated with a 500% increase in children with ADHD symptoms at age 5.

This connection between ADHD and OPs isn't surprising when we consider how OPs work. Their mechanism is to block the "off" chemicals in the synapses of the insect's brain. Thus the bug gets overwhelmed with "on" chemicals, becomes hyperactive, has a seizure, and dies. Humans have similar synapses, and this sequence sounds eerily similar to the ADD experience of uncontrollable and unstoppable thoughts and actions.

Kids are especially vulnerable to toxic exposure, because their body's defenses aren't fully developed and their smaller size amplifies the impact of lower doses. Additionally, tiny amounts at pivotal moments in their body's growth process can seriously derail their development.

To decrease ADD risks, Bouchard advises parents to avoid using toxics at home and buy organic food. Other studies have demonstrated that shifting from mainstream to organic food dramatically reduces body OP levels. Organic food also offers us higher nutrients and allows us to support the farmers who forgo toxics. When we also choose *local* organic, we help reduce pollution from nearby farms.

For more about the demonstrated links between toxics, learning

See ADD, over

## STEP Updates

■ **Good news!** The Sebastopol City Council has decided to return *The Next STEP* newsletter (TNS) to its original two-page format. Yay! Thank you to the City Council, staff, and community members for your ongoing support of this innovative community project for a healthier world for all.

■ **The TNS Online Index** makes it easy to look up past newsletters by topic. You can quickly discover what's toxic, and the effective alternatives, in everything from housecleaning to pest control. Timely topics of interest include: uncovering the hidden pesticide exposure at your child's school or day care (and what you can do about it), caring for your pets without toxics, assessing the health risks of pesticide products, and properly disposing of toxics. [www.healthyworld.org/STEPIndex.html](http://www.healthyworld.org/STEPIndex.html)

■ **Share your TNS newsletter!** Our recent decision-making process reminded me of one of this project's original visions: to provide *everyone* in Sebastopol with information that helps them reduce their toxic use and exposure. By each of us acting individually, we can together protect our community's shared health, air, and water supplies.

**You can help with that mission!** While the water bill is a great way to reach most folks in town, it doesn't get to everyone. So we invite you to share your copy of TNS with family members, tenants, friends, and neighbors. Perhaps choose an issue that features a topic of special interest to them. Or email them a link to our handy STEP Index (above), as a helpful resource to detox their daily lives. There's lots of useful and friendly information there. Best of all, it's free!

**Also, anyone can receive email alerts when new TNS issues are put online.** Just email that request to me at [STEP@healthyworld.org](mailto:STEP@healthyworld.org). Sebastopol residency is not required!

**ADD, continued**

disabilities, and other neurological harm, see *TNS VIII/5* and *TNS V/5*.

~ Patricia Dines

*SOURCE: "New study links pesticides and attention deficit in kids," By Lisa Ko, May 21, 2010, www.pbs.org/wnet/need-to-know/health/new-study-links-pesticides-and-attention-deficit-in-kids/859*

## Pesticide Ban Encouraged

In a related story, three environmental groups have sued the U.S. Environmental Protection Agency to ask that it fully ban chlorpyrifos. This neurotoxic organophosphate (OP) pesticide, largely banned from household products nine years ago, is still widely applied to crops, golf courses, and for urban pest control. Its continued use puts at risk farmworkers, farm neighbors, and consumers. The USDA has consistently found chlorpyrifos in our food, including in 46% of almond samples, 30% of corn, and 18% of peaches.

I personally experienced this pesticide's health impacts when it drifted from local apple orchards into my (previous) home. What I learned from this led me to take stronger action on toxics issues.

A number of other countries have already banned chlorpyrifos completely. While some farmers are concerned about losing this farming tool, organic farmers demonstrate that we can grow our food without poisoning ourselves and our world.

~ Patricia Dines

*SOURCES: "Federal suit seeks ban of common pesticide," By Marisa Lagos, S.F. Chronicle, July 22, 2010 • NRDC http://switchboard.nrdc.org/blogs/jsass/d.html*

"Working hard, cooking good dinners, coaching soccer games are the jobs of parents. But it's not the job of parents to have to inspect every single item they buy in the store for toxic contamination.

Keeping unsafe chemicals out of baby formula is the government's job."

*Dr. Harvey Karp, Pediatrician, Author of popular parenting guides*

## Support Cosmetics Regulation Reform

Unbeknownst to most of us, health and beauty products (ranging from cosmetics to shampoo) often include highly toxic materials. That's both because of regulations that are antiquated and an industry still clinging to unsafe materials. I mean, does lipstick really need to contain lead? While we think of health and beauty products as being applied to the outside of our bodies, they actually often get inside via our skin.

The recently-proposed Safe Cosmetics Act of 2010 seeks to improve the safety of these products by

disallowing materials linked to cancer and birth defects, improving labeling, and better informing workers about the materials they use. Proponents say the bill would also level the playing field for manufacturers already using safer ingredients.

We should be able to buy products without worrying that they're going to compromise our health. For more information and easy actions you can take to support this bill, see [www.safecosmetics.org/safecosmeticsact](http://www.safecosmetics.org/safecosmeticsact). For an engaging video explanation, to view and share with others, see [www.storyofcosmetics.org](http://www.storyofcosmetics.org).

*SOURCE: "Safe Cosmetics Act of 2010 could eliminate toxins in cosmetics," By Jessica Rubino, Delicious Living, Aug. 10, 2010*

## Protecting Sea Creatures — & Ourselves

It can seem that toxics are primarily an issue near industrial areas. However, time and again scientists have found our harmful chemicals in ecosystems and creatures all around this precious planet.

Now a new five-year study has found that sperm whales living in the most remote oceans carry disturbingly high levels of toxics and heavy metals. This scale of contamination is risking harm to all ocean life, as well as to the millions of humans who eat and depend on seafood.

The materials that researchers found at the highest amounts included mercury, lead, cadmium, aluminum, and titanium. The industrial carcinogen chromium (made famous by Erin Brockovich's lawsuit) was unexpectedly found in all but two of the 361 whales tested for it. Also, mercury was found as high as 16 parts per million. Health experts usually advise children and pregnant women to avoid shark and swordfish, which typically have one part per million. (For more about toxics in seafood, see *TNS IX/5*.)

These toxics likely reach whales by moving through air and water and being ingested by their prey. They also accumulate in whale body fat, creating large cumulative doses that mothers pass on to their babies.

Biologist Roger Payne, founder and president of Ocean Alliance which led this \$5 million study, calls it the most comprehensive report ever done on ocean pollutants. Payne is best known for his 1968 recordings of humpback whale songs and discovering that they communicate over thousands of miles. U.S. Whaling Commissioner Medina urged the International Whaling Commission to further investigate the report's concerns.

This is just another example of how we're all put at risk by our culture's prevalent use of toxics, and we all benefit from less-toxic living.

*SOURCE: "Report: Toxins found in whales bode ill for humans," By Arthur Max, Associated Press, June 24, 2010*



### ABOUT STEP

**The Next STEP** (TNS) is published six times a year by the **Sebastopol Toxics Education Program** (STEP). **STEP is a project of the City of Sebastopol**, implemented by local citizen volunteers. **STEP's mission** is to support city residents in reducing their toxic use and exposure, creating a healthier and safer Sebastopol for everyone.

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