



"It is difficult to read a family magazine or newspaper without some warning about protecting your children from something they might eat, drink or breathe. It is easy to get so overwhelmed that you begin to skip these articles. For the sake of your present and future children, please don't. The reason for such a fuss is that toxins are harmful to children,

particularly to their developing nervous systems and brain.

Why all the fuss about children? First, they are exposed to more toxins per pound of their body weight than adults – they eat, drink and breathe more for their size than adults. Second, they live closer to the ground, playing on floors or rolling on the grass or dirt. They are thus exposed to more dust, household cleaners, paint, plastic, and other items that contain toxins. Worse, they often put their hands and other objects into their mouths.

Only we as adults can help minimize this potential harm. How can you do this? (1) Don't bring toxins into your home; (2) remove existing toxins from your home; (3) keep children away from toxins; (4) buy foods that are healthy and safe; and (5) work with other community members to reduce pollutants and contamination.

This article, as the first in a series, will offer valuable information regarding all of these steps: what products to keep, what to get rid of, how to store potentially harmful materials properly, what foods to buy that reduce your children's risk of exposure, and how you can collaborate with neighbors and friends to create healthier communities. There are also resources listed for additional information. Please read it carefully.

All of these ideas may take a little more time and effort, at least initially. But if you do not work to protect your children, who will? And you will feel better just knowing your children are in the healthiest environment possible."

- Larry B. Silver, MD

*from the Learning and Developmental Disabilities Initiative
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What's the fuss?

Today's children are exposed every day to a wide variety of environmental chemicals in the food they eat, the water they drink and the air they breathe. These chemicals can be found in everyday products that are under your kitchen sink or in your laundry room, basement, bathroom or garage. Chemicals in some plastics, pesticides, flame retardants, solvents, and even baby care products are known to be harmful to children, particularly to their developing nervous systems and brains. Heavy metals, such as lead and mercury, and industrial chemicals including PCBs, arsenic and perchlorate add to the known environmental hazards that our children face.

This column introduces a series of columns devoted to identifying and preventing exposures to these harmful toxics. Parents and other caregivers are encouraged to take action for all children's well being.

Why are children at greater risk from toxic chemicals?

Children are not just "little adults." Pound for pound, children are exposed to greater amounts of toxic chemicals because they eat, drink and breathe more for their size than adults.¹ Children also generally live closer to the ground. When they play on floors, for example, they can come in contact with dust that may carry toxic chemicals from insecticides, household cleaners, paint, plastic and some fabrics. Children may also be exposed to chemicals tracked in from outdoors, such as pesticides. In addition, children frequently put their hands and other objects in their mouths. Hands and objects that have chemical residues on them further increase their exposure.

Another reason children are at higher risk is that their bodies are growing rapidly. Even small amounts of toxic exposures during critical developmental periods can harm children's health, sometimes for life. For example, exposures to mercury or lead early in life can impact the nervous system and brain, potentially contributing to learning, behavioral and developmental disabilities.²

How can these harmful exposures be prevented?

You can help protect your current and future children by taking simple steps in your home and garden to reduce everyday exposures to harmful chemicals.

1) Don't bring toxins into your home. Many products that people use in their homes – such as cleaners, paints, and pest control – contain highly toxic materials. To make healthier choices about products you use:

- Look at the ingredients and warning labels on packages to help you decide whether to buy products. More complete information, including a list of many products, their ingredients, and their effects, is available on the website of National Institutes of Health at <http://householdproducts.nlm.nih.gov>.
- Find out about non- or less toxic alternatives for almost everything from cosmetics to appliances. See www.chec.greenhome.com/products/.
- Buy or make your own nontoxic cleaning products. See www.housekeeping.about.com/cs/environment/a/alternatclean.htm.
- Avoid using pesticides. See www.beyondpesticides.org/how_to/ for alternatives to chemical pesticides.
- Reduce or eliminate your use of tobacco products, alcohol and solvents, such as inks and glues.
- Have family and guests remove their shoes at the door. Harmful contaminants like pesticides and arsenic are easily picked up on shoe bottoms and can be tracked across the floors where your children play.
- Avoid purchasing food packaged in plastics or cling wrap, including children's convenience foods such as puddings, snack trays and juice drinks. Baby bottles and children's dishes are sometimes made from dangerous plastics, too. See www.checnet.org/healthhouse/education/articles-products.asp.

2) Remove existing toxins from your home.

Lead, mold, mercury and other toxics may already be in your home where they can contaminate your air, drinking water and food.

- Ask to have your water and painted surfaces tested for lead, particularly if you live in an older home. See www.leadpro.com. Test water for arsenic, too.
- Replace mercury thermometers with digital ones. Do not break fluorescent bulbs, which also contain mercury. Dispose of all mercury-containing products at hazardous waste collection sites.
- Make sure your home is well-ventilated, especially where dampness may lead to the growth of mold.
- Keep floors, furniture and other surfaces clean so that children don't breathe contaminated dust or accidentally put contaminated items into their mouths.
- Don't heat or microwave food in plastic wrap or containers – use glass instead.

3) Keep children away from toxins. If you do have dangerous items in your home – cleaning supplies, medications, alcohol and even children's vitamins – take these steps to keep them away from your children:

- Store toxic substances in locked cabinets where children cannot get to them.
- Never reuse containers that have held toxic materials. For example, don't save a bleach container to hold lemonade for a picnic or to water houseplants. Even when these containers have been washed carefully, dangerous toxic residues remain.

4) Buy healthy food to keep your kids healthy.

Because our food can contain toxic chemicals, it's important to make careful choices.

- Check advisories about eating fish caught locally,

and avoid fish that are frequently contaminated with mercury, such as tuna, sharks, or swordfish. See www.epa.gov/ostwater/fish/.

- When possible, buy certified organic foods (grown without pesticides, herbicides, antibiotics or hormones) for your family. Residues of pesticides can build up in children's growing systems and disrupt healthy development. While some organic food can be more expensive than conventional food, it is still less costly than chronic health problems later in life. Your kids are worth it!

5) Reduce pollutants and contamination in your community.

- Find out about the sources of toxic pollution in your community. See www.scorecard.org.
- Contact local or regional groups that are working to reduce toxins in our environment or to protect children from toxins. Ask how you can help.
- Let your elected officials know that you want them to work to protect all children from toxic exposures.

For more information

- The Institute for Children's Environmental Health resources, including other Practice Prevention columns, www.iceh.org.
- Children's Environmental Health Network, Resource Guides for Parents and Parent Groups, www.cehn.org/cehn/resourceguide/parentsparentgroups.html.
- Children's Health Environmental Coalition, www.checnet.org.
- National Institutes of Health searchable household products database, <http://householdproducts.nlm.nih.gov>
- A Small Dose of Toxics at Home, www.asmalldoseof.org/toxicology/home_toxics.html.
- Toxic Black Mold, www.moldinspector.com.

Footnoted resources

1. Landrigan PJ, Carlson, JE. Environmental Policy and Children's Health. *The Future of Children*. 1995 Summer/Fall;5:34-52.
2. National Academy of Sciences. *Pesticides in the Diets of Infants and Children*. Washington, DC: National Academy Press, 1993.

ICEH Medical Advisor Dr. Larry B. Silver is a child and adolescent psychiatrist and clinical professor of psychiatry at Georgetown University Medical Center. His popular book *The Misunderstood Child: A Guide for Parents of Children with Learning Disabilities* is now in its fourth edition. His other books include *Attention Deficit Hyperactivity Disorder: A Clinical Guide to Diagnosis and Treatment for Health and Mental Health Professionals* and *Dr. Larry Silver's Advice to Parents on Attention Deficit Hyperactivity Disorder*. Past president of the Learning Disabilities Association of America, he received their Learning Disabilities Association Award. He also received the Berman Lifetime Achievement Award from the American Academy of Child and Adolescent Psychiatry for his contributions to the study and treatment of learning disabilities.

For more information or for other Practice Prevention columns, visit the Institute for Children's Environmental Health (ICEH) online at www.iceh.org/resources.html or call 360-331-7904.



ICEH serves as the national coordinator for the Collaborative on Health and the Environment's Learning and Developmental Disabilities Initiative.

