



# Learning Times

## Toxic Chemicals and Child Development

Today's children are exposed regularly to a wide variety of household and environmental chemicals in the food they eat, the water they drink, and the air they breathe. These chemicals are found in products used every day that are under your kitchen sink, in the basement or in the garage.

"In Harm's Way" a report on the contribution of toxic chemicals to neurodevelopmental, learning and behavioral disabilities in children states, "toxic exposures deserve special scrutiny because they are preventable causes of harm." Common insecticides contain potent neurotoxins – i.e. they function by disrupting the organism's nervous system, disabling the transmission of signals to and from the brain. Studies have revealed clear links between the neurotoxic nature of these pesticides and impacts on the development of a child's brain. Such impacts can result in learning, behavioral, and developmental disabilities.

Children are not just "little adults." Pound for pound, children have higher exposures to toxic chemicals because they eat, drink and breathe more for their size than adults. Children also live closer to the ground. They play on the floor, exposing

them to toxic chemicals trapped in carpets. The chemicals may come from inside the house, or can be tracked in from outdoors (for example, lawn pesticides). Additionally, children are at increased risk because their bodies are growing rapidly and may be at vulnerable stages of development. Exposure to toxins at these stages can result in lifelong impairments.

### What can parents do to protect their children?

Parents can help protect their current and future children by taking simple steps in their homes and gardens to reduce everyday exposures to harmful chemicals. Here are a few simple steps:

- Have family and guests **remove their shoes at the door**. Contaminants like lead, solvents and pesticides are easily picked up on shoe bottoms and can be tracked across floors where children play.
- **Use damp rags to dust**. Feather dusters simply stir up the dust and disperse it in to the air where it can be inhaled.

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Building learning success  
for children, families,  
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Learning Disabilities Association of Minnesota

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# Toxic Chemicals continued from page 1...

- **Be cautious of certain plastics** that contain harmful contaminants that can leach into foods and beverages during storage, and especially during heating. Never heat or microwave food in plastic wrap or containers. Use glassware instead.
- **Buy certified organic foods** (grown without pesticides, antibiotics or hormones) whenever possible. Residues of pesticides can build up in your child's growing body and disrupt healthy development. Foods most likely to contain residues include peaches, apples, pears, winter squash, green beans, grapes, strawberries, raspberries, spinach and potatoes. Many major grocery chains now carry organic foods. If buying organic is not possible, consider peeling the skins of those foods that most likely contain residues.
- **Prevent household pests naturally by removing sources of food, water and shelter.** Fix leaks and do not let water accumulate; wipe up food on countertops; seal pet food containers; rinse recyclable containers; repair door and window screens; remove diseased plants and fallen fruit that may attract pests to your house or garden.

## Learn more about environmental toxins:

- ***Common Sense Pest Control: Least-toxic solutions for your home, garden, pets and community***, written by Olkowski, Daar, and Olkowski, Taunton Press, 1991.
- *National Coalition Against the Misuse of Pesticides*, [www.beyondpesticides.org](http://www.beyondpesticides.org)
- *Pesticide Action Network of North America*, [www.panna.org](http://www.panna.org)
- Minnesota Children's Health Environmental Coalition, 952-933-7235, [www.chechnet.org](http://www.chechnet.org)
- Minnesota Office of Environmental Assistance, [www.moea.state.mn.us](http://www.moea.state.mn.us)

**Sources:** Institute for Children's Environmental Health ([www.iceh.org](http://www.iceh.org)); "In Harm's Way: Toxic Threats to Child Development" a report prepared by the Greater Boston Physicians for Social Responsibility; Environmental Protection Agency's Office of Children's Health Protection (<http://yosemite.epa.gov/ochp/ochpweb.nsf/homepage>)



# LDA's Parenting Corner

## Want to boost your child's brain function?

Diet and exercise can greatly improve your child's thinking as well as promote healthy development. Research presented at a recent Boston conference titled "Learning and the Brain" indicates that daily exercise can have a profound impact on brain functioning, mood, and health. Moving and exercise releases the body's motivation chemicals (noradrenaline a hormone and dopamine a neurotransmitter the produces good feelings). Regular exercise has also been shown to combat the negative impact of stress and increase production of proteins that nourish the part of the brain that stores what we learn (hippocampus). That said, here is what you can do:

- Children and adolescents should get 30 minutes of aerobic exercise at least 3-4 times per week. This includes swimming, soccer, running, bicycling, brisk walking, etc.
- Engage in stretching, yoga, dance, or martial arts every day. This type of exercise promotes strong lean muscles, increases blood flow, and enhances concentration. Yoga and martial arts also develop self-discipline skills.
- Encourage your child to exercise before sitting down to do homework. This gives his/her mind a break and prepares the brain for learning with increased blood flow.



## Want to boost your child's concentration for homework?

It turns out that what we eat has an impact on our ability to stay alert and learn. A protein snack of cheese, meat, nuts, or tofu will do more to keep the brain alert and ready for learning than a snack loaded with carbohydrates. Carbohydrate consumption is linked with producing chemicals our brains use during sleep. Foods rich in iron also promote concentration and energy. Iron deficiency is very common in young children and girls. To increase your child's iron intake:

- Iron that is the easiest for the body to absorb is found in shrimp, clams, lamb, beef, pork and dark poultry meat. Iron from these sources also allows the body to absorb iron found in fortified foods.
- Children ages 1-3 should consume 7 milligrams of iron a day and 4-8 year olds should consume 10 milligrams per day.

# Easy Alternatives for Healthy Living

There are many easy alternatives to using pesticides in your garden and harmful household cleaners around your home. Here are just a few easy things that you can do to create a safer environment for you and your children.

## Use earth and people-friendly home cleaning products:

- Baking Soda
- Bon Ami Cleanser
- Borax
- Canola Oil
- Cornstarch
- Lemon Juice
- Liquid Dish Soap
- Salt
- White Vinegar

For the bathroom sink, tub, toilet, tile and floor use Alice's Wonder Spray™. Combine a ¼ cup white vinegar, 2 teaspoons Borax, Hot Water in a 32 ounce spray bottle, and ¼ cup liquid dish soap (added last).

Around the kitchen use baking soda on your sink, countertops and refrigerator to clean. Baking soda also works to clean your oven. Just sprinkle water on the bottom of oven, sprinkle with baking soda, then sprinkle water again. Let sit overnight and in the morning wash and rinse.

Wood floors can be cleaned with only water and vinegar. Carpets can be more difficult. Be sure you immediately blot the spot. Then sprinkle baking soda or cornstarch, let dry and vacuum. If the spot remains, wash with club soda.

## Easy garden and lawn care for a healthy environment:

- Avoid using Herbicides, Insecticides and Fungicides on your lawn and garden
- Mow your lawn high to encourage deep root growth
- Water deeply and infrequently to avoid fungal disease
- Control weeds in your garden by hand-pulling or solarization (covering the soil with plastic to kill the weeds)
- Use 3-4 inches of mulch to keep the weeds out and water in

## LDA is Seeking Board Members

LDA welcomes individuals from varying backgrounds, skills and experiences. At present, LDA is committed to expanding its diversity; people of color and individuals or families with learning disabilities are strongly encouraged to apply.

### ***Roles and responsibilities:***

- Develop strategic direction
- Establish and monitor board policy
- Maintain fiduciary responsibility
- Attend board meetings
- Promote LDA within your personal and professional network and the community
- Financially support LDA and assist in fund raising
- Provide advice and counsel in your area of expertise

### ***Time commitment:***

- Bi-monthly board meetings
- Committee work
- Renewable three-year terms

# LDA Makes a Difference!

January 8, 2004

The first time I went to LDA was with a bunch of kids and teen kids. It was a lot of fun because we did a test. I like doing tests. They are my favorite. I like doing math and reading. Last year I was at a second grade level for math and reading. Last year I was in fourth grade and I wasn't listening in my math or reading classes. This year I am in fifth grade. I am now doing seventh and eighth grade work like algebra and my reading. LDA really helped me out. I want to say thank you Mariah for my math.

So my life is great now. I also want to thank Janine for giving me a ride to LDA. So I want to say thank you guys.

Tammy  
age 11

**Please consider making a gift to LDA to help more students like Tammy succeed in school and life. Complete the membership form on back and check "I want to help LDA."**

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[www.ldaminnesota.org](http://www.ldaminnesota.org)

## Become a member of LDA!

LDA of Minnesota is the state affiliate of LDA of America. As a member of LDA, you will receive:

- Access to the latest information and research on learning disabilities
- Complimentary subscriptions to LDA's local and national newsletters
- A chance to connect with others who have similar interests

Member information:

Name \_\_\_\_\_

Address \_\_\_\_\_

City / State / Zip \_\_\_\_\_

Phone \_\_\_\_\_

Email Address \_\_\_\_\_

I am interested in:

- Individual Membership \$30  
 Journal Subscription (members only) \$30  
 Journal Subscription (non-members) \$60

**Subtotal \$\_\_\_\_\_**

*LDA relies on the generosity of our members and the community to provide information and services that advance our mission.*

I want to help LDA, I have enclosed a contribution to support LDA's mission \$\_\_\_\_\_

**Total \$\_\_\_\_\_**

Method of payment:

- Check (payable to LDA)  
 Visa  Mastercard

Card number \_\_\_\_\_

Exp. date \_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_

Signature \_\_\_\_\_

Contributions to LDA are tax deductible

So that we may better serve you, please consider providing us the following OPTIONAL information.

I am a:

- Person with Learning Disabilities  
 Professional  Family member  Other

*Please mail completed application along with payment to:*

LDA of Minnesota  
4301 Highway 7, Suite 160  
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ph: 952-922-8374 [www.ldaminnesota.org](http://www.ldaminnesota.org)

LDA is a private, non-profit, educational agency that specializes in helping children, youth, and adults with learning disabilities or other learning difficulties maximize their potential so that they and their families may lead more productive and fulfilled lives.

