

BE SAFE: Protecting Children's Health

Keeping Our Children Out of Harm's Way

Environmental chemical exposures should be treated the same way we treat hazards such as:

- Placing a gate at the top of a staircase to keep children from falling down.
- Placing children in seat belts and safety car seats.
- Washing fruits and vegetables before serving.
- Keeping medications out of children's reach.



We need to act and prevent environmental chemical exposures to children.

Why Focus on Children?

Because regulations and laws are inadequate in protecting children from environmental chemicals.

- Regulations are primarily based upon an adult's body, weight and behaviors—not a child's body, weight and behaviors.

For example, a doctor wouldn't give a child the same amount of aspirin as an adult would take – environmental chemical exposures should be no different—they need to be child protective.

- Children are more vulnerable than adults. Infants and children breathe, eat, and drink more than adults per unit of body weight.

- Children's organ systems change and develop rapidly making them vulnerable to small exposures at crucial times in their development – from birth to adulthood.

Children Are Today's Canaries.

These changes are similar to concerns pregnant women have about the growth of the fetus—taking medication or alcohol during pregnancy could interfere with the baby's development.

- Children are exposed differently than adults because they are closer to the ground, play on the floor/ground and place their fingers and other objects in their mouths frequently.



There Are Strong Indicators That Exposures to Environmental Chemicals Have Contributed to Increased Childhood Diseases.

In the last two to three decades childhood cancer has increased by:

- ↑ 31.7% in children under the age of 15
- ↑ 29.6% in children under 20 years of age
- ↑ 57.2% in acute lymphocytic leukemia
- ↑ 49.6% in brain and other nervous systems cancers
- ↑ 47.5% in cancers of the kidney and renal pelvis

The Occurrence of Developmental Disorders Have Also Increased



Autism rates in California, for example, went from 2,778 children in 1987 to 10,360 children in 1998 and to 18,460 children in July 2002.

Childhood learning disabilities, hyperactive behavior and the inability to maintain attention have soared nationwide.

The number of children in special education programs increased 191% from 1977 to 1994.

Asthma Has Increased Dramatically

- National childhood asthma rates increased 160% for ages zero to four in the past two decades.
- Asthma afflicts nearly 4.8 million American children.
- It is the leading cause of school absenteeism and hospital admissions for chronic conditions.



Look At Schools As A Place To Protect Children.

- Children spend anywhere from 6 hours to 12 hours a day in the school environment.
- School environments should provide a safe oasis for protecting children's health, in the same way that schools enforce drug free zones or take protective steps to eliminate crime.
- Children can't learn if they are sick or can't sit still—resulting in school drop-outs, teen pregnancy, a loss of earning potential and less promising futures.
- Every community has public and private schools—*providing a proactive opportunity* to protect children and educate parents.

What are the Environmental Hazards to Children?



- Air contamination both indoors and outdoors.
- Contaminated dumpsites or industrial sites that release chemicals into the air, water or soil.

- Surface water runoff, polluted rivers, lakes and drinking water.
- Food especially, fish, meat, dairy and non-organically grown fruits and vegetables.

Now let's look at each one of these exposure sources individually . . . and steps that can be taken to protect children.

Outdoor Air Pollution Comes from Many Sources The Following Are Central.

- Chemical discharges from industrial sources near schools.
- Buses and diesel exhaust
- Arial spraying of pesticides

In North Carolina a statewide effort has made significant strides toward restoring the state's air toxics program to its original role as a health-protective standard and are working to define children's health as the point of measurement as a final victory.



Indoor Air Pollutants Often Travel Through Air Vents

- Mold spores (some very toxic)
- Pesticides that are used or tracked inside the building
- Residue and fumes from the use of toxic cleaning products
- Fumes or off-gassing from products such as carpets, formaldehyde cabinets
- Lead and asbestos fibers

Girard, Ohio parents blamed the mold and toxic carpet in their newly built school for the increased illnesses in students. They closed the school to remove the mold and carpets and passed a policy eliminating the use of carpets in their district.

Contaminated Land and Surface Water

- Dumpsites leak chemicals and gases into the soil, air and groundwater.
- Schools, playgrounds and athletic fields are often built on such areas.

CHEJ's Child Proofing Our Community Campaign looked at five states, New Jersey, California, New York, Michigan, Massachusetts to see how many public schools were within a half mile of a government defined contaminated site.

The results of this research – 1,195 schools within ½ mile—housing 621,931 children.

- ✓ State legislation around where schools can and cannot be built are being introduced in several states. Most states have no laws defining building public schools on contaminated lands.



Parents in Elmira, New York attribute the 24 cases of testicular cancer in their high school to contaminated soil under and around the building.

Water Contamination

- Surface runoff of pesticides, lead, mercury, and other persistent toxic chemicals get into children's drinking water and recreational areas.
- *Do not swim* and *Don't eat the fish* - signs are huge indicators of problems. But often small contaminated creeks and ponds are never tested and often when problems are found they are never posted.
- Ground water contaminants leak into drinking water wells. Wolburn, Massachusetts' childhood leukemia cluster (subject of a Civil Action book/movie) is a good example.
- ✓ Schools' drinking water should be tested at the water fountain as well as at the tap. Older water pipes in buildings and fountains have been found to release lead into the water supply.



Keeping Our Food Safe

- Fatty foods are not good for children in general. Many chemicals such as mercury, pesticides, dioxin and PCBs stick to animal fat and muscles. Children eating high quantities of animal fat in meats, fish and dairy will most likely ingest these chemicals too.
- Some food products also contain hormones and antibiotics that are directly fed to the livestock. Other foods can be exposed to irradiation meant to kill bacteria.
- Organic foods have the least amount of chemical residue resulting only from those chemicals that cannot be avoided because they come from air pollution and other discharges.
- ✓ Some children (from low-income families) only receive one healthy meal a day and that's provided for them at school—let's make it the best possible food.

Eliminating Pesticides In Schools

- ✓ Surveying your school is an easy first step.
- ✓ Ask questions about pesticide or herbicide usage. Does the school regularly apply pesticides to the building? Do they spray monthly or when there is an infestation?
- ✓ Are chemicals used outdoors on grounds, around playgrounds or athletic fields?
- ✓ Do parents and school employees receive notification of what is being sprayed and a description of the health effects associated with the particular pesticides before they are applied?



✓Pests and weeds can be controlled without highly toxic pesticides or herbicides.

Remember pesticides are designed to kill pests, are usually chemicals that effect the nervous system and are often chemicals that are suspected of causing cancer in humans.

Steps to Protect The Air Children Breathe

- ✓ Ask about what types of cleaning products are used within the building. Generally very toxic industrial chemicals are used. There are safe non-toxic or less toxic cleaning solutions readily available and affordable.
- ✓ Avoid carpeting where possible, they hold dust, cleaning chemicals and pesticides if used.
- ✓ Does there seem to be a high rate of asthma and respiratory problems in the school? It's very inexpensive to check the air for mold, dust and chemical residues.
- ✓ Check to see if the filters are regularly changed on the air conditioning/heating units.

✓ Check to see if school buses are idling near the buildings air intake vents located on the outside of the building or where the students wait to load.

Avoid Unhealthy & Contaminated Foods

- ✓ Avoid fatty foods which are not good for children in general. Many cancer causing, nervous system toxins and endocrine disrupting chemicals are found in fatty foods. Low fat or no fat foods are healthier.
- ✓ Schools food services need to serve foods that are low in animal fats. Parents should also pack healthy foods for growing children.
- ✓ Fruits and vegetables that have been grown with pesticides need to be washed thoroughly. Schools should be encouraged to buy organically grown fruits and vegetables because they are better overall.
- ✓ Schools should be encouraged to buy locally as well as organic where it is possible. Some children (from low-income families) only receive one healthy meal a day and that's at school. They need the best food possible.

Protecting Children At Home

- ✓ Don't use toxic chemicals on your lawn or inside your home for cleaning.
- ✓ As much as possible buy food products that are low in animal fat and are grown or raised organically.
- ✓ Change your air conditioning/heating system filters regularly.
- ✓ Be a smart consumer and buy products that are made of natural fibers and avoid formaldehyde, synthetic materials such as vinyl, or solvent based paint, stains and finishes.
- ✓ Recycle your waste to avoid increasing the need for landfill space or incinerators.



- ✓ Ask for a report on what's in your drinking water and the human health effects, if any from all the chemicals listed.

Protecting Children In Your Community

- ✓ Visit the www.scorecard.org and to find (by entering your zipcode) if and where chemicals are being released near your home, schools or daycare facilities.
- ✓ Pass a local law that prohibits pesticides and herbicides from being used in your parks, recreation areas and along roadsides.
- ✓ Find out more about the problems and solutions. Visit the Child Proofing Our Communities website or get involved in the student, school-based efforts in the Green Flag Program.



- ✓ Find out where your drinking water comes from and then look to see (by driving around or consulting the scorecard) if there is something that is located near your community's water source that may threaten water safety.

www.childproofing@chej.org
www.greenflag.org

We need to *stand with our children*—who represent 100% of our future—*and speak out*.



Everyone Can Do Something.

- ✓ Get involved in your school.
- ✓ Support policies that protect children.
- ✓ Find out who your school, county or state representatives are—ask them what they're doing to protect children's health.
- ✓ Support your local organizations working on these issues.
- ✓ Vote in the next election.