

# “Healthy Kids” Campaign Focuses on Preventing Toxic Pollution

**T**ake a pill. Keep your inhaler handy. If you get really sick, be prepared for chemo. Our health care system is predicated on

treating illnesses, not preventing them. Drug companies, medical technology firms and even HMOs are eager to sell us a pound of cure ... but not nearly enough are investing adequately in prevention.

Many illnesses, including certain cancers, asthma, birth defects and neurological diseases, are not always genetically determined. For example, we all know tobacco smoke and diet can have major impacts on our health.

A growing body of evidence also points to toxic pollution as a significant factor, especially for kids. Their smaller bodies and developing immune systems make them more vulnerable to pollution than adults.

## Key Toxic Threats to Kids

With more than 75,000 synthetic chemicals in use (only 7% have been fully tested for health effects), deciphering a “cause and effect” relationship for illnesses can be overwhelming.

Here at the Oregon Environmental Council (OEC), our strategic plan for the year 2010 strives to bring some rhyme and reason to the process by protecting our kids from the most

harmful toxic pollutants.

Over the past year, OEC staff has consulted with experts in toxicology, public health and other fields to develop a list of 12 key environmental pollutants (see box, pg. 3) that pose serious threats to our kids.

With toxic chemicals permeating our lives from cradle to grave,

it's unrealistic to think there's a magic wand that can suddenly make them go away. OEC's campaign aims for a 30% reduction in the 12 targeted chemicals by 2010, focusing on sub-stances where clear alternatives are available.

Over the next five years, our “Healthy Kids” campaign will use a mix of voluntary and regulatory strategies to secure these reductions. Read on to learn more about how these chemicals are affecting you and your loved ones, what OEC and others are doing to address this threat, and how you can take steps to minimize your exposure. We hope you'll join us in being part of the solution to toxic pollution.



courtesy of Environment California

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# Growing Up With Toxins

Imagine a world where parents and caregivers protect children from toxic pollution as vigilantly as we protect them from tobacco smoke or alcohol.

A key part of building that awareness is a better understanding of **when** children are most vulnerable to toxic exposures. The typical advice to “keep curious kids out of cabinets that contain harmful chemicals” is sound, but barely scratches the surface in terms of what parents can do.

Protecting kids from dangerous toxins also means protecting and taking care of **ourselves**. Many of the most serious threats to kids take place long before they are able to probe into cabinets. Instead, these threats are often “hand-me-down” poisons that are unknowingly passed on by parents to babies in the womb. In fact, environmental pollutants can even impact whether a baby is born at all.

Here’s a quick overview of how key toxins can affect the conception, birth and development of children.

## Fertility and Conception

A recent Harvard study found that men with lower sperm counts often have high levels of **phthalates** (plastic softeners) in their bodies. Men exposed to **lead** pollution have also been found to have reduced fertility. By some estimates, human sperm counts are dropping by as much as 1% per year, and **bisphenol-a** (used in hard polycarbonate plastics such as some “Nalgene” water bottles) and **PBDEs** (flame retardants) may be other causes.

## Pregnancy

Recent research by the US EPA suggests that **phthalates** are also a possible factor in increasing rates of certain male birth defects, such as hypospadias (the penis opens at its base instead of its tip) and undescended testicles. Similar birth defects, as well as oral clefts, have also been associated with **dioxins**, which are created by burning or heating chlorine, e.g., in garbage incinerators, backyard burn barrels, or pulp and paper mills.

Other chemical exposures in the womb can lead to problems that only become evident some time after birth.



Shawn Sutherland

For example, according to EPA, one in six pregnant women in the U.S. are estimated to have unsafe levels of **mercury** in their blood. Decades of evidence tells us that fetal exposure to even low levels of mercury, a potent neurotoxin, can result in irreversible cognitive impairment and developmental delays.

**PBDEs** can alter hormone levels and thyroid function in fetuses, also leading to developmental and learning disabilities in young children.

Chemical exposures may also threaten some pregnancies directly by triggering miscarriages. For example, even at low doses, **bisphenol-a** (BPA) has been shown to trigger miscarriages in mice. A California study found that mothers who live within a 9-square mile area in which commercial **pesticide** spraying took place during pregnancy were 40% to 120% more likely to suffer miscarriages. **Benzo-a-pyrene**, a component of wood smoke and vehicle emissions, has also been fingered as a potential trigger of miscarriages.

## Infancy

Once out of the womb, a baby is still quite vulnerable to chemical exposures. For example, a



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USC study found that children exposed to household **pesticides** were twice as likely to develop asthma than those not exposed.

Ironically, one of an infant’s greatest exposures to toxic chemicals may be mom. New research shows that **PBDEs and other chemicals** are building up in breast milk and other parts of our bodies at alarming rates, with U.S. women having higher concentrations than other countries. That means that our kids are starting life with a higher “body burden” of toxins that could lead to unforeseeable problems later in life, including passing along a greater risk of birth defects or other illnesses to **their** children. Researchers and health professionals agree, however, that despite the added risk, breast-feeding babies is still **by far** healthier (for both mom and baby) than formula.

## Childhood

Like **mercury** and **PBDEs**, **lead** can, in effect, “make kids dumber” by thwarting the development of their brains. Early childhood is a time to be especially wary of lead exposure, which usually occurs via breathing household dust that includes microscopic bits of peeling lead-based paint (found in houses and other buildings built before 1978), but can occasionally occur by drinking water from pipes joined with lead solder.

**Benzene** is a more ubiquitous threat (it is found in vehicle exhaust as well as wood smoke and other sources) and a known cause of leukemia. Studies in Italy have found higher rates of childhood leukemia in high-traffic areas than elsewhere.

In fact, in just a few decades, childhood cancer has jumped from the realm of a medical rarity to the most common disease killer of American schoolchildren ages five and over.

A study in Denver found that children with lymphomas and other cancers were more likely to live in houses with **pesticide**-treated yards. **Dioxin** is also a known cause of cancer, according to the National Toxicology Program.

**Diesel** exhaust includes benzene and other carcinogens, and is also a widespread asthma trigger, especially for children who ride diesel school buses, or live near freeways or truck routes.



USDA

never completely possible. However, by limiting the degree to which you and your kids are exposed to these toxic chemicals, you can significantly reduce the risks of miscarriages, birth defects, cancer and other catastrophic events, as well as the frequency of other health concerns, such as asthma or learning disabilities.

**Be sure to consult the helpful checklist on page 4 of this newsletter for tips on which products and behaviors to avoid, and suggestions for alternatives that can minimize your exposure to these chemicals.**

Like diesel, **formaldehyde** (which is found in car exhaust, as well as cabinetry, furniture and other building products made of particle board) is a carcinogen, as well as an asthma trigger.

**Acrolein**, another widely found by-product of field and slash burning, as well as fireplaces, woodstoves and vehicles, is an even greater asthma trigger. In fact, it accounts for nearly two-thirds of the risk of non-cancer illnesses that Oregonians experience from all hazardous air pollutants.

As any parent knows, protecting kids from danger is – unfortunately –

## Key Toxic Threats to Children

- Diesel exhaust
- Flame retardants
- Phthalates
- Mercury
- Benzene
- Bisphenol-A (BPA)
- Lead
- Formaldehyde
- Acrolein
- Dioxins
- Home & garden pesticides
- Benzo-a-pyrene

## Protecting Kids Where They Play and Learn

Children spend more time at parks, schools or childcares than anywhere else besides their own homes. That also means these are places where the potential for exposure to toxic pollutants is of concern.

That's why OEC is working on a number of fronts to protect kids in learning and play environments:

- Our "Green and Healthy School Teams" will begin their second year this fall, working in a dozen or more Oregon schools to identify and reduce environmental health hazards. Last year, school teams led campaigns to encourage parents and bus drivers to reduce exhaust emissions by not idling their vehicles near schools.

- Our new "Green Childcare" project will debut this fall, leading to new guidelines that childcare providers can use to create a healthier environment for kids.
- We're also advocating for implementation of Oregon's pesticide use reporting law, which would provide important new information about pesticide use in schools, parks and childcare centers. Unfortunately, the pesticide lobby is thwarting that effort (see pg. 6), leaving you and me in the dark about what's being sprayed and when.

If you would like more information about any of these projects, please contact OEC's Laura Weiss at 503-222-1963 x. 111 or [laura@orcouncil.org](mailto:laura@orcouncil.org).



Enthusiastic students at Leslie Middle School lobbied parents and others to stop idling their cars in the school's parking lot. They believe their efforts have made a difference. Their school, in the Salem-Keizer School District, is one of eight schools statewide that took part in OEC's Green and Health School program last year.

# Keeping Kids Safe from Toxins



You don't have to look hard to find many of the most serious toxic threats to kids: chances are they're making themselves right at home – in **your** home or yard. Some of these threats, like lead paint and mercury, have been known “bad actors” for years and have been fairly well publicized; others, such as phthalates,

bisphenol-a (BPA) and flame retardants, are emerging dangers you may never even have heard of.

The good news is that the home environment is one you **can** control. That means you can make your house, apartment or yard a safer environment, especially for kids, by taking action to create a healthier home. The checklist

below provides some “dos” and “don'ts” that can steer you in the direction of better health; on page 2, you'll find more background about the possible health effects of the dangerous chemicals highlighted below.

	Do	Don't
<b>Seafood</b>	Eat a variety of fish (it's healthy for you!), with the caveats noted in the next column	Children & women of child-bearing age should avoid swordfish and albacore because of <b>mercury</b> contamination; they should also limit wild salmon & canned chunk light tuna to 1-2 cans/month
<b>Dairy &amp; Meat Products</b>	Drink low-fat or non-fat milk, soy milk or other products; breastfeed infants	Two-thirds of our average exposure to <b>dioxin</b> occurs via eating high-fat dairy & meat products from cows that have grazed on pastures contaminated by dioxin
<b>Kitchenware</b>	Use metal, wood, glass or other non-plastic products	Bottles & other plastic items with a “3” recycling symbol may contain <b>phthalates</b> & also emit <b>dioxin</b> when burned; those with a “7” may contain bisphenol-a (BPA)
<b>Cabinets, Flooring &amp; Furniture</b>	Buy solid wood “FSC” certified products, or other alternatives (e.g., “PrimeBoard” made from wheat straw)	Wood products made of particle board can “off-gas” <b>formaldehyde</b> glues, as can (to a lesser extent) those made of plywood, waferboard or fiberboard (some formaldehyde-free fiberboards are available; see pg. 6).
<b>Bedding</b>	Consider mattresses with wool (a natural flame retardant) fill	Most mattresses with synthetic fill are likely to include <b>PBDEs</b>
<b>Home Heating</b>	Conserve energy & use natural gas or electric heat generated by wind	<b>Diesel</b> & home heating oil pollute heavily; replace such systems if possible or use bio-diesel blends; woodstoves and wood-burning fireplaces emit <b>benzene, formaldehyde, dioxins, benzo-a-pyrene</b> & other carcinogens; use them sparingly
<b>Thermostats &amp; Thermometers</b>	Use digital, mercury-free models; programmable thermostats can also help save energy	Many older thermostats & thermometers contain <b>mercury</b> ; recycle them properly with your other household hazardous waste
<b>Home Electronics</b>	Use Epson, IBM & Apple products; HP printers & PCs; Panasonic phones, cell phones & fax machines	Some other brands may contain <b>PBDE</b> flame retardants; be sure to ask if you're not sure
<b>Toys</b>	Phthalate-free toys are available from: Early Start; Guidecraft; Lamaze & The Natural Baby Catalogue	Try to avoid toys made out of soft plastic vinyl that often contains <b>phthalates</b> & can emit <b>dioxins</b> if burned as trash
<b>Trash &amp; Yard Debris</b>	Recycle as much as possible	Don't burn trash, especially PVC plastics, which, when burned, emit <b>dioxins</b>
<b>Pet Care</b>	Use pet combs, frequent vacuuming & other non-toxic controls of fleas	Many flea collars, sprays & dips contain dangerous <b>pesticides</b>
<b>Lawn &amp; Garden Care</b>	Limit lawn areas & grow native plants adapted to the Northwest	<b>Pesticides</b> such as weed killers & insecticides should be used as a last resort, if at all
<b>Indoor Pest Control</b>	Use diatomaceous earth & other less toxic controls	Most commercial ant & roach killers contain toxic <b>pesticides</b>

# Diesel: Air Pollution Public Enemy #1

You see it spewing from trucks, school buses, trains and even certain cars. Even more of it billows from vehicles that don't move much, or far: construction equipment, farm tractors, logging machinery.

No matter where you live in Oregon, diesel exhaust is one of the most widespread air pollutants. And, it is, by far, the most dangerous to our health.

By some estimates, it accounts for 74% of the added cancer risk we Oregonians experience because of all forms of air pollution. In the metro Portland area, the percentages are even higher (see pie charts).

Diesel exhaust is also a formidable threat in terms of illnesses other than cancer, such as asthma and other respiratory diseases.

Until recently, surprisingly little has been done to address diesel pollution. The powerful trucking lobby has routinely killed state legislation that would require trucks to be tested for excessive emissions, for example.

And "off-road" diesel sources, such as construction equipment, have largely been overlooked in the fight against air pollution, even though they account for a majority of emissions.

Much of that is changing, though. For example, federal rules will require trucks and buses to burn "ultra-low sulfur" diesel fuel starting summer 2006, a move that promises to reduce

emissions by 15%. Construction equipment and other "off-road" sources will also need to switch fuels by 2011.

OEC is pushing hard here in Oregon for additional reforms that promise to bring cleaner, healthier air. In the 2005 Legislature, we'll introduce legislation encouraging the use of diesel fuels that contain at least part "bio-diesel" (cleaner burning fuel made from canola oil, waste grease or other renewable sources), along with providing money for "retrofits" of school buses that would enable them to emit less pollution.

We will also be leading voluntary efforts with construction companies to ensure they reduce diesel emission impacts on surrounding neighborhoods when working in heavily populated urban areas. (A parallel project will focus on sources of diesel pollution that don't move, such as backup generators, home heating systems, pumps, etc.)

OEC anticipates that this combination of federal mandates and voluntary local projects will bring us close to our goal of reducing diesel emissions by one-third over the next five years. For more information, or to get involved, please contact OEC's Sarah Doll at sarahd@orcouncil.org or 503-222-1963 x. 110.



In some parts of Oregon, kids are riding on 30-year old (or more!) school buses that can contain levels of diesel exhaust that may be eight times higher *inside* the bus than outside.

## Cars and Toxins

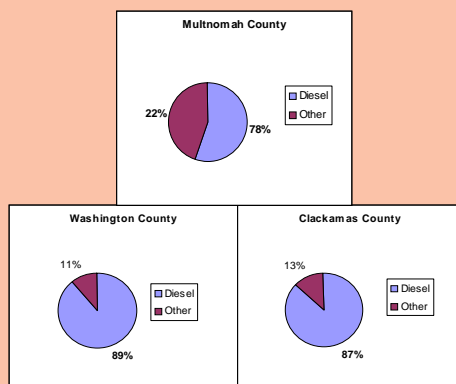
Even if you don't drive a diesel-fueled vehicle, your car still has significant toxic impacts on the environment.

All cars emit **benzene** and **formaldehyde**, for example, both of which are carcinogens. Formaldehyde is also a significant respiratory irritant.

You can minimize your emissions of those toxins by buying a car that is rated by EPA as either an ultra-low emission vehicle (ULEV) or a super low-emission vehicle (SULEV). All vehicles now have a mandatory under-the-hood label that identifies the emission standard, so while you're standing on the dealer's lot, just pop the hood and have a look.

And remember that not all toxic pollution associated with cars comes out of the tailpipe. For example, certain cars have hood and trunk switches that contain **mercury** (see [www.aboutnata.org](http://www.aboutnata.org) for a list of which ones). If the switches aren't removed, the mercury is vaporized when the car is eventually melted down for scrap. Each switch contains enough mercury to contaminate a 20-acre lake so that the fish are unsafe to eat. OEC, the Northwest Auto Trades Association, and AAA of Oregon/Idaho have teamed up to replace at least 3,500 mercury switches over the past three years. If your car has a mercury switch, visit NATA's web site for a list of participating repair shops that will replace it at no charge.

### Percent of Additional Cancer Risk from Air Pollution by Source



Source: Environmental Defense Scorecard

# Leaders – and Laggards – on the Road to a Less Toxic Environment

As we become more aware of the impacts of toxic pollution on our health, one bit of good news is that some businesses are aggressively stepping up to the plate to take a swing at reducing their pollution.



**Intel, Apple** and **Epson**, for example, have all taken swift action to make sure that all of their products are free of PBDE flame retardants, even though they have only become a public health concern in the relatively recent past (see Health,

pg. 2). **HP** has eliminated PBDEs from their PCs and printers, and **Panasonic** has removed them from their phones, cell phones and FAX machines – all without compromising product safety.

Companies like **Early Start, Guidecraft, Lamaze** and **The Natural Baby Catalogue** offer plastic toys free of the chemicals known as phthalates.



Digital thermostats and thermometers that are free of mercury are now commonplace.

Waiting lists for low-polluting “hybrid” gas-electric cars, such as the

**Toyota Prius** (photo at right), are overflowing.

**Albina Fuel** and **SQBiofuels** in Portland offer bio-diesel for use in home heating or diesel cars.

Indeed, many small businesses are getting in the act. More than 100 auto repair shops that are part of the



**Northwest Auto Trades Association (NATA)** are offering free replacement of mercury-containing switches (pictured

above) in cars. Several dentists also offer mercury-free fillings.

**Neil Kelly** in Portland sells formaldehyde-free cabinets, some of which are also made of recycled wheat straw. So does **Environmental Building Supplies** in Bend and Portland. The **Meditate Corporation** in Medford makes formaldehyde-free fiber board for use in home interiors.

Companies like **Organicare** in Portland offer lawn care without the use of pesticides, and home pest control companies like **EcoCare** use non-toxic products to eliminate pests.



**Schnitzer Industries**, denies emitting mercury even though it incinerates thousands of junked cars (which contain mercury switches) every year, and similar facilities elsewhere in the U.S. report substantial emissions.

Another example: trucks account for more than 90% of all diesel emissions from mobile sources. Despite this, Oregon’s powerful trucking lobby has resisted even the most basic steps to clean up their share of diesel pollution. In Salem, the **Oregon Trucking Association** has killed state legislation that would require trucks to be tested for emissions, even though those of us who live in the metro Portland, Eugene and Medford areas are required to have our private vehicles tested every two years.

Last, but not least, the powerful pesticide industry is blocking our right to know even basic information about pesticide use. Their business association, **Oregonians for Food and Shelter**, has worked hand-in-hand with anti-environment legislators in Salem to thwart implementation of Oregon’s pesticide “right to know” law – despite the Legislature’s 88-2 vote and the overwhelming support of the public.

“We hope that the actions of forward-looking companies and businesses can serve as an inspiration to those who aren’t yet doing their share,” said Jeff Allen, executive director of the Oregon Environmental Council. “We think most Oregonians want a cleaner, healthier environment for their kids, and that the pressure for reducing the use of highly toxic chemicals is only going to increase. The sooner companies adapt, the less painful the change.”

## Room for Improvement

Unfortunately, a few of Oregon’s most dangerous polluters are not taking responsibility for their pollution, and are fighting tooth and nail against new laws and regulations that would help make our environment healthier.

For example, even though roughly one-quarter of all mercury emissions comes from industrial smokestacks, the state’s most powerful lobby group, **Associated Oregon Industries (AOI)** has thwarted any effort to hold mercury polluters accountable by squashing proposed new permit requirements.

One major source of mercury emissions, the Cascade steel mill in McMinnville, owned by Portland’s

# Taking on Toxins

OEC is indebted to two of our board members who have been particularly helpful in motivating and developing our efforts to reduce toxic pollution.

**Dorothy Fisher Atwood's** compassion, enthusiasm and energy have helped inspire OEC's work.

In 1997, Dorothy founded Pink Phoenix™, a women's dragon boat team made up of breast cancer survivors. The team's name is taken from the pink ribbons worn by breast cancer survivors and from the mythical bird that consumes itself in fire and arises from its own ashes – a triumphant symbol of rebirth and renewal of human spirit.

In 2000, she joined OEC's board, bringing 20 years of experience as an environmental consultant working with companies that want to use more sustainable practices in their business operations.

Her energy extends well beyond OEC: Dorothy also has served on DEQ's Green Permits and Environmental Cleanup advisory committees and is active with Oregon Natural Step.

She earned two degrees from Stanford University, California, and lives in Lake Oswego with her husband, two grade-school aged children, and a backyard full of plants and wildlife.

**Gary Oxman, MD**, joined our board three years ago. Our first physician board member in quite a while, Gary brings a unique perspective to our work, providing key leadership for our Environmental Health Advisory Board.

Since 1987, Gary has been the Health Officer for the Multnomah County Health Department, which has a staff of 800 full-time employees and an annual budget of over \$100 million, and which serves 680,000 residents. He specializes in Public Health and Preventive Medicine and works on everything from bio-terrorism prevention to health issues related to water contamination.

Gary previously practiced general/family medicine in Portland, and served for two years as president of the Oregon Public Health Association. Born and raised in Minnesota, he received his MD from the University of Minnesota. He also earned a Masters in Public Health from the University of Washington, Seattle.



In addition to his work on behalf of OEC and the environment, Gary also has a strong interest in the performing arts, serving on the board of the acrobatic Do Jump! Theater. He lives in Portland with his family.

## An Environmental Legacy



Few people have been as generous in their support of environmental causes in Oregon as were Leroy (Roy) and Connie Jensen. Roy and Connie (pictured at left) made a point of supporting groups like OEC that are based here in Oregon and do all their work here in Oregon.

Roy was born in 1916 and lived almost his entire life in Portland where he developed a lifelong love of camping and fishing. Educated as a health epidemiologist, he also served as a naval aviator in World War II and in the USMC reserves, from which he retired as a colonel. Roy and Connie met in the 1950s, enjoying several first dates on hiking club outings, later marrying, and having four kids.

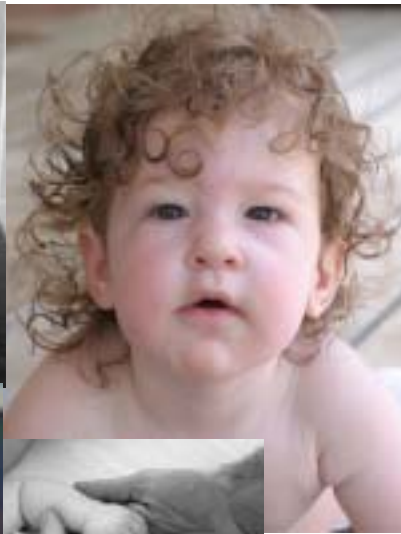
Over the years, Roy and Connie supported more than 20 groups working to protect the environment they loved. Their extraordinary generosity extended even beyond their deaths last year: OEC recently received a significant bequest from Roy, and had earlier received an equally large gift after Connie passed away.

We're deeply appreciative of the Jensen's support, and we hope OEC members and others will find their commitment to the environment as inspiring as we have.

(For a short, easy-to-read brochure on how you can remember OEC in your will, just check the box on the enclosed envelope and return it to us.)

# Keeping Children Safe from Toxins: *Special Issue*

Photo by Gail Kewney, South Africa



 Printed on 100% recycled PCF paper with soy-based inks.

Oregon Environmental Council



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520 SW 6th Avenue, Suite 940  
Portland, OR 97204-1535

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