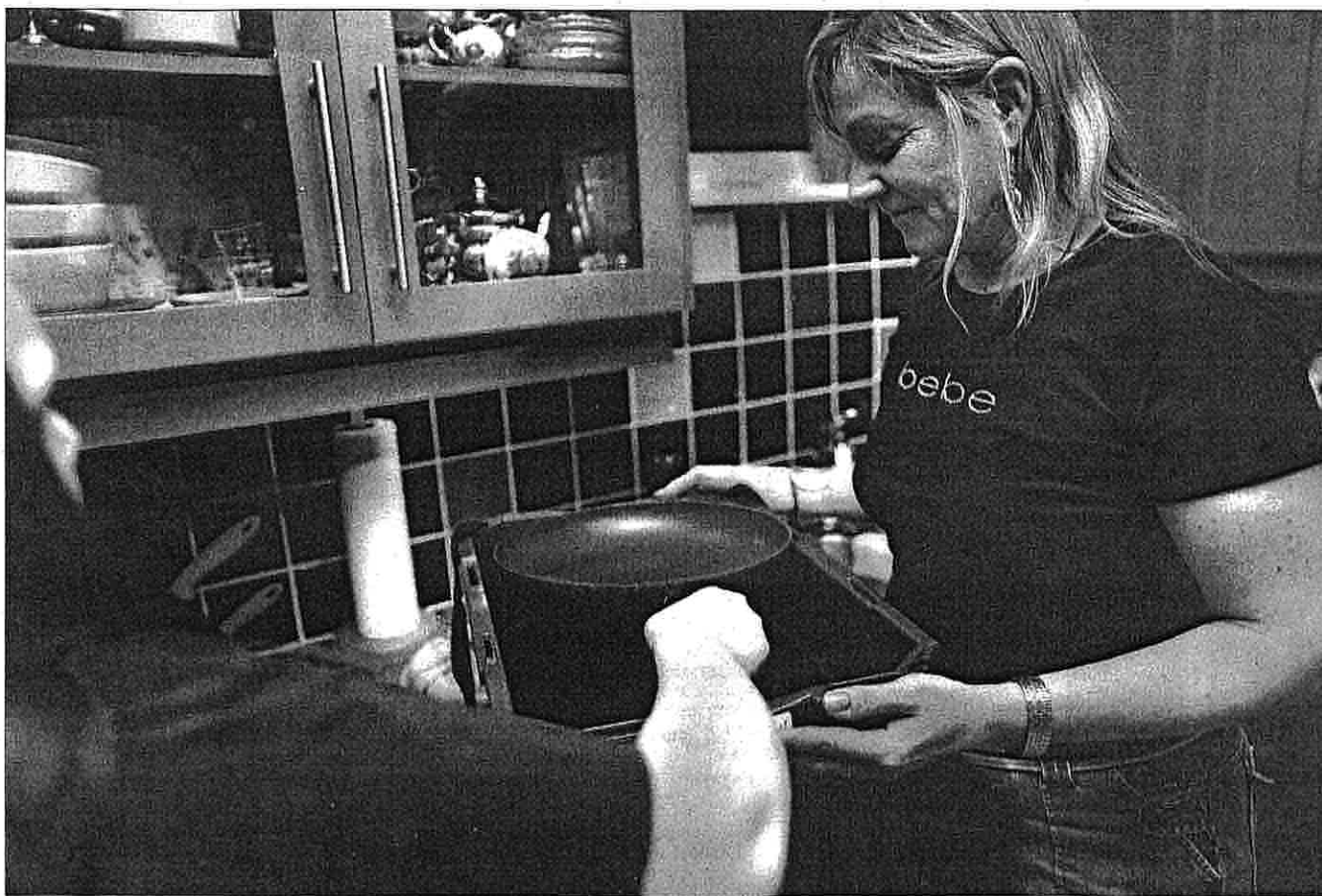




TOXIC

Tests find traces of deadly PCBs, neurotoxins, carcinogens in ordinary



CHARLA JONES/TORONTO STAR

Barri Cohen and daughter Ada Dowler-Cohen, 10, load a bin with non-stick cookware they plan to discard after taking part in a study on toxic chemicals.

'We are poisoning our children'

> Children From D1

Smith, executive director of Environmental Defence, "we are poisoning our children."

This method of sampling human tissues and fluids, known as biomonitoring, is being used increasingly by environmental groups and governments to get a sense of the chemicals our bodies are absorbing through air, water, food, soil and consumer products. Next year Health Canada will start its first large-scale biomonitoring testing on about 5,000 volunteers, some as young as 6.

Environmental Defence published its first *Toxic Nation* study last year, testing 11 adults for 88 harmful chemicals. This year's follow-up study focused on families, the youngest children age 10, and was done at expert labs in Quebec and British Columbia at a cost of \$2,000 per person.

The Canadian Chemical Producers' Association points out that not all biomonitoring studies are equal, that some are comprehensive while others are carried out primarily for advocacy purposes and may be less robust.

With relatively small numbers of volunteers, Environmental Defence studies are intended to illustrate that a serious problem exists, not offer a full diagnosis, explains Smith.

While traces of chemicals can

one knows exactly what it means to human health. People's susceptibilities differ depending on their genetic make-up. And people are exposed to thousands of various chemicals at different concentrations and at different times in their lives.

"It's so incredibly complicated, I'm not sure we'll ever get there," says Miriam Diamond, a University of Toronto professor in the geography department who specializes in environmental science. "But we shouldn't wait. We should act in a precautionary way."

Children tend to be more vulnerable to chemical exposure because they're still developing and growing, says Diamond. They also take in proportionally more pollutants than adults. Per kilogram of body weight, they eat more, drink more, breathe more.

'There are chemicals in my blood that have been banned since 1977. How fair is that?'

Ada Dowler-Cohen, 10

The good news from the study, according to Smith, is that the children had much lower levels of banned substances, such as PCBs and DDT, than their parents. "It's a clear indication that when government does act, the levels of poison do decrease over time."

up in kids at all. It points to the need for government to act quickly to ban other harmful chemicals, says Smith. "The longer we wait, the more generations of children will be affected."

The Canadian Environmental Protection Act is up for review this year. Environmental Defence wants to see it amended to make industry more accountable for the safety of its chemicals and to include an immediate ban on the most dangerous ones with timelines for the elimination of other toxic substances.

Pointing to toxin reduction laws in many American states and in Europe, Smith says Canada is falling behind. "Unless the federal government acts, Canada risks becoming the market of last resort for poisonous products that are illegal to sell in other parts of the world."

A proposal from Health Canada and Environment Canada to ban six of the seven groups of PBDEs is currently being considered by the new government in Ottawa. "We expect a decision fairly soon," says Paul Glover, director general of the safe environment program at Health Canada.

The *Toxic Nation* volunteers are left trying to figure out how to reduce exposures in their lives. Cohen, a documentary

A Toronto family's toxins

Barri Cohen and her daughter Ada Dowler-Cohen, 10, of Toronto took part in a study by an environmental watchdog group that measured toxic chemicals in their bodies. The chart shows the number of chemicals detected that have known health effects, and averages from the other volunteers.

Chemicals' effect on health	Mother	Daughter	Average in adults	Average in children
Carcinogen	25	18	26	19
Hormone disruptor	18	14	18	14
Respiratory toxin	6	5	8	6
Reproductive/development toxin	25	19	26	20
Neurotoxin	13	9	14	11
No data	1	2	1	1

SOURCE: *Polluted Children, Toxic Nation*, Environmental Defence

shocked to learn she had above-normal levels of cadmium, a carcinogen associated with cigarettes, even though she smokes rarely. She also had the greatest levels of mercury among all the study participants. She intends to cut down on her frequent consumption of fish, some species of which have high levels of the heavy metal.

Her daughter, Ada, showed an above-normal level of manganese, a suspected toxin to the respiratory, reproductive and nervous systems that's used in fuel additives. Cohen wonders if that result has something to do with the school bus that her daughter rides for about an hour every

Cohen also plans to buy more organic foods and resist the convenience of fast foods. Ada had a higher concentration than her mother of PFOA, which is often used in candy-bar and fast-food wrappers and microwave popcorn bags.

Rummaging through her cupboard, Cohen examines the individually wrapped cereal and yogurt bars and bags of pita chips that would often go in Ada's lunch and wonders about the packaging. "It's all so pervasive," she says. "I'm not sure where to even begin."

For more information, visit www.environmentaldefence.ca/