Towards Healthy Environments for Children

Frequently asked questions (FAQ) about breastfeeding in a contaminated environment

Q. Should mothers be worried about toxic chemicals in the environment?

Yes; everyone should be worried. Chemical contaminants are causing harm to our children; environmental activists, breastfeeding groups and health advocates worldwide are calling for the elimination of toxic chemicals in the environment. If we were to test infants born today, anywhere in the world, we would find in them a body burden of industrial toxins including dioxins, PCBs, mercury, phthalates, pesticides, flame retardants, bisphenol A and other dangerous substances. These chemicals pass through the placenta and into the fetus during pregnancy, and through breastmilk after birth. Babies and toddlers continue to be exposed to hazardous chemicals through contact with air, water, soil and everyday products such as carpets, clothing, furniture and household products. It is critical that chemical residues be reduced in the environment to reduce both the prenatal and postnatal health risks they pose to infants, children and the general public.

Q. How do chemical residues end up in our bodies and the bodies of our infants?

Many chemicals have the capability to travel far from their sites of origin or use, polluting the air we breathe, the water we consume, the food we eat and the everyday products (such as cosmetics and certain plastics) we tou[illegible]e. Some of these chemicals resist metabolic breakdown and excretion, or break[illegible]o harmful derivatives that accumulate mainly in our body fat, becoming part of [illegible]nical body burden. Some chemicals act as endocrine disruptors and can damage the [illegible]ctive system. No matter where we live or how we live, none of us can avoid being exposed to a wide variety of chemicals and passing on this chemical body burden to the next generation. Children are at higher risk than adults because they are undergoing rapid development and consuming more food in relation to their body weight compared to adults. The only way to reduce their body burden is to eliminate hazardous chemicals from production and use, replacing them with less hazardous chemicals and products.

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Q. When does exposure to contaminants start?

Children's exposure to toxic chemicals starts before birth and comes from everything their parents were exposed to – the air they breathed, the food they ate, the products they used and the water they drank. After birth, a child continues to be exposed to chemicals through

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contact with air, water, soil, food and household items. Even toys and pacifiers may contain harmful chemicals. The biggest impact of pollutants occurs prenatally when the fetus is passing through critical stages of development. Tiny doses of chemical residues can have a dramatic effect on the developing fetus. Levels of mercury that would have little or no impact on an adult can harm the developing fetal brain. Tiny amounts of dioxins and PCBs can damage the developing immune and nervous systems; the phthalate DEHP can disrupt the development of the male reproductive system. Pollutants and heavy metals readily cross the placenta, and some also enter breastmilk.

Q. Why are chemical residues found in breastmilk?

Chemicals accumulate in different body parts including adipose tissue, brain, bone, blood, liver, placenta and semen, and are also found in breastmilk. Chemical residues accumulate in the body fat which is used to produce breastmilk. Because breastmilk is convenient and inexpensive to test for those contaminants stored in body fat, it is often used to monitor human exposure to chemicals that should not be in our bodies. Chemical residues found in breastmilk are like the messenger, the canary in the mine, telling us about the body burdens found in everyone.

Q. Is the presence of these chemical residues in breastmilk a reason not to breastfeed?

No. Exposure before and during pregnancy is a greater risk to the fetus. The existence of chemical residues in breastmilk is not a reason for limiting breastfeeding. In fact, it is a reason to breastfeed because breastmilk contains substances that help the child develop a stronger immune system and gives protection against environmental pollutants and pathogens. Breastfeeding can help limit the damage caused by fetal exposure.

Q. Should breastfeeding mothers have their breastmilk tested?

Breastmilk testing is not necessary unless a mother has been exposed to excessive amounts of chemicals during an industrial accident, or during long periods of workplace exposure involving the mishandling of pesticides, for example. In the case of industrial accidents, public health officials would provide instructions about the best way to minimize risks. Thus, individual testing of breastmilk should never be used as a basis for making decisions about breastfeeding, except in the rare case of an emergency short term response to an industrial accident.

Some communities monitor the changing amounts of chemical residues in breastmilk as part of the process of protecting the community. Such monitoring can indicate the need for better protective regulation and indicate the efficacy of previous legislation. For example, contaminants appearing in breastmilk at high levels twenty to thirty years ago alarmed activists and politicians. The regulations and legislation that followed resulted in slowly diminishing the amount of these chemical residues in our bodies. This clearly shows the benefits and necessity for strong protective laws and regulations, and for their enforcement and monitoring. Monitoring may also reveal the presence of toxic chemicals not previously considered to be capable of lodging in human tissue. In some communities, mothers may give breastmilk as part of an effort to provide accurate information to guide environmental policy. Other communities encourage different means for testing for the presence of chemicals, such as using blood, urine, semen, hair or ear wax.

Q. Can these chemical residues harm our children?

Most health effects on the infant from chemical residues are associated with exposure before conception from damage done to fathers' semen, or when the baby is in the womb, rather than from breastmilk. Most of the damage is done by the time the infant is born. Studies have shown that breastfeeding, even in a contaminated environment, has a positive impact on the development of children as compared to children fed with commercial baby milks. Breastfeeding provides a vast array of physical and psychological benefits to mothers and babies not available to infants fed on commercial products. While there are few health risks from the average levels of chemical residues in breastmilk, lower levels of exposure to toxic chemicals would benefit everyone, especially the developing fetus and the breastfeeding infant.

Q. Are commercial baby milks a safer choice?

No. Even in areas where the contamination is highest, the risks of artificial feeding and not breastfeeding are even greater. There are different contaminants in commercial feeding products, including infant formula, the water in which it is mixed, the containers in which it is stored and often in the bottles used for feeding. Heavy metals such as lead, aluminum, cadmium and mercury, chemical residues from pesticides and fertilizers, and hormone-disrupting plasticizers have all been found in commercial infant foods. Recalls of infant formula from the market are regularly made because of industrial and bacterial contamination; they are not sterile products. Reports and advisories in recent years have warned that infant formula can be contaminated with pathogenic bacteria, after several infants died or became seriously ill from consuming infant formula contaminated by *Enterobacter sakazakii*. In addition, while some common contaminants such as nitrates in ground water may be tolerated when ingested by a breastfeeding mother, they can be fatal if the water is given directly to the baby.

The use of genetically engineered ingredients (such as soy in soy-based infant formulas) and the inclusion in infant formula of components produced by genetic modification, pose new and as yet unknown risks. Although these are not chemical contaminants, they underscore the importance of promoting breastfeeding as the healthier choice.

Q. How does the production of infant formula contribute to a polluted environment?

Compared to the natural production of breastmilk, the production of infant formula adds to environmental contamination. The consumption of materials such as fossil fuels, wood products, and other kinds of energy, as well as the clearing of forests for cattle grazing, and the ensuing production and disposal of wastes (greenhouse gasses and the use of metals, plastics, and paper for infant formula packaging) are prominent features of the manufacture, distribution, and use of commercial infant and baby foods. In contrast, the production and consumption of breastmilk is an environmentally friendly act.

Q. Whose responsibility is it to protect the health of individual families and their children?

As with other public health problems such as epidemics and infectious diseases, it is a government's responsibility to protect the health of families and their children, and not the responsibility of the individual alone. Communities can mobilize to ensure that governments regulate the industries that pollute, and do not compromise the health of their

citizens for the interests of business and industry. Successful interventions to reduce pollution occur at the community, national and global levels, when citizens concerned with women's health, children's health and environmental health and justice band together and work collaboratively to take action against the polluters. As consumers, we can change our buying habits and lifestyle choices, and choose not to use or buy products whose production or waste disposal may further pollute the environment.

Q. Who is to blame for this situation?

The blame for this chain of contamination which produces chemical body burdens in us all must be placed on the sources of contamination – the chemical industries responsible and the governments who fail to regulate them or who fail to enforce and monitor protective laws and regulations.

Q. Can media attempts to alert the public to the dangers of contamination influence breastfeeding decisions of mothers?

Media campaigns that insensitively headline stories about contaminated breastmilk in order to draw attention to pollution may discourage breastfeeding. Such campaigns are easily exploited by the commercial baby milk industry who profit at the expense of the health of mothers and children. Breastfeeding is a sensitive process and can be easily disrupted by undermining the mother's confidence in her ability to provide the best food for her infant. Breastfeeding, a human right of all women, cannot be reduced to a risk-benefit equation. Every mother is entitled to up-to-date and accurate information, on the basis of which she makes decisions about feeding her child. She must not be targeted with sensationalized messages about environmental contamination that undermine her confidence in breastfeeding. Instead she should have access to correct, objective, up-to-date information on the full range of issues surrounding infant feeding.

Q. In the context of an alarmist media, how can the practice of breastfeeding be protected?

We must act to ensure that breastfeeding is protected by speaking out about the issue of chemical contamination of all human bodies, male and female, in our communities. As breastfeeding advocates we must continue to be proactive about the superiority of breastmilk, be ready to counter sensationalist messages about "contaminated breastmilk", and reassure mothers about the quality of their breastmilk with advice when necessary about personal choices to reduce risks (advice such as avoiding smoke, not eating fish from polluted sources, etc). Educational and advocacy efforts to promote a toxic-free future for our children should recognize and encourage collective action aimed at reducing chemical contamination and developing the strongest possible pollution prevention laws. We need to work together to ensure that media and the general public understand that the presence of these residues in breastmilk means that toxic chemicals have taken up residence in our bodies and our communities.

Q. What can governments and international organizations do to reduce environmental pollution?

Governments have to be sensitized to the importance of the issue and urged to act in the best interests of children. Some countries have taken positive steps. In Europe, strong governmental programs to eliminate persistent organic pollutants like DDT, dieldrin, PCBs

and dioxin have resulted in dramatic decreases of these residues in breastmilk. As a result of controls, Sweden has seen a decline in breastmilk PBDE levels. In the United States, bans on lead in gasoline and smoking in public places have resulted in dramatic decreases in the levels of these dangerous substances or their by-products in the blood of young children. In Canada, several local governments have banned the use of pesticides for cosmetic use on lawns.

These public health achievements show that reductions in the production, use and disposal of toxic chemicals along with the destruction of toxic chemical stockpiles and reservoirs, can all decrease the body burden of noxious materials in our children and in us. Regulatory frameworks by governments and international organizations are important to minimize and eliminate exposure to harmful contaminants.

International Labour Organization (ILO) Conventions, especially Convention No. 184 on Health and Safety in Agriculture have been particularly helpful. The United Nations Stockholm Convention on Persistent Organic Pollutants (POPs) needs to be ratified by 50 countries before it enters into force. These conventions must be implemented nationally. The Stockholm Convention calls for national bans on incineration. In addition, there are local and national efforts to restrict the use of pesticides and to ban the sale of mercury-containing products. All of these efforts deserve our energetic and sustained support.

Breastmilk is the most ecologically sound and complete first food available to infants. It is the foundation of food security for all children in the first six months of life, and is one of the world's most valuable renewable natural resources. Breastfeeding is a basic human right of every mother, and is essential to fulfil every child's human right to adequate food and to the highest attainable standard of mental and physical health.

There are many women's groups, environmental groups, health activists and breastfeeding advocacy groups who are working to create healthier environments. (See the websites below for the organizations working on this issue.) You can pledge to work with them towards the day when our infants are born free of toxic contamination and our children grow and develop in the healthiest possible world.

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Websites

- Baby Milk Action <www. babymilkaction.org>
- Chemical Reaction <www.chemicalreaction.org>
- Initiativ Liewensufank <www.liewensufank.lu>
- International Baby Food Action Network <www.ibfan.org>
- International Lactation Consultant Association <www.ilca.org>
- International POPs Elimination Network <www.ipen.org>
- La Leche League International <www.lalecheleague.org>
- National Network on Environments and Women's Health <www.yorku.ca/nnewh/>
- World Alliance for Breastfeeding Action <www.waba.org.my>

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This FAQ Sheet,"Towards Healthy Environments for Children: Frequently asked questions about breastfeeding in a contaminated environment", was prepared by Penny van Esterik (York University, Toronto), author of Risks, Rights and Regulation: Communicating about Risks and Infant Feeding and member of WABA Breastfeeding and Environment Working Group with the assistance of: Baby Milk Action, UK; Commonweal/IPEN Working Group on Community Monitoring, USA; IBFAN-GIFA, Switzerland; Initiativ Liewensufank, Luxembourg; INFACT, Canada; La Leche League International, USA; National Networks on Environments and Women's Health, Canada, and WABA Secretariat, Malaysia.

This FAQ Sheet emerged out of the combined efforts of breastfeeding and environmental health and justice groups in addressing breastfeeding in a contaminated environment. These allies seek to understand the issue from both the environmental health and justice and breastfeeding perspectives, share experiences and develop communication strategies to educate the general public, health workers, policy makers and the media. It is based on the recognition that breastfeeding promotion should take place alongside efforts to eliminate toxic chemicals from the environment. The WABA Breastfeeding and Environment Working Group and the WABA Secretariat coordinated the collaborative process and preparation of the document for publication.

The World Alliance for Breastfeeding Action (WABA) is a global alliance of individuals, networks and organisations that protect, promote and support breastfeeding based on the Innocenti Declaration and the WHO/UNICEF Global Strategy on Infant and Young Child Feeding. WABA is in consultative status with UNICEF. Its core partners are International Baby Food Action Network (IBFAN), La Leche League International (LLLI), International Lactation Consultant Association (ILCA) and Wellstart International. For more information, contact: WABA, PO.Box 1200, Penang 10850, Malaysia. Fax: 604-6572 655 Email: waba@streamyx.com Website: <www.waba.org.my>.