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Newsletter

Summer / Fall 2002

Breastfeeding: a sustainable practice



Photo by Melanie Cillis

The recent Summit for Sustainable Development held in Johannesburg, South Africa, gives us opportunity for renewed focus on the importance of breastfeeding as a sustainable practice. It seems so easy to cite the environmental importance of an act as simple and as normal as breastfeeding. Common sense tells us that breastfeeding requires no external inputs, no expensive and non-renewable resources, no plastic or metal packaging, no fuel for distribution; no heating is required to destroy bacterial and viral contaminants and no plastic feeding apparatus is needed. Breastfeeding is so very friendly, yet as a natural resource breastmilk, the most ecologically sound and perfect human food, remains undervalued and its protection a focus for advocates.

As a natural resource, breastfeeding has yet to make its mark. With much of the world's attention, and deservedly so, on greenhouse gases, destruction of rain forests, pollution of waterways and the air we breathe, solutions need to include the environmental costs of not utilizing the health and immunological contributions of breastfeeding.

When we take a closer look at the ecological savings, we observe that when infants are artificially formula-fed, the tally is staggering. It is also important to note that the waste created by the artificial feeding industry (with very few exceptions) is entirely needless.

"People are rising up in arms because the rainforests are being destroyed, and valuable pharmaceuticals are being lost. But breastfeeding is very much the same. It provides so much to human health, and yet we are losing it. For the sake of profits."

—Linda Ross development educator,
OXFAM Canada

Environment

Inefficient use of land

Infant formulas are manufactured for the most part from modified cow's milk. While four hectares of land will generally support 61 people when growing soy, 24 people when growing wheat, 10 people when growing maize, it supports only two people when used for raising cattle. In India alone it would require 135 million lactating cows to replace the breastmilk required for India's babies.

"Breastfeeding is the ultimate ecological act."

—Suzanne Elston, Journalist, Environmentalist

Contributes to greenhouse gases

Cattle flatulence also contributes significantly to the buildup of greenhouse gases. The methane gas produced is considered to be the second most damaging greenhouse gas. It is estimated that the methane production from the dairy industry contributes 20% to total greenhouse gases. Clearing land for grazing is yet another link to the earth's diminishing ability to sustain climate and air quality. For Mexico, to produce one kilogram of baby milk powder, 12.5 square meters of land need to be cleared.

Contributes to waste

We calculated that more than 15 million tin cans would be discarded if 50% of Canada's infants (based on a birthrate of 400,000 per year) are bottle-fed for six months. However, as the infant formula industry is now promoting the use of its products for longer duration with follow-on milks and milks for toddlers the duration of feeding canned milks is ever-increasing.

Escalating amounts of waste are produced as the products are manufactured, packaged, transported, sold through retail outlets and purchased, then prepared, consumed and their packaging, tins and labels are discarded. None of this is needed when women breastfeed.

Economics

Notwithstanding its high economic value as a natural resource, the economic contribution of breastmilk is generally ignored. Its contribution to the Gross National Product generates no "profits" for corporations so its economic value can be dismissed. The Norwegian Nutrition Council had other ideas and calculated that during the nineties Norwegian women produced over 8.2 litres of milk annually and valued this to be worth at least \$460-million (U.S.)

When infants are not breastfed, the cost to society is overwhelming. Families need to pay for breastmilk substitutes, bottles, teats, fuel and all the paraphernalia linked to artificial feed-

Bottle-feeding requires...

*...when exclusive breastfeeding is **not** practised for the first six months of life*

1. Cows
2. Tins
3. Fuel
4. Water
5. Cleaning agents
6. Labels
7. Genetically modified ingredients
8. Bottles
9. Nipples
10. Money
11. Marketing
12. Distribution
13. Retailing
14. Formula reps
15. Health care
16. Medications – not only for the increased illnesses but also for fertility control

ing. The subsequent costs to the health care system associated with the treatment of infectious as well as chronic diseases linked to not breastfeeding can be in the billions of dollars.

Otitis media, a childhood ear infection, with an incidence of more than 50% lower in breastfed babies than for formula-fed, is estimated to cost parents in the U.S. about \$1330 per episode. This includes costs for parental time to care for a sick infant, medications and physician visits.

In Canada hospitalization rates for respiratory illness were 55 times greater for bottle-fed infants than for breastfed infants. Treatment of diabetes costs Canada's health care system approximately \$9-billion annually and the cost to families is about \$3,600 per year. In countries where there is no public health care system the cost to a family would be prohibitive.

Environmental costs are rarely calculated when tins, plastic and paper needs to be discarded nor the cost related to the environmental damage when fossil fuels are needed.

Breastfeeding requires...

...when exclusive breastfeeding is practised for the first six months of life

1. Mother and baby pair
2. An extra sandwich daily
3. Knowledge
4. Support

Breastfeeding is a renewable resource; it does not consume non-renewable resources.

Emergency

Think of trying to bottle feed an infant in places of the globe where populations are under attack, or where there are large populations of refugees. Breastfeeding can save an infant's life in emergencies when the requirements for artificial feeding are inaccessible or where conditions make their use highly unsafe.

Child spacing

The world's most efficient, cheapest and safest method of birth spacing is breastfeeding. When practised according to the Lactational Amenorrhoea Method (LAM) it is as effective as hormonal interventions. The latter is expensive, not available to the majority of women, and is a medical intervention with documented side effects linked to increased risk of cardiac illness and breast cancer.

On average breastfeeding in developing countries prevents four births per woman. In Chile, mothers breastfeeding exclusively for six months reported no pregnancies, while of those bottle-feeding, 72% became pregnant.

Clearly breastfeeding women are doing their part. We are all the better for it. ❖

Waba forum gathers breastfeeding experts from around the world



From September 24 to 28 the World Alliance for Breastfeeding Action brought together breastfeeding researchers, activists and clinicians from all over the world. Over 300 delegates from close to 70 countries reaffirmed their commitment to work towards a breastfeeding culture, remove obstacles for mothers, and monitor and work for the implementation of mechanisms that protect and enhance breastfeeding.

The global breastfeeding community met in Arusha, Tanzania, Africa, to discuss and enhance knowledge and draw up action plans around a number of critical and vital concerns affecting infant and young child health.

Workshops and plenary sessions afforded stimulating sessions led by some of the world's top experts in infant and young child feeding.

Topics included:

- > mother-to-mother support
- > the status of women and breastfeeding
- > the impact of globalization
- > the capacity to implement supportive breastfeeding structures
- > the impact of HIV on a mother's decision to breastfeed
- > the encouraging research of exclusive breastfeeding on the reduction of HIV transmission
- > the need for continued efforts to develop ways to eliminate the need for formula in the Neonatal Intensive Care Unit setting
- > the critical continuing challenge for the implementation of the International Code and all relevant resolutions of the World Health Assembly
- > the important task of ensuring that the instruments of the World Trade Organization, such as the Codex Alimentarius standard-setting process for infant foods, are in conformity with the International Code and Resolutions.

New research from the Swedish Karolinska Institute on the amazing hormonal responses of mother and infant contact was presented, as well as the impact of birthing practices on breastfeeding. ❖



World Breastfeeding Week 2002

Healthy Mothers Healthy Babies

The Breastfeeding Challenge

Your reports ♥ photographs ♥ events ♥ evaluations are needed for the **WBW 2002 wrap up edition** of the INFAC Canada Newsletter. Reports and photos can be e-mailed to Elisabeth Sterken at esterken@infactcanada.ca or mailed to 6 Trinity Square, Toronto, ON M5G 1B1

Optimal duration of exclusive breastfeeding

Exclusive breastfeeding is known to confer optimal health benefits to infants and young children, and may have life long beneficial effects. It is however the duration of exclusive breastfeeding that has been the subject of debate for a number of years.

The long-standing debate of whether the duration should be four to six months or six months was finally settled with the release of the "Cochrane" review headed by Michael Kramer of Mc Gill University. Using wide-ranging literature searches that produced 2,668 relevant studies and additional unpublished data from experts in the field, approximately 3,000 studies were reviewed. After applying rigorous selection criteria of consistency and methodology, the data was narrowed to about 20 studies.

The review determined that:

- > breastmilk supply is sufficient for six months
- > the infant's need does not outgrow the supply
- > infants experience less morbidity related to gastrointestinal infections
- > no deficits in growth are observed in either the developing or the developed world
- > mothers have longer lactational amenorrhea.

"Although infants should still be managed individually so that insufficient growth or other adverse outcomes are not ignored and appropriate interventions are provided, the available evidence demonstrates no apparent risks in recommending as a general policy, exclusive breastfeeding for the first six months of life." ❖

—Kramer MS, Kakuma R. *Cochrane Database Syst Rev* CD003517, 2002

Allergies, asthma and money

Who makes money when children are sick, when children have chronic disease such as asthma or allergies? The pharmaceutical industry of course.

When research appeared in newspapers across the world that breastfeeding contributed to the risk of allergy and asthma in children, those working in infant and young child health were astounded. The McMaster based research was so out of line with what other centres had reported, that the first response by those who questioned the doubtful results, was “who funded this research?” as well as questions of “conflict of interest” and how this negative information gets published in newspapers around the world, including Africa, where artificial feeding can be deadly, so readily?

Well, after numerous telephone calls, e-mails and some net searches, certain information has emerged. It appears that the pharmaceutical giant **GlaxoSmithKline** has an interest in allergies and asthma. It recently announced a \$1-million investment to establish a McMaster University Research Chair in pediatric asthma at the *Firestone Institute for Respiratory Health*, St. Joseph Healthcare Hamilton. The department is positively swimming in corporate sponsorships!

And that’s not the only asthma connection for the seemingly generous **GlaxoSmithKline**. There’s the Asthma Society of Canada, the Lung Association and check out the Asthma Landmark Survey™ all “linked” to the maker of various inhalators, dilators, sprays etc. to

treat asthmas and allergies with not a word about prevention.

“The creation of this Chair is part of the **GlaxoSmithKline Pathfinders Fund for Leaders in Canadian Health Science Research**, a \$10 million initiative to help fight the brain drain in Canada by providing opportunities for leading medical researchers and potentially lead to pioneering new **treatments** (our emphasis) for Canadian children with asthma.”

**INFACT Canada,
together with our
IBFAN partners,
advocates independent
research in infant
and young child
nutrition.**

This is certainly one brain drain the mothers of Canada would welcome. Anyone who receives corporate funds to tell us that our milk is inadequate, so that the pharm corp can use our babes for their research trials to find profitable “treatments,” is welcome to take a hike.

Also of importance are the questions raised regarding the ease of publication of research with apparent methodological flaws and outcomes

that bear no resemblance to previously published research on asthma and infant feeding.

First, the breastfeeding cohort was not exclusively breastfed. Recalls and third party documentation of infant feeding practices can hardly be deemed a reliable means to verify exclusivity of breastfeeding. Additionally infants received cow’s milk formulas for the postnatal hospital duration and mixed feeding was the usual practice at the time the data was collected (1972 to 1973). Exclusive breastfeeding was not really defined let alone promoted until 1988. The possibility exists that another conclusion can be made noting the long-term danger of supplements given during the neonatal period.

Secondly, why the rush to publish, when the results are so out of line with what others have reported? Surely a concerned scientist would discuss with the wider research community these “unanticipated” results. Dialogue with others in the field, a thorough peer review of methods used, the need for accurate infant feeding definitions and an independent review of the raw data would be the ethical and scientifically honest means to follow. The worldwide sensational dissemination of these results can only be regarded with suspicion.

Thirdly, it seems that each year here in Canada where World Breastfeeding Week is celebrated from October 1 to 7 there are media reports attempting to sabotage the efforts by many health care workers, public health facilities and mothers’ groups to highlight the importance of breastfeeding for mothers and children. We log this as another attempt. ❖

“...a baby nursing at a mother’s breast...is an undeniable affirmation of our rootedness in nature.”

—David Suzuki in *The Toronto Star*, April 18, 1992

Want to announce your breastfeeding events?

Check out the **BULLETIN BOARD** on the **INFACT Canada** web site: www.infactcanada.ca

Research confirming the risk of atopic eczema and asthma when infants are not breastfed (a partial list):

Infant feeding, wheezing, and allergy: a prospective study.

Burr, M. L. ARCH Dis in Childhood 68:724-728, 1993

To study the determinants of wheezing and allergy, 453 British children were followed up to the age of 7 years. Children who had ever been breastfed had a lower incidence of wheeze (59%) than those who had not (74%). This effect persisted until the age of 7 years in the non-atopic children. The risk of wheeze was reduced by 50% in breastfed children after eliminating confounding factors. The researchers concluded that breastfeeding may confer long term protection against respiratory infection

Breastfeeding and Asthma in Young Children. Dell S, To T.

ArchPediatr Adolesc Med 155: 1261-1265, 2001

This Canadian population-based study with a sample size of 2,184 children, between 12 to 24 months found that the longer the duration of breastfeeding the greater the protection against the development of asthma and wheeze in young children.

[Prevention of asthma in childhood] Dtsch Med

Wochenschr Kabesch, M. Von Mutius, E. 127: 1506-1508, 2002

Approximately 10% of children in Germany suffer from the onset of asthma. Primary prevention strategies to reduce the incidence are breastfeeding and the reduction of environmental tobacco smoke.

A Randomized trial in the Republic of Belarus Promotion of Breastfeeding Intervention Trial Kramer MS et al. (PROBIT).

JAMA 285: 413-20, 2001

Over 17,000 Belarus mother and baby pairs were followed for one year to determine the impact of duration and exclusivity of breastfeeding on gastrointestinal disease, respiratory infections and atopic eczema. No significant reduction in respiratory disease was noted. A striking impact was found in the reduction of gastrointestinal disease (40% lower risk) and in atopic eczema (47% lower risk).

Optimal duration of exclusive breastfeeding. Kramer MS,

Kakuma R. Cochrane Database Syst Rev. CD003517, 2002

The researchers concluded that there is no apparent risks in recommending, as a general policy, exclusive breastfeeding for the first six months of life in both developing and developed countries.

Occurrence of acute diarrhea in atopic and non-atopic Infants: the role of prolonged breastfeeding. Ruuska, T. J.

Pediatr Gastroenterol Nutr 14: 27-33,1992

A cohort of 336 was followed from birth for two years to study the development of atopy and the occurrence of acute diarrhea. Breastfeeding reduced the number of episodes and severity of diarrhea for infants with atopic disease.

Breastfeeding as prophylaxis against atopic disease: prospective follow-up study until 17 years old. Saarinen UM,

Kajosaari M. Lancet 346:1065-1069, 1995

One hundred and fifty healthy infants were followed during their first year and then at ages 1, 3, 5, 10, and 17 years to determine the effect on atopic disease of breastfeeding. The researchers concluded that breastfeeding is prophylactic against atopic disease – Including atopic eczema, food allergies and respiratory allergy – throughout childhood and adolescence.

Association between breast feeding and asthma in 6 year old children: findings of a prospective cohort study. Oddy,

W.H. et al. BMJ 319: 815-818, 1999

A cohort of 2,602 Australian children were enrolled prior to birth and followed prospectively, for respiratory illness and method of feeding in the first year of life. The researchers concluded that exclusive breastfeeding for four months protects against asthma and reduces the risk by 40%.

Maternal asthma, infant feeding, and the risk of asthma in childhood. Oddy, W. H., Peat, J. K., de Klerk, N.H. J Asthma Clin

Immunol 110: 65-67, 2002

To settle the controversy regarding breastfeeding and asthma, this study looked at a cohort of 2,602 Australian children prospectively. They found that the risk of asthma increased if exclusive breastfeeding was stopped before 4 months. They recommend that infants with or without a maternal history of asthma be exclusively breastfed for 4 months and beyond

The effects of respiratory infections, atopy, and breastfeeding on childhood asthma. Oddy, W. H. et al. Eur

Respir J 19: 899-905, 2002

The Australian cohort of 2,602 children followed prospectively, were studied to quantify the association between atopy, respiratory infections and asthma, and exclusive breastfeeding. Multiple episodes of wheezing (lower respiratory) increased the risk for developing of asthma for both non-atopic and atopic children. Having three or less upper respiratory infections had a negative association, while four or more episodes showed a positive risk for asthma. Both wheezing and atopy were independently associated with increased risk for asthma, suggesting their effects are via different pathways. Exclusive breastfeeding protected against asthma via effects on both pathways as well as through as yet undefined mechanisms.

Breastfeeding and asthma among Brazilian children.

Romieu, I. Et al. J Asthma 37: 575-583, 2000

This Pan American Health Organization study examined 5,182 Brazilian school children as part of the International Study on Asthma and Allergies in Childhood. Over 90% of the children had been breastfed. The authors attribute the low prevalence of asthma and wheeze in this population to be related to the high incidence of breastfeeding. Children who had not been breastfed were more likely to have a medical diagnosis of asthma, experience wheezing, than children who had been breastfed for 6 months or longer.

[Risk factors associated with bronchiolitis in children under 2 years of age]. Ruiz-Charles, M.G. et al. Rev Invest Clin 54:125-

132, 2002

To determine the risk factors for bronchiolitis in children less than 2 years, this case controlled study examined the children attending a pediatric emergency ward in Mexico. Risk factors included prematurity and a family history of bronchial asthma. Present-day breastfeeding was found to have a protective effect.

Is prevention of childhood asthma possible? Allergens, infection and animals. Tang, M. L. Med J Aust 177:575-77, 2002

This review article notes that the current recommendations for the primary prevention of asthma include exclusive breastfeeding for the first six months of life, avoidance of maternal smoking during pregnancy and infancy and reducing the levels of house mites in some environments. ❖

Wal-Mart sabotaging breastfeeding



Wal-Mart brand infant formula display

Shopping cart advertisement for Wal-Mart brand infant formula



INFAC member, Kimberly Hancock B.A., M.L.S. Co-Chair of the Breastfeeding Action Group – Western Region, Western Health Care Corporation, Cornerbrook Newfoundland, is proud that their efforts to increase breastfeeding rates in the western region of Newfoundland has increased rates from 39 % initiation to over 60%. She is outraged at how formula promotions attempt to sabotage these efforts to improve infant and young child health.

“When shopping at Wal-Mart on October 1, 2002, the first day of World Breastfeeding Week, what did I hear but an overhead public announcement advertisement for the Wal-Mart brand ‘Parent’s Choice Infant Formula’ touting the product as ‘a nutritionally complete high quality, trusted alternative approved by Health Canada.’ I made my way over to the infant section of the department store and found a full display in the aisle. The cans have a cartoon bunny with blocks and a rubber duck, and the displays have pictures of healthy looking babies.

“I decided that I had to go back with my camera. I went on the afternoon of October 2 and let the Wal-Mart greeter know that I had a camera in my bag and that I was going to take a picture of something in the infant section. While

there, the overhead advertisement was playing yet again. Also, the cart I used had an advertisement for the formula as well. Pamphlets were available on the display for parents to take talking about the formula and bottle feeding in general.” ❖

Warning: filling out coupons may hook you into the artificial promotion machine

It never fails to amaze us at what lengths the infant formula industry will go to get its products into the mouths of babes. Filling out coupons can hook you into Nestlé’s database for the promotion of its artificial feeding products.

Maternity stores have for some time now, had a marketing relationship with MeadJohnson. Filling out coupons at the Thyme maternity wear stores have expectant mothers receiving MeadJohnson’s free sample and glossy mailings. Nestlé too, we learned, has its tentacles out to get hold of expectant and new mothers. Parents who fill in coupons promoting the Heritage Scholarship Trust Fund Plan are finding themselves in the tentacles of Nestlé’s formula promotions. Free samples are offered and free magazines sent via the mail, promoting the virtues of artificially feeding their babies. ❖

“...the idea of bottle feeding just to “involve the father” is one more instance of preserving the status quo at a price to the baby.”

—Marni Jackson in *The Mother Zone*

Available from the Breastfeeding Committee for Canada

The Breastfeeding Committee of Canada has recently completed its manual entitled, ***The Baby-Friendly Initiative in Community Health Services: A Canadian Implementation Guide***. The manual is designed to give community-based health services guidelines on strengthening and supporting breastfeeding policies and practices. The guidelines are available for \$15 plus 15% postage and handling from the BCC, P.O. Box 65114 Toronto, ON M4K 3Z2 ❖

Breastfeeding photo contest for Saskatchewan and Manitoba mothers

A Breastfeeding Photo Contest has been launched for Saskatchewan and Manitoba residents. Moms For Milk Breastfeeding Network was received a grant to launch this contest. Its purpose is to support families to breastfeed beyond infancy.

Most women (90% in some areas) in Saskatchewan initiate breastfeeding, however, the rate quickly drops to less than 50% by six months.

With this contest we hope to...

...make breastfeeding in public acceptable and visible

...demonstrate how women can incorporate breastfeeding into their normal daily lives

...show that breastfeeding is important in North America, not just in "poor countries"

...honour and celebrate women who breastfeed

...share women's breastfeeding experiences

...provide a supply and variety of images for promotional and educational publications

...raise the profile of the sponsoring groups

...promote public discussion

For further information, contact Janice Reynolds and Linda Romphf of the Moms For Milk Breastfeeding Network at momsformilk@hotmail.com ❖

Postpartum Maternal Oxytocin Release by Newborn: Effects of Infant Hand Massage and Suckling

Matthiesen, A. F. Ransjo-Arvidson, A. B., Nissen, E., Unvas-Moberg K. Birth 29: 13-19, 2001

Mother and infant interaction immediately after birth never fails to create a sense of awe and wonder about the marvels of breastfeeding. And our admiration goes out to this Swedish team for capturing and describing these emotion-filled moments.

Ten mothers and babies, vaginally birthed and not exposed to maternal analgesics were video recorded from birth until the first breastfeed. Each of the infant's positions, hand, finger and tongue movements were assessed every 30 seconds. Blood samples were taken from the mother every 15 minutes to determine oxytocin levels.

The researchers noted that the newborn used her hand to explore and stimulate her mother's breasts in preparation for the first breastfeed. They identified a coordinated pattern of infant hand and suckling movements. When the infant suckled, the hand motions ceased and started up again during a suckling pause. The infant's massage-like hand movements were followed by an increase in the mother's oxytocin levels.

In conclusion, the Swedish findings show that newborns use their hands as well as their mouths to stimulate maternal oxytocin release and this may have significance for uterine contractions, milk production and mother-infant interaction. ❖



"Maternity" Pablo Picasso 1905



ur members write...

Letter to INFAC about Zellers and infant formula marketing.

Zellers advertised formula in a flyer a few weeks ago. I along with a number of others contacted them to let them know this was in violation of the WHO code. The response I received back was that they were willing to change the wording on the flyer but the marketing department was unwilling to discontinue marketing formula as "there is a market for it." This offends me greatly as I am an advocate for breastfeeding and will not support any company who markets breastfeeding substitutes to make a buck. I have let them know that I will no longer shop there and will spread the word. I am copying the message I received. As a point of interest, a number of other complainants also received the EXACT same response as I did which led us to believe they were not taking us seriously or had a robot answering! Anyway this is the information.

Mary Siever

Zellers' response about their violation of the WHO Code.

Dear Ms. Siever,

I apologize for the delay in responding to your concerns about our advertising of infant's formula and feeding products. We appreciate the time you have taken to advise us of your comments and concerns. It is not Zellers' intention to mislead our customers in any way that this is what's best for baby. Unfortunately, we cannot cease advertising or carrying this merchandise as there is a large market for it; however due to the time you have taken to contact us, we will be making changes to the wording in the near future. I have discussed your concerns with our Marketing Department and they are in the process of making changes to future advertisements and going forward we will change the wording so that it will not give our customers the impression that it is "best" for baby. Once again, thank you for advising us of this.

Regards,
Diana
Zellers Customer Service

Jack Newman's letter to the *Medical Post*, responding to their article about West Nile virus.

To the editor,

Your quick look at breaking news entitled "Breastfeeding and West Nile Virus" (*Medical Post* October 15, 2002), was a little too quick. While it is true that if the virus was passed in the milk, this is not an indication that breastfeeding is unsafe. For a mother who is infected with this virus (unless she is not breastfeeding, which is continued nursing impossible). Unfortunately, that the conclusion that breastfeeding is the conclusion that too many physicians

In the first place, the viremia almost certainly occurs before the mother is aware that she is sick, and only when there is viremia does the virus get into the milk. Thus the baby would have been "infected" before the mother (incorrect) to stop breastfeeding. Secondly, the issue is not whether breastfeeding is about, at least some of what it is about. Thirdly, if an infection, it helps prevent the illness which may occur. So, if we want what we want, isn't it? This is why we promote immunization.

The *Medical Post* article, coming hard on the heels of the recent CNN and New York Times coverage should have made it clear that many mothers being told to stop breastfeeding, unnecessary maternal medication use, and infant illness.

Jack Newman, MD, FRCPC

Letter to Loblaws critiquing their promotional booklet, *Baby Matters*.

Dear Customer Service,

I picked up your magazine, *Baby Matters*, read it and was disappointed in some consumer feedback.

Your information appears to be neutral but in many ways it undermines the value of breastfeeding. For example, the introduction states "resistance to some diseases." When, in fact, it fights against them very serious and life-threatening.

I found it misleading that you use the word "convenient" when talking about protection from diarrhea. Proper sterilization of formula does not necessarily protect the formula-fed baby from diarrhea. In fact, the mother's breastmilk actually fight off any bacteria that might be in the formula.

You mention the mother is a portable food source and that you sell formula in bottles, ignoring that breastfeeding is much more than just a food source. There is a tactile, comforting connection that is missing from a bottle. The hormones released in the mother calm the baby.

As I look through your booklet I see many advertisements for formula, Enfalac, Nestlé, Heinz, and Gerber. Their intent is to increase sales, not in the promotion of breastfeeding and optimal infant health.

Perhaps you are unaware that The World Health Organization has a code of ethics of this code by publishing these ads and coupons in *Baby Matters*. It should remove this publication from your stores.

Sincerely,
Megan Gill Vander Wielen

Letter (translated from French) to a pharmacist whose store added a Nestlé Good Start display.

Mr. Edouard Malak
2595, rue Salaberry
Cartierville
H3M 1L1

I like to shop at your pharmacy. Your store is clean and employees are very courteous. However I was very disappointed on July 25th when I saw a Nestlé display in the baby products section. This video and coupons for the Good Start programme promote infant formulas.

I am sure you are unaware that this practice is in direct violation of the International Code of Marketing of Breastmilk Substitutes and relevant World Health Assembly Resolutions to which Canada is a signatory. The International Code states that there should be no point-of-sale advertising, giving of samples, or any other promotion device to induce sales directly to the consumer at the retail level, such as special displays, discount coupons, premiums, special sales, loss leaders and tie-in sales, for products within the scope of this Code (Art 5.3).

I am confident you will take action to rectify this situation and look forward to hearing from you soon.

Sincerely,
Annie Desrochers

"And today, the owner called me! He said he really didn't know that this was illegal. He said that the material wasn't his but Nestlé's. The company came to them with the idea and all the stuff (VCR, coupons, display). He also mentioned that the store's policy wasn't to promote artificial milk ("powder milk" were his actual words). He was very polite and apologized but didn't mention once if they would do it again. I went to this pharmacy today and the display wasn't there... Coincidence?"

Letter to INFAC about Wal-Mart's "washroom lunchette."

Friday, September 13, 2002, I asked a Wal-Mart employee (Lethbridge, Alberta, store) to open a dressing room for me so that I could nurse my baby. She responded, apologetically, that she was not allowed to provide access to a fitting room for a woman to breastfeed. I politely inquired whether there was a designated room for nursing mothers. She did not believe so. I immediately requested access to try on clothes. She was firm in her refusal. I went straight to Customer Service to speak with a store manager. I was incredulous to say the least. It had never occurred to me that any store would have a specific policy against nursing in a dressing room. The store manager calmly assured me that the dressing room attendant had responded in accordance with store policy. Then, calmly informed me, "We prefer you do it in the washroom." I asked if it would be acceptable to feed my baby from a bottle in a location other than the washroom. My disbelief must have been conveyed via the look on my face, for he quickly added, "You are welcome to use a dressing room if you want." I thanked him and asked that he call over to the attendant to let her know. I then returned to the dressing room and nursed my daughter. I am still trying to reach Wal-Mart Canada to inquire as to their policy on breastfeeding.

Thank you for the work you do to promote breastfeeding.
Gay

Abstracts

Collaborative Group on Hormonal Factors in Breast Cancer, The Lancet 360:187-195, 2002

This important independent review article concluded that “**The longer women breastfeed, the more they are protected against breast cancer. The lack of or short lifetime duration of breastfeeding typical of women in developed countries makes a major contribution to the high incidence of breast cancer in these countries.**”

Additionally the study concluded that “**the incidence of breast cancer in developed countries could be reduced by more than 50% (from 6.3 to 2.7 per 100 women) if women had the average number of births and lifetime duration of breastfeeding that had been prevalent in developing countries until recently. Breastfeeding could account for more than two thirds of this estimated reduction in breast cancer incidence.**”

The collaborative group, consisting of researchers from a number of countries, collected the worldwide data from epidemiological studies of women with breast cancer to determine the relationship between breast cancer and a number of hormonal, reproductive and other factors. The study included 47 studies from 30 countries. This included more than 80% of the global epidemiological data on breast cancer and breastfeeding. All the data were analysed centrally to get consistent scrutiny. ❖

The phytoestrogen genistein induces thymic and immune changes: A human health concern?

Yellayi, S. et al. Proc Natl Acad Sci 99:7616-21, 2002

Yet another study adds to the continued concerns about the use of soy as a basis for infant formulas. This time the study warns that infant may be at risk for lowered immune capacity. In the U.S. soy formulas account for about 25% of all formula uses. The use is particularly high in the African-American population. (Editor’s note: in Canada approximately 6% of those formula feeding their infants use soy-based formulas. Also in Canada, infant formula companies distribute free samples of soy-based formulas to pregnant women and new mothers, with messages that these products are as good as breastmilk.)

The research looked at the hormone-like component – genistein – found naturally in soy. When genistein was fed to mice in levels similar to levels consumed by infants fed soy-based infant formula, the mice showed a **substantial decrease in the number of immune cells and changes in the thymus, where immune cells mature.**

MeadJohnson, a manufacturer of soy formulas, has stated that, “the safety of soy is well documented. Food and regulatory agencies ...have approved the use of soy protein in infant formulas based on decades of clinical studies.” ❖

Nutritional effect of including egg yolk in the weaning diet of breast-fed and formula-fed infants: a randomized controlled trial

Makrides, M. et al. Am J Clin Nutr 75: 1084-92, 2002

Egg yolks are significant nutritional sources of long-chain essential fatty acids, such as DHA, as well as important sources of iron for the infants’ complementary food diet. This Australian study looked at the outcomes of consuming four egg yolks per week in both breastfed (82 infants) and formula-fed (79) infants from six to 12 months of age.

The researchers investigated the effect of egg yolk consumption on the following: DHA status, haemoglobin, ferritin and plasma cholesterol levels as well as plasma iron, transferrin and transferrin saturation.

The results suggest that egg yolk can be a beneficial addition to the complementary diet of infants during the second half of the first year. The outcome indicated that: cholesterol levels did not increase; none of the infants had overt signs of allergy or intolerance to egg yolk; and there was a positive effect on transferrin saturation and plasma iron.

Generally complementary food diets are low in long-chain essential fatty acids. For breastfed infants, this is not a problem as breastfed infants receive an abundant supply. The addition of egg yolks to the diet of formula-fed infants did offset some of this deficit. ❖

INFACT and Greenpeace demand Loblaws remove infant foods with GE ingredients

LOBLAWS, Canada's largest grocer, manufactures and sells genetically engineered (GE) baby food, but refuses to have the GE ingredients removed or labelled. Nestlé, Mead-Johnson and Ross Laboratories products were named in a survey as either confirming that their products were made with GE ingredients, refusing to make a commitment to remove them, or simply not knowing if they're selling infant formulas with GE ingredients.

In statements read to the press at the October 29 action against GE food at the Harbourfront Loblaws store in Toronto, INFACT and Greenpeace noted that various authorities have raised concerns about the safety of feeding infants with foods containing GE ingredients.

"Bottle fed infants for the first six months rely exclusively on infant formula as their sole source of food during a critical growth and development stage," noted Elisabeth Sterken, director of INFACT Canada.

"Parents expect Loblaws to be selling baby food that is safe," said Holly Penfound, GE campaign coordinator for Greenpeace. "There should be a zero tolerance of GE in baby foods. Loblaws must remove GE ingredients from their baby food and stop selling GE contaminated food from other companies."

What health risks are infants exposed to?

The process of genetic engineering is imprecise and random. Inserted genes can disrupt a plant's natural growth and development; be unstable in their new environment; or function differently than expected. As a result, genetically engineered foods can have unintended effects, with potentially harmful consequences for human health.

These unintended effects can cause increased allergenicity when foreign proteins are transferred from



Photo by Calzavara, courtesy Greenpeace

Dolls with funnels reading 'Don't Feed Me GE Food' in their mouths at a Toronto Loblaws.

one species to another.

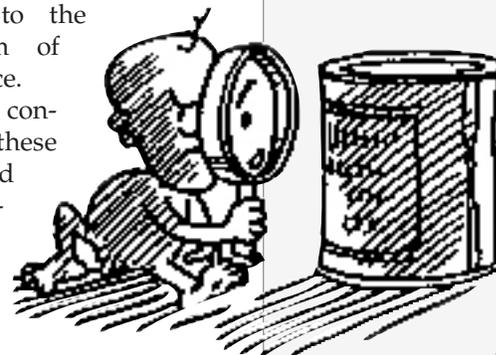
Genetic engineering can increase and/or introduce new food toxins.

Genetic engineering can decrease a food's nutritional value.

Genetic engineering may also contribute to the growing problem of antibiotic resistance.

The potential consequences of all these perturbations could be the biosynthesis of molecules that are toxic, allergenic, or carcinogenic.

Since children are the most likely to be adversely effected by toxins and other dietary problems, if the GM food is given to them without proper testing, they will be the experimental animals." ❖



Comments from health authorities

Howard, Vyvyan,
toxicological pathologist,
Liverpool University
Hospital, UK

"Swapping genes between organisms can produce unknown toxic effects and allergies that are most likely to effect children."

The Royal Society (UK)
Working Group on
Genetically Modified Food

"Bottle fed babies could be undernourished if given genetically modified infant formula milk because of inadequate regulations and testing regimes for GE foods."

Schubert, David professor
at the Salk Institute, USA

"...I believe that insufficient attention has been paid to three important issues: first, introduction of the same gene into two different types of cells can produce two very distinct protein molecules; second, the introduction of any gene, whether from a different or the same species, usually

significantly changes overall gene expression and therefore the phenotype of the recipient cell; and third, enzymatic pathways introduced to synthesize small molecules, such as vitamins, could interact with endogenous pathways to produce novel molecule ❖

Marketing fats to fatten profits

MeadJohnson, a U.S.-based infant formula maker, is claiming that the addition of a lipid blend to their formulas marketed in the U.S. improves the levels of essential fatty acids DHA (docosahexaenoic acid) and ARA (arachidonic acid) in their formulas. It claims that the fatty-acids-enhanced infant formulas improve the development of babies' eyes and brains. There is no doubt about the critical functions of these essential fatty acids in infant and young child nutrition, but thus far research results remain non-conclusive about their efficacy when added to infant formulas. Moreover, questions of safety of adding fats derived from microalgal and soil fungi remain.

Yet the promotions state, "mothers can feel confident that no formula is closer to breastmilk." In its deliberations to address the addition of lipid blends to infant formulas, the U.S. Food and Drug Administration raised a number of concerns casting doubt not only on the adequacy of information to determine safety and efficacy of the additions but also regarding adequacy of the clinical trials required for premarket approval.

Despite these concerns, the FDA "allowed" Martek Biosciences (producer of the DHA and ARA lipids) to market the oils for inclusion in infant formulas, but did not grant

"approval." FDA considered the clinical trials to be insufficient and is expecting the infant formula manufacturers to report adverse affects as part of a "post-market surveillance" monitoring.

The FDA informed Martek that, "whether a food ingredient is safe is a time-dependent judgement that is based on general scientific knowledge as well as specific data and information ...for these reasons, the FDA would expect any infant formula manufacturer to monitor, through scientific studies and rigorous post-market surveillance, infants who consume such a formula."

It seems that all babies born in the U.S. consuming the new formula will now be part of an ongoing experiment to assess its efficacy and safety.

FDA Food Safety and Applied Nutrition comments:

- Martek assumes that because ARA and DHA are present in human milk that the digestion and absorption of DHA and ARA from their lipids will be the same as that from human milk.
- Even though Martek acknowledges some adverse effects in the highest doses tested in rats, such as significant liver enlargement, and spleen enlargement, possible effects on the kidney and a change in blood chemistries, Martek concludes that these are not adverse toxicological findings related to its fatty acids.
- Martek notes that 14 published clinical trials involving 1,500 term and preterm infants, with about 700 consuming the Martek enhanced formulas demonstrate

Double-Blind, Randomized Trial of Long-Chain Polyunsaturated Fatty Acid Supplementation in Formula Fed to Preterm Infants

Fewtrell, M.S. et al. *Pediatrics* 110:73-82, 2002

Breastmilk is known to contain high levels of long-chain polyunsaturated acids (DHA and ARA). Importantly, these essential fatty acids contribute to brain, neurological and retinal development. These essential fatty acids are not present in infant formulas sold in North America and may account for the differences in IQ and learning capacities between formula-fed and breastfed infants. Thus much research is going into trials of various formats of long-chain fatty acids to determine if this will improve neurological outcomes for formula-fed infants. To date the outcomes have been inconclusive.

This current study, based in the UK, tested the hypothesis that the addition of long-chain fatty acids to preterm infant formulas during the first weeks of life, would give long-term neurological developmental advantages in a double-blind, randomized controlled trial of preterm infant formula with or without long-chain fatty acids DHA and ARA.

The study tested neurological and developmental outcomes of 195 formula-fed preterm infants and 88 breast-milk fed infants.

Results found no significant differences in the developmental scores of the randomized formula-fed groups. They did find infants in the fatty acid supplemented group to be shorter than the control group. Breastfed infants were found to have significantly higher developmental scores at nine and 18 months of age, than both of the formula-fed groups. Breastfed infants were also significantly longer and heavier than the supplemented group, but not the unsupplemented formula group.

In conclusion, the researchers determined that the addition of long-chain fatty acids did not confer neurological benefits up to the age of 18 months, and raised concerns about growth implications for infants given these formulas. ❖

no adverse effect on growth and notes that internationally there are no reports of adverse effects. Although there have been reports of increased SIDS in those who consumed formula supplemented with fish oils, Martek claims that none of the SIDS deaths were related to dietary treatment.



- FDA noted that studies have reported unexpected deaths among infants consuming these supplemented formulas. The deaths were attributed to SIDS, sepsis and necrotizing enterocolitis. Other studies have reported adverse effects such as diarrhea, flatulence, jaundice and apnea
- Also the FDA noted that Marek had not taken into account that the bioactive DHA and ARA in human milk are part of a complex matrix, including various forms of fatty acids and that the physiological relationships are not accounted for by the simple addition of the Martek lipid mixture to infant formula.

FDA Food Advisory Committee on Infant Formula

This committee raised questions concerning the appropriateness and completeness of clinical trails for infant formulas and recommends considerable overhaul of definitions and study design.

They questioned the inappropriateness of generalizing the results from one population to another population, for example studies done with preterm infants, and applying the results to term infants or studies done with healthy term infants, or transferring results from one product to another. Should studies be interpreted in comparison to healthy infants exclusively breastfed and not just on whether the composition is similar to human milk?

How does a study conclude that a product supports normal physical

growth? Are they compared to other formula-fed infants or are they compared to exclusively breastfed infants?

Additionally these studies only follow growth for the first 12 months. Long-term results must be included to take into account for example increased obesity at a later age for formula-fed infants.

Also incremental growth standards are needed to adequately assess if a product supports normal growth.

The current regulations address safety and nutrition similarity but not efficacy. Efficacy should take into account all health criteria and not just the safety of an ingredient.

The Advisory committee also noted that independent analysis is needed to study the very high attrition rates – an attrition rate of 25% was common – in these trials. When is a study rendered invalid related to rates of attrition? What are the reasons for attrition – formula intolerance, adverse effects?

The U.S.-based National Alliance for Breastfeeding Advocacy (NABA)

Our sister organization, NABA, reports that mothers should be informed that this formula is under surveillance by the Institute of Medicine, and NABA concludes that U.S. infants are unwitting participants in an uncontrolled experiment of the safety and side effects of its use. NABA continues to receive reports of the fortified formula as causing watery stools, explosive diarrhoea and vomiting in babies.

The Labelling Committee of the Codex Alimentarius

It has recommended a prohibition on health and nutrition claims for foods for infants and young children (See INFACCT Canada Newsletter Spring 2002). It is vital that this prohibition be enforced so that the formula makers cannot mislead parents. It is also vital that we protect this clause

by giving it as much publicity as possible and to lobby our governments to support its enforcement.

Is Canada the next target?

As we go to print we have received information that Canada has given the nod to MeadJohnson's re-engineered formulas. ACTION: Please write Health Minister Anne McLellan to let her know that we do not want Canadian infants engaged in a post-market surveillance feeding trial! Moreover, urge the minister to enforce Canada's Food and Drug regulations prohibiting health and nutrition claims for these products. ❖

Who pays? Who profits?

The Martek company has claimed that its product had great marketing potential.

A few years ago Martek Biosciences was recommended as a strong stock market buy. Their lead product was touted as Formulaid – a unique blend of fatty acids, DHA and ARA. The promos read:

"Infant formula is currently a commodity market, with all products being almost identical and marketers competing intensely to differentiate their product. Even if Formulaid has no benefit (our emphasis), we think it would be widely incorporate into formulas, as a marketing tool and to allow companies to promote their formula as "closest to human milk."

Martek's aggressive marketing paid off. Martek sales of nutritional products increased 183% over the first nine months of 2002 as compared to the same period for 2001 with 80% of its revenues generated from sales of its oils to infant formula companies.

As well MeadJohnson's second quarter profits increased 18% over the same period last year, attributed to their introduction of the *Lipil* product. ❖

Update on *Enterobacter sakazakii* contamination of powdered infant formulas

In response to the urgent situation of contamination of powdered infant formulas by the highly virulent *Enterobacter sakazakii* (see INFACT Canada Newsletter Spring 2002, How safe are infant formulas?), Health Canada has issued a Health Professional Advisory.

Notable in the recommendations there was no mention of breastfeeding or the provision of banked human milk as the safest means to feed infants who have special needs or who may be immunocompromised.

Highlights from the advisory

***Enterobacter sakazakii* infection and powdered infant formula – background**

On April 9, 2002, the United States Food and Drug Administration (USFDA) issued an alert to U.S. Health Care Professionals regarding the risk associated with *Enterobacter sakazakii* infections among neonates fed milk-based, powdered infant formulas. Historically, there have been several small *E. sakazakii* outbreaks reported among infants fed milk-based, powdered formula products from various manufacturers. In addition to powdered milk-based formulas, powdered human milk fortifiers may also pose a hazard.

E. sakazakii is a rare, but life-threatening cause of neonatal meningitis, sepsis, and necrotizing enterocolitis. In general, the reported case-fatality rate varies from 40-80% among newborns diagnosed with this type of severe infection. The type of meningitis caused by *E. sakazakii* may lead to cerebral abscess or infarction with cyst formation and severe neurologic impairment.

Reports have also suggested a correlation between *E. sakazakii* infection and powdered infant formulas. Similarly, it has been reported that premature infants and those with underlying medical conditions may be at highest risk for developing an *E. sakazakii* infection.

Several outbreaks of *E. sakazakii*, in Neonatal Intensive Care Units (NICUs), have been reported worldwide including countries such as England, the Netherlands, Greece, U.S. and Canada. In Canada, two incidents of neonatal meningitis caused by *E. sakazakii* were reported in two Canadian hospitals (1990,

Health Canada is drawing attention to the fact that powdered infant formulas are not commercially sterile products.

1991). It should be noted that healthy infants may not always be immune to *E. sakazakii* infections.

Health Canada is drawing attention to the fact that powdered infant formulas are not commercially sterile products. Unlike liquid formulas, which are subjected to sufficient heat to render them commercially sterile, powdered infant formulas are not processed at high enough temperatures for sufficient time to achieve commercial sterility. Human milk fortifiers which

are added to preterm breast milk are also available in powdered or liquid forms. A number of formulas, including formulas for infants with metabolic conditions, are available only in powdered form. Powdered soy-based infant formulas may also become contaminated with *E. sakazakii* through improper cleaning of production lines and may, therefore, pose a safety hazard.

Recommendations

Based on the above, Health Canada recommends that formula products be selected based on nutritional and medical needs. Whenever possible, an alternative to powdered formulas, such as ready-to-feed and concentrated liquid formulas, should be chosen in the NICU setting and for immunocompromised infants. If there is no alternative, the following steps will help control or minimize the risk:

Preparation of powdered infant formulas in a laminar flow hood by trained personnel and using sterilized water, which should minimize contamination from the environment. Refer to the following document for detailed procedures. Preparation of Formula for Infants: Guidelines for Health-Care Facilities, American Dietetic Association (updated April, 2002). Website: www.eatright.org/formulaguide.html (official document in English; a French translation is available on Health Canada's Website.)

Health Canada urges Health Care professionals to promptly report adverse symptoms associated with the consumption of infant formulas to the nearest Canadian Food Inspection Agency (CFIA).

At present, Health Canada is determining whether additional precautionary steps are required to ensure the safe manufacturing and handling of infant formulas. ❖

Health Minister McLellan supports 54th WHA Resolution on exclusive breastfeeding

INFACT Canada has finally received a response from Health Minister Anne McLellan to our request that the policy statement *Nutrition for Healthy Term Infants* be revised. In November 2001 we wrote the then Minister Allan Rock requesting that the document be updated to be consistent with the 54th World Health Assembly Resolution supporting exclusive breastfeeding for the first six months of life.

After seven months, we were pleased to receive news that Canada supports the Resolution for the recommended age of exclusive breastfeeding.

The Minister responded as follows:

As you are aware, the Government of Canada supports the 54th World Health Assembly Resolution that calls for a global standard for infants to be exclusively breastfed for the first six months of life. Health Canada recognizes that a review of its policies related to breastfeeding in Canada, as set out in the joint statement, Nutrition for Healthy Term Infants (1998), is required in light of the Resolution. The Department has therefore initiated discussions on the review process with its partners, the Canadian Pediatric Society, and the Dietitians of Canada, in the development of this joint statement.

Additionally we called for the elimination of those with conflicts of interest from setting Canada's policies on infant and young child nutrition. The current *Nutrition for Healthy Term Infants* (1998) was authored by two infant nutrition "specialists" linked to the infant foods industries. The Minister did not address the conflict of interest issues in her letter.

We responded by noting the encouraging content of her letter, but disappointed that her letter failed to:

...address the fundamental concern of conflict of interest among those parties who are directly involved in developing public policy on the issues of infant feeding...

More to follow... ❖

Aussie mums burn bras to push for maternity leave

Sydney: A crowd of angry Australian mothers burnt their maternity bras yesterday on the steps of the state parliament in Melbourne as part of a push for paid maternity leave. Australia and the U.S. are the only two wealthy countries that don't have government-funded maternity schemes. Calling themselves the Mothers of Intervention, they are calling on women across the country to go on a 'fertility strike' until paid maternity leave is a reality. ❖

—*The Sun*, Monday, 23 September, 2002

"A woman's life isn't worth a plateful of cabbage if she hasn't felt life stir under her heart. Taking a little one to nurse, watching him grow to manhood, that's what love is."

—Carol Shields in
The Stone Diaries

Infant Feeding and Blood Cholesterol: A Study in Adolescents and a Systematic Review

Owen, C.G. et al. American Academy of Pediatrics

More and more research is indicating that breastfeeding may have long-term benefits for cardiovascular health. This UK-based study examined the impact of infant feeding on serum, total and low-density lipoprotein (LDL) cholesterol.

Researchers studied more than 1,500 adolescents in 10 British towns, and reviewed studies of cholesterol levels in infants, children, adolescents and adults, comparing those who were breastfed to those formula-fed. Their findings suggest that having been breastfed is linked with different effects on cholesterol at different stages of life as compared to having been formula-fed. Those breastfed had higher levels of cholesterol during infancy, but no relationship was found between infant feeding pattern and cholesterol in later childhood and adolescence. However, cholesterol levels were found to be lower in adults who had been breastfed.

The research suggests that early exposure to breast milk may program fat metabolism in later life, resulting in lower blood cholesterol levels and thus a lower risk of cardiovascular disease.

Infant formulas contain no cholesterol and may thus limit the infant's ability to handle cholesterol in later life. ❖