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Newsletter
Spring 2002

How safe are infant formulas?

The death of a week-old baby in Belgium



Photo by Melanie Gillis

Breastfeeding saves lives

The death of a one-week formula fed infant, Natan, born March 11, in Belgium raises important questions about the safety

of breastmilk substitutes. Natan's untimely death has again focused on the health risks of formula feeding. Born healthy with an excellent

AGPAR score, Natan had been fed Nestlé Beba 1 powdered infant formula during his hospital stay in Aalst. Soon after hospital discharge, his fifth day (this is the normal hospital stay in Belgium), he became ill and his parents admitted him during the night to the University Hospital in Ghent. Soon after on March 16 he died of meningitis.

The family contacted the Belgian IBFAN group when they became aware that pathogenic bacteria, *Enterobacter sakazakii*, caused the death of their baby. This highly virulent bacterium can survive the usual heat treatments in the production of powdered infant formulas.

Shortly after, on April 12, the U.S. Food and Drug Administration (FDA) issued a communiqué warning that *E. sakazakii* linked to the use of powdered formula can be the cause of invasive infections with a high mortality outcome in neonates.

The FDA warning was prompted by the death a year earlier of an infant who had been hospitalized and fed commercial powdered infant formula that was found to be infected with *E. sakazakii*.

A subsequent investigation to determine the extent of infection with *E. sakazakii* triggered the FDA warning. The surveillance study found that of 49 cases studied, 10

were identified with positive *E. sakazakii* cultures. A cohort study was performed to determine the possible risk factors for the infection. Medical records were reviewed to assess risk factors such as gestational age, birth weight, medications, type and mode of feeding. Results of the risk analysis determined that only the use of Portagen Mead Johnson powdered formula was associated with the *E. sakazakii* infections. All case patients had received the contaminated powdered formula.

Stating that, "Clinicians should be aware that powdered formulas are not sterile products and might contain opportunistic bacterial pathogens such as those in the family *Enterobacteriaceae*, including *E. sakazakii*," the FDA warning notes, "These products are commonly used at many hospitals. A recent survey indicated that of 16 responding facilities, nine used powdered formulas."

In a letter on its website, the FDA reports that it found 14 per cent of tins of powdered formula tested to be contaminated with the *E. sakazakii*. The letter also mentioned a "Belgian case" dating back to 1998 when two infants died and a number of infants became ill.

It took nearly seven weeks for the Belgian Federal Agency for Food Safety to ask Nestlé to recall its Beba 1 product – as a "precautionary measure." The surrounding publicity revealed that the parents of the previous two deaths in 1998 had never been informed of the cause of death.

The contaminated batch of Nestlé Beba 1 was manufactured by Nestlé Germany Kapeln. Nestlé claims the product was only distributed to Belgium and Switzerland, but is also being recalled from Luxembourg (although no information has been provided to consumers there).

We wonder how many of these

cases go undetected and how many are not traced back to contaminated formula. What happens in countries where rigorous microbial testing and diagnosis is unaffordable. How many infants have died of contaminated formula products. As one



Powdered infant formulas are not sterile products. They can come contaminated with heat resistant, pathogenic bacteria.

E. sakazakii, found in Nestlé Beba 1, is a particularly virulent bacterium linked with a high mortality rate (40-80 per cent for neonatal meningitis).

European lactation consultant noted, "the formula comes already with the contaminating bacteria."

The contamination risks demonstrated by the presence of *E. sakazakii* in powdered infant formulas highlight the critical need for adequate product labeling, and strict enforcement of product regulations. Precau-

tionary principles, adequate surveillance and monitoring systems with immediate, publicly announced, mandatory recalls are essential for health protection. Importantly, the seriousness of *E. sakazakii* contamination demonstrates the consequences of no code compliance. In Canada, Nestlé mails its unsolicited powdered formulas accompanied by misleading health claims to pregnant women and new mothers. This practice of promotion and idealization of infant formula products must stop. Instead truthful and independent information about infant feeding is needed so parents and their newborns can avoid the tragedy of *E. sakazakii* babies.

In Canada

Although there have been no recalls for infant formulas contaminated with *E. sakazakii* in Canada, Health Canada will be issuing a Health Provisional Advisory Letter intended for neonatal units, hospitals and health care workers, to warn that formulas are not sterile products and that prescribed procedures must be strictly followed. ❖

Some recent infant formula recalls

- In August 2001, the UK baby milk manufacturer, Wyeth, recalls its SMA following a suspected link to infant botulism.

A six month old girl first contracted symptoms of infant botulism in June. A suspected link to the infant formula led the authorities and the company to test samples of the batch consumed by the infant. The batches were close to their expiry dates. One in five of the batches tested was positive for the strain that made the girl ill. The recall was taken as a precautionary measure as the results were considered not enough "proof" that the formula was the cause.

- In March of 2000, Nestlé Canada recalled its Good Start liquid concentrate and its follow-up liquid concentrate when temperature fluctuations in its manufacturing process could not guarantee the sterility of these products. Consumers need to demand why these products were released onto the Canadian market to begin with when clearly problems were already noted at the manufacturing stage. ❖

Case reports of *E. sakazakii* infections and powdered infant formulas

E*nterobacter sakazakii*, a gram-negative rod shaped bacterium, is implicated as the infective organism in a rare but often fatal (mortality rate of 40 to 80 per cent) form of neonatal meningitis. Infection with the highly virulent organisms has been associated with the use of powdered infant formulas contaminated with the *E. sakazakii*. A number of cases of neonatal deaths related to the infective organism have been reported in the literature. Significantly, this organism is highly resistant to heat treatment and is able to survive high temperatures during the processing of dried powdered infant formulas

U.S.

In April 2001, a male infant, delivered prematurely (weight 1.270 kg and 33.5 weeks gestation) by Cesarean section was admitted to the NICU because of respiratory distress. By day 11 the infant had fever, tachycardia, decreased vascular perfusion and neurologic abnormalities. Cultures of the spinal fluid grew *E. sakazakii*. Treatment with intravenous antimicrobials did not halt the progressive neurological damage and the infant died nine days later, diagnosed with meningitis.

To determine the magnitude and the source of the infection, stool and urine samples of 49 infants were examined – ten were identified as *E. sakazakii* positive. Further analysis determined the only risk factor was the use of the powdered infant formula Portagen – a specialty formula recommended for infants with malabsorption problems – produced by Mead Johnson.

Samples of the Portagen opened cans used in the NICU and product controls of unopened cans with similar batch numbers were cultured. Both the opened and unopened cans produced positive growth of *E. sakazakii*, whereas the

water and culture were negative.

Additionally, product preparation procedures were according to NICU policies and manufacturers instructions

The batch of Portagen implicated was recalled voluntarily by Mead Johnson on March 29, 2002.

In conclusion, the investigators cautioned health providers as follows: “Clinicians should be aware that powdered infant formulas are not sterile products and might contain opportunistic bacterial pathogens such as those in the *Enterobacteriaceae* family, including *E. sakazakii*.”

Himelright J, et al. *Enterobacter sakazakii* Infections Associated with the Use of Powdered Infant Formula --- Tennessee 2001, MMWR 51: 298-300, 2002

In 1988 a similar outbreak of *E. sakazakii* infection was reported in a Memphis, Tennessee, 20-bed NICU. This time the outbreak involved four infants. Three suffered from bloody diarrhea and three had sepsis. Fortunately all four responded to intravenous antibiotics and survived. The outbreak was traced to contaminated powdered infant formula.

Simmons, BP. Et al. *Enterobacter sakazakii* infections in neonates associated with intrinsic contamination of a powdered infant formula. *Infect Control Hosp Epidemiol* 10: 398-401, 1989

Belgium

In 1998, an outbreak of necrotizing enterocolitis involved 12 neonates in Belgium. *E. sakazakii* was isolated from six of the 12 cases. Ten of the 12 cases had been fed the same brand of powdered infant formula. *E. sakazakii* was isolated from the formula fed to the infants as well as in unopened tins of the formula. No further cases developed when the use of the contaminated formula stopped. Two of the infants who fell sick – twin boys – died as a result of the infection.

van Acker J, et al. Outbreak of necrotizing enterocolitis associated *Enterobacter sakazakii* in powdered milk formula. *J. Clin Microbiol* 39: 293-97, 2001

Iceland

The national University Hospital of Reykjavik, Iceland has reported three cases of neonatal infections caused by *E. sakazakii*. Two of the infants, born normal and full term survived and are brain damaged, the third infant, born with Down's Syndrome and severe cardiac malformations, died. The *Enterobacter* organisms were cultured and grown from several lots of powdered infant formula used in the hospital.

Biering G. et al. Three cases of neonatal meningitis caused by *Enterobacter sakazakii* in powdered milk. *J. Clin Microbiol* 27: 2054-56, 1989

Netherlands

Eight cases of neonatal meningitis caused by *E. sakazakii* over a period of six years were reported in the Netherlands between 1977 and 1983. Two of the cases had both necrotizing enterocolitis and meningitis. Despite antibiotic treatment, the fatality rate was 75 per cent.

A quality check by the same key researcher, examined 141 powdered infant formula samples collected from 35 countries. The species most frequently isolated were: *Enterobacter agglomerans*, *cloacae*, *E. sakazakii* and *Klebsiella pneumoniae*. They note that if any infections with these causative bacteria occur, it is important to check the procedures for preparation and storage of infant formulas. ♦

Muytens H.L. et al. Analysis of eight cases of neonatal meningitis and sepsis due to *Enterobacter sakazakii*. *J. Clin Microbiol* 18: 115-20, 1983

Muytens HL et al. Quality of powdered substitutes for breast milk with regard to members of the family *Enterobacter*. *J. Clin Microbiol* 26: 743-46, 1988

Codex Labeling Committee prohibits health claims for infant foods

“Easier to digest,” “improved cognitive ability,” “more like breastmilk than ever before,” will no longer be permitted, the Codex Alimentarius Committee on Food Labeling has determined. Although the committee’s deliberations are not yet at the final stages of approval, the provision (*[Nutrition and] health claims are not permitted for foods for infants and young children unless specifically provided for in relevant Code standards.*) will restrict the ability of the baby foods industries to create a sense of equivalency between breastmilk and infant formulas and to glamourize their products in order to compete with breastfeeding.

This critical provision was again supported by the global community at the Codex Alimentarius Committee, a joint UN body under the auspices of the Food and Agricultural Organization and the World Health Organization, which sets labeling and quality standards for food commodities and products, including infant formulas and complementary foods.

Even though the implementation of this prohibition on health claims would need recognition by individual countries, the baby food

industry must comply with Code Alimentarius rules when individual countries have set rules for labeling provisions that follow the guidelines set by the Codex Committee for Food Labeling.

The same Codex labeling committee also attempted to address the labeling needs for food and food ingredients produced through genetic modification. Government representatives of the U.S., Argentina, Brazil, Mexico and Canada attempted to soften the language of genetic engineering to “foods produced through the use of modern biotechnology.” They also attempted to maintain their positions on “voluntary labeling.” Canada is promoting the labeling of genetically modified food and food ingredients only if there are differences between the GMO products, such as nutritional and or other compositional changes. In these cases it is the nutritional difference or the increased allergenicity that will be labelled and not the fact that the product’s method of production is by genetic alteration. According to the delegation from the U.S., to label according to whether or not a product or ingredient is genetically modified is “misleading.” ❖

Microsoft goes Micronutrient

Bill Gates has turned his gaze to solving malnutrition. An international consortium known as GAIN (Global Alliance for Improved Nutrition) places the ubiquitous Mr. Gates in partnership with companies such as Kraft Foods, a wholly owned subsidiary of tobacco giant Philip Morris and a pusher of many unhealthy foods, Heinz, a company well known for violating the International Code, notorious polluter Procter & Gamble, and vitamin manufacturers Roche and BASF Corp. (It should be noted that GAIN is not coincidentally also the name of an infant formula).

The GAIN program, which is funded with \$50 million US from the Bill and Melinda Gates Foundation, would have participating companies adding nutrients such as iron, folic acid and Vitamin A to foods destined for sale in developing countries. GAIN will also provide technical assistance to local governments on how to fortify food staples. In return, the companies get GAIN’s support in lobbying for more favourable taxes and tariffs and a speedier review of new food products. Needless to say, GAIN has received considerable criticisms. Flogging macaroni and cheese with added nutrients to the world’s poor may add to corporate health and wealth, but will not solve the problems of food security and poverty.

The direct involvement of both UNICEF and WHO in these controversial arrangements, violate their own conflict of interest guidelines. These guidelines exclude involvement with tobacco companies and companies that violate the International Code. Several countries expressed grave concerns about these new-partnered initiatives, including IBFAN in its address to the Assembly. ❖

Brazil strengthens its Code!



Brazil, already a global leader in the support of breastfeeding, has added another notch to its list of progressive policies.

The Brazilian government heard the messages from its breastfeeding support groups – letters were sent during two critical department meetings one on the International Code relating to infant foods and the second on bottles, teats and pacifiers. Issues discussed included labeling. In response to the upcoming regulatory changes, some industries have already changed their labels. Labels for Isomil and Similac will not have the bear, and new labels for Enfalac will not display the Peter Rabbit family – after all Peter wasn’t bottle fed. ❖

World Health Assembly 2002 rejects commercial influence in infant feeding programmes

"Recognizing that infant and young child mortality can be reduced by exclusive breastfeeding for the first six months of life, and continued breastfeeding with appropriate complementary feeding with safe and adequate amounts of local foods, up to the age of two years and beyond."

Protecting breastfeeding from commercial influences was a critical quest at this year's World Health Assembly (WHA) meeting in Geneva. After a lengthy debate, WHA Resolution 55.25 emerged without the controversial commercial participation by the baby food industry that was proposed in the original draft. The final resolution had much more positive language to support the importance of exclusive breastfeeding for the first six months.

A number of items relating to infant and young child nutrition came before the assembly this year – the Global Strategy for Infant and Young Child Feeding; WHA Resolution 55.25; and Progress on the Implementation of the International Code of Marketing of Breast-milk Substitutes. IBFAN representatives, including Elisabeth Sterken from INFAC Canada, had a number of concerns related to the documents before the Assembly. Both the Global Strategy and the proposed Resolution 55.25 included elements that would sanction industry participation in the implementation of infant nutrition programming. IBFAN's position has always been that the commercial interests of the baby foods industries should not play a role in infant nutrition programming.

IBFAN was also critical of the vague and undefined wording throughout the texts, which used, "optimal nutrition practices", rather than the specific language of "exclusive breastfeeding for six months."

There was much support, particularly from developing countries, for the critical language of exclusive breastfeeding for six months and the removal of the infant foods industries from involvement in infant nutrition program implementation. The end result was a newer and stronger resolution.

The delegate from India called for the removal of commercial influences and noted that,

"Commercial enterprises by definition are profit driven entities. It is neither appropriate nor realistic for the WHO to expect that commercial groups will work along with governments and other groups to protect, support and promote breastfeeding."

He also drew attention to the 1996 WHA Resolution 49.15, which urges Member States to ensure that financial support for professionals working in infant and young child health does not create conflict of interest. Many of these concerns were reiterated by a number of other countries.

Two other critical concerns arose from the infant feeding proposals before the Assembly: the accessibility of safe local complementary foods and apprehension about the increased use of micronutrient interventions at the expense of programmes to support exclusive breastfeeding. (See side bar: Micro-soft goes Micronutrient).

In the end, to minimize the potential negative impact of reliance on micronutrients as well as the

effects of their marketing, an operative clause was inserted into the Resolution (WHA 55.25 – 2. (4)):

"To ensure that the introduction of micronutrient interventions and the marketing of nutritional supplements do not replace, or undermine support for the sustainable practice of, exclusive breastfeeding and optimal complementary feeding." ❖

How the WHA works

Since the passage of the International Code of Marketing of Breast-milk Substitutes in 1981, the WHA Member States meet every two years to report progress on the implementation of the International Code and to review and update recommendations on infant and young child nutrition. Eliminating ambiguity and closing loopholes of marketing practices that are detrimental to infant health are also considered. Ministers of Health and their senior departmental staff are usually represented at WHA meetings. (For example, this year Canada's Health Minister Anne McLellan, and several provincial staff, were present at a number of the Assembly's meetings.) These representatives then discuss and make decisions on the various agenda items in the form of Resolutions before the Assembly. Resolutions on infant and young child nutrition that are agreed upon then become additions to the International Code and carry similar weight and importance as the original 1981 document. ❖

Nestlé claims responsible use of GMOs in food products

Nestlé strongly reaffirms its view that genetically modified organisms (GMOs) or ingredients derived from them do not constitute a health risk, provided they have passed strict scientific evaluation, and are therefore found to be as safe as their traditional counterparts.

The company said this following recently published Greenpeace statements charging Nestlé with supporting the use of GMOs in food production. Greenpeace's charges came after its representatives from Thailand, Philippines, Argentina and Switzerland met with Nestlé at its headquarters in Switzerland.

At the meeting, Nestlé confirmed its global position that there are no food safety or quality considerations that would justify a worldwide corporate decision to avoid using GM crops in food production. Nestlé said the safety of its products and the integrity of the ingredients from which they are manufactured is

paramount. "Genetically modified crops, as all raw materials used by Nestlé, comply with strict regulatory and safety evaluations." As a responsible corporate citizen, Nestlé said, it complies with Government rules and regulations on the use of gene technology, wherever it operates.

—*BusinessWorld (Philippines)*

INFACT Canada has learned from representatives at the Canadian Food Inspection Agency that when there is no substantive difference between a conventional food and a genetically modified food, safety tests are not required. In the case of soy based infant formulas, safety tests are not mandatory as these are "assumed" to be safe based on the subjective and yet to be defined criteria of "substantial equivalence." Testing GMO infant formulas on human infants would be perceived to be unethical, yet a mass uncontrolled trial with promotion and free samples is apparently not. ❖

South Africa is banking it!

South Africa's KwaZulu-Natal Province has achieved a world "first" with the opening of a "community-based breast milk bank." The milk bank is designated for AIDS orphans or for babies whose HIV-infected mothers have left them and is the creation of Professor Anna Coutsooudis, researcher and specialist in the area of infant feeding, breastfeeding and HIV.

Her awareness of the need for this service developed from her work with AIDS orphans and abandoned babies in children's homes and in hospitals. And at the same time, many women approached her, wanting to do something practical to offset the

HIV/AIDS epidemic. She noted that "The mothers have to be free of any infectious diseases or drugs, and all the milk is pasteurized. "The milk has to be kept in sterile plastic bags in a freezer and it is stored in a central depot."

She said that where possible a mother nursing a baby of a certain age, was "twinned" with an AIDS orphan or needy baby of the same age. Eventually, she hopes that the community-based concept could be extended to other areas of South Africa. At present the project is a voluntary service, funded by UNICEF. ❖

—*The Independent (South Africa)*
October 22, 2001

Easier? Nestlé label violates Canada's Food and Drugs Regulation

Despite Nestlé's claims that it abides by the laws and regulations wherever it operates, INFACT Canada has launched a complaint against Nestlé with the Canadian Food Inspection Agency, which administers the labeling provisions of Canada's food laws.

Labels of Nestlé's Good Start infant formulas violate the regulations on two counts:



1. The claim "easier to digest" placed on the front of its Good Start product is not only false and misleading, but such health claims are also prohibited.
2. Ingredient listing for products is required to be on the outside of the label and be readily visible to the purchaser. Nestlé's infant formula tins display the ingredient list on the inside of the label. Parents must purchase the tin and then peel off the label to determine the product ingredients. ❖

Breastmilk contamination is NOT the problem!

There are over 80,000 industrial, human-made, synthetic chemicals now present in the environment, including 3,000 high-volume substances (PCBs, cosmetics, pesticides, cleaning compounds, medications, dioxins and furans).

Our bodies contain most of these substances. For example, just about everyone in North America carries multiple pesticide residues. Almost none of these compounds has been tested for their effects on human health, and none of them has been tested in combination.

Breastmilk, not surprisingly, also contains many of these substances as contaminants. Recently popular and scientific attention has been focussed on this fact, because breastmilk is easy to sample, and because the breastfeeding dyad is a potent symbol of human sensitivity. Environmental groups have often used breastmilk contaminants to highlight their general message about ecological degradation.

Unfortunately, this tactic has led to the perception that the effect of breastmilk contamination on the developing infant is the problem; other sources of exposure have receded into obscurity. Unscrupulous formula manufacturers, eager for any bad news about breastfeeding, have headlined this perspective.

However, the best research shows that prenatal exposure is, on average, ten times worse than breastmilk exposure.

The work of Dr. Eric Dewailly in Canada and of Dr. Joseph Jacobson in the U.S. confirm this basic truth. Both researchers laboriously distinguished between the effects of pre-natal and post-natal exposure. Both showed that contaminant exposure in maternal blood caused the same or far greater damage to the fetus than 10 fold higher exposure in breastmilk. This damage, measured as impaired neurodevelopmental function, was present for years after (and possibly for life).

So when mothers ask about the role of breastmilk contaminants in human health, tell them: "the only way to avoid damage from contaminants present in breastmilk is to not get pregnant. That's because contaminants showing up in breastmilk in significant levels have already done far worse damage to your baby in your womb."

The real message of breastmilk contamination is: STOP THE RECKLESS DEGRADATION OF OUR PLANET WITH UNTESTED CHEMICALS AND DON'T STOP BREASTFEEDING!! ❖

—Warren Bell, Physician, President CAPE
www.cape.org

In order to preserve and protect the environment for breastfeeding mothers and their children, this newsletter is printed on chlorine-free/acid-free paper, containing 30% post-consumer recycled stock.

You be the judge...

Found in infant formula but not in breastmilk

Bacterial Contaminant	Number of Outbreaks
<i>Enterobacter sakazakii</i>	SEVERAL in a number of countries
<i>Salmonella bredbeney</i>	2 each in Australia and France
<i>Salmonella ealing</i>	1 in UK
<i>Salmonella Tennessee</i>	1 each in USA and Canada
<i>Salmonella virchow</i>	1 in Spain
<i>Salmonella anatum</i>	1 each in UK and Europe

Found in breastmilk but not in infant formula

Antibacterial factors active against a large range of pathogenic bacteria, including *E. coli*, *B. pertusis*, *Salmonella* species, *Staphylococcus* species and *H. influenzae*.

Secretory IgA, IgG, IgM, IgD, Free secretory component, Growth factors, Factor finding proteins, Complement C1-C9, Lactoferrin, Lactoperoxidases, Lysozyme, Uni-

dentified factors, Nonimmunoglobulin, β -defensin-1, Ganglioside GM1, Ganglioside GM3, Phosphatidylethanolamine, Sialyllactose, Mucin, Sialyloligosaccharides, Glycoproteins + oligosaccharides, Glycoproteins, Kappa-casein, Phosphorylated beta-casein, Xanthine oxidase, Alpha-Lactalbumin, Glycolipid, Gb3, Sulphatide, Fucosylated oligosaccharides, Analogues of epithelial cells, Lewis antigens, Soluble bacterial pattern recognition receptor CD14, Milk cells – macrophages, neutrophils and lymphocytes, Secretory leukocyte protease inhibitor, Heparin

Antiviral agents active against a large range of viruses, including HIV, hepatitis, rotavirus and Rubella.

Secretory IgA, IgG, IgM

Antiparasite factors active against such organisms as *Giardia lamblia*, *Entamoeba histolytica*, *Schistosoma mansoni* and *Plasmodium falciparum*.

Secretory IgA, IgG, Lipids, Lactoferrin, Unidentified compound, Macrophages. ❖

Information derived from the Science, Technology & Engineering website and from the Proceedings of Breastmilk and Special Care Nurseries: Problems and Opportunities Conference. 1995, Melbourne, Australia

Canada's Prenatal Nutrition Program boosts breastfeeding rates

INFACT Canada's Board Member, Janet Murphy Goodridge and representative of Canada's Prenatal Nutrition Program (CPNP) to the Breastfeeding Committee for Canada, has worked hard over the past few years to get a program in place with some dramatic results.

The Canada Prenatal Nutrition Program (CPNP) is a comprehensive nutrition program that applies a population health approach to improve pregnancy outcomes for vulnerable women and their babies, promote breastfeeding and increase access to health services. The Government of Canada provides long term funding through a joint management agreement with provincial and territorial governments to community groups. More than 95 per cent of projects target pregnant women who are teens; women who are Aboriginal or recent immigrants; women who live in poverty or in geographic isolation; women who use tobacco, alcohol, or other substances; and women who have poor access to services. Program delivery models vary across the country and from community to community as each project responds to what works well in the local community. Participant involvement in all aspects of program planning and delivery is expected. The recommended program elements

include: food supplementation; nutrition assessment and counselling; support, education and counselling on lifestyle issues; breastfeeding promotion and support; peer support models, drop-ins, collective kitchens and gardens; and a registered dietitian in planning and support to project staff and participants.

What impact has CPNP had on breastfeeding rates?

The breastfeeding initiation rate across the 350 CPNP projects is 78 per cent, close to the national average of 79 per cent, and although surveys are not directly comparable, initiation appears to be higher than for similar at-risk groups in the general population. CPNP uses a continuum of strategies to nurture successful breastfeeding, including peer and professional support models and collaborative partnerships with local community breastfeeding initiatives. Throughout Canada, CPNP projects are taking the lead in creating more supportive environments for breastfeeding women and their families. CPNP staff and participants actively promote World Breastfeeding Week activities and the WHO/UNICEF Baby Friendly Initiative (BFI). ❖

Changing attitudes, changing environments

The Peel Health Breastfeeding Advocacy Group has developed innovative strategies to help make their community more breastfeeding friendly. These include the development of a region-wide breastfeeding strategy and public education and marketing.

Ten major malls in the Region of Peel were given a PowerPoint presentation that emphasized the social aspects and business implications of supporting the region's 11,000 breastfeeding mothers. Suggestions for signage, designated parenting areas and ideas for supporting breastfeeding anywhere within the malls were provided. The second step of this retail education project is to provide follow-up education sessions on Human Rights Legislation for security staff and provide Breastfeeding Friendly logos for mall promotional literature.

The PowerPoint presentation was also tailored for use in the region's three library divisions with the emphasis being on a fact/research-based approach. Also included in the presentation were photographs of a mother breastfeeding in the library while reading to her children.

A presentation entitled "A Common Purpose" was given to the three Parks and Recreation divisions (Brampton, Caledon and Mississauga) again emphasizing the importance of accepting breastfeeding in a recreational environment.



Photo by Peel Health Advocacy Group

Lory Levere of the Peel Health Advocacy Group conducts an information session on breastfeeding and human rights.

The group has also designed a wallet-sized card that reinforces the Human Rights message and gives contact numbers, appropriate for distribution to staff, nursing mothers and the general public.

In May 2002, the Peel group approved a region-wide Breastfeeding Workplace Policy – the first for Ontario. The Peel group is currently working to produce a sculpture of a mother breastfeeding her child to be displayed in public. For more information, contact the Breastfeeding Advocacy Group through their web site at: www.region.peel.on.ca or call Health Line Peel at 905 799-7700. ❖

WBW: Healthy Mothers Healthy Babies

The Breastfeeding Challenge

Join the breastfeeding challenge. Beat the Guinness Book of World Records and breastfeed your baby along with thousands of other mothers across Canada. For more information contact Frances Jones at: babyfriendly@canada.com



World Breastfeeding Week Action Kits

WBW Action Kits celebrating the theme are available from **INFACT Canada**.

Phone (416) 595-9819

E-mail orders@infactcanada.ca

At left, "Breastfeeding 101," an item from the Kit. See Resources (page 12). ❖



Photo by Lori Last, Children's & Women's Health Centre of British Columbia

Mothers and babies participating in the breastfeeding challenge, October 6, 2001, to celebrate Canada's World Breastfeeding Week, achieve Guinness world record for most women breastfeeding at the same time, in the same place.

TRIGR triggers warning

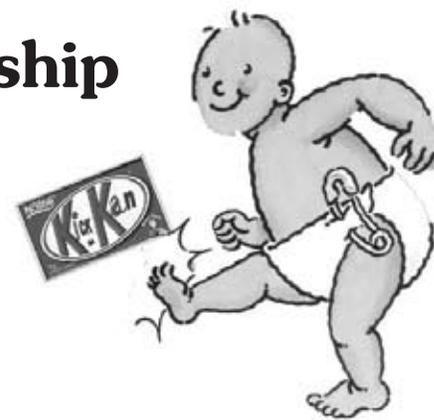
TRIGR, Trial to Reduce Insulin-Dependent Diabetes in the Genetically at Risk, is a multi-centred feeding trial to determine if the weaning from breastfeeding to an infant formula with partially hydrolyzed cow's milk proteins will result in fewer cases of Type I diabetes as compared to weaning to routine cow's milk based infant formulas. Canada's government is contributing 10 million dollars in funding to this project. Other contributors include the Juvenile Diabetes Research Foundation and Mead Johnson, which has been a "supporter of the TRIGR trials since its inception" and is providing the free formula for the feeding trials.

The project is creating considerable alarm amongst breastfeeding proponents. Questions of ethics are being raised. Criticisms are being levied at Minister McLellan for the granting of public funds to be used to determine the outcome of a trial where the beneficiary is an infant formula company. Virtually no funds are made available for the promotion of breastfeeding while the massive promotions of artificial feeding products remain ignored and unregulated.

INFACT Canada has issued a warning (see INFACT Canada website at www.infactcanada.ca) to parents who may be considering enrolling in the TRIGR trials. Ample evidence exists to support the promotion of and enhanced assistance for exclusive breastfeeding to parents of infants at risk for diabetes Type I. Serious ethical issues surround this experiment. In the proposed randomized trial parents of susceptible infants will not know if their infants are receiving modified or unmodified proteins in their infant formulas. Those receiving the formulas with the unmodified cow's milk proteins will be put at greater risk and thus are being "set up" for comparison to those fed the formula with hydrolyzed cow's milk proteins. In this way the hydrolyzed product can claim to "reduce the risk". No comparisons are to be made to an exclusively breastfed population. Moreover the provision of banked human milk when their own mother's milk is not available is also not an option for these infants.

If, instead moneys were made available to set up and support highly cost effective breastmilk banks the cost savings could be in billions of dollars over a lifetime of benefits for those receiving human milk. ❖

CICH accepts Nestlé sponsorship



We were shocked to see the Nestlé logo proudly displayed as a corporate sponsor in the Winter 2002 edition of the Canadian Institute for Child Health's newsletter. A letter expressing our concern to CICH chairperson Judy Erola prompted this response:

**Letter to INFACT Canada from the Hon. Judith Erola
May 28th, 2002**

"The decision (to accept Nestlé sponsorship) is consistent with our view that corporations are part of the global community and that working with corporations can be an effective method to influence long range change. We are very clear that our corporate relationships will not influence our health policy positions, which we make very transparent.

"...CICH is of the belief that in our changing world, we can work closely with industry without compromising our health policy activities or advocacy."

**INFACT Canada's reply to Hon. Judith Erola
June 20th, 2002**

"Nestlé in particular has consistently and flagrantly violated the World Health Organization's International Code of Marketing of Breastmilk Substitutes in developing and developed countries. Corporations have had a significant impact on the global community. These violations have proven to affect infant feeding practices, which ultimately put babies at risk of disease and death.

For your reference I have enclosed a copy of the IBFAN publication, "Breaking the Rules, Stretching the Rules 2001." It carefully outlines how Nestlé and other companies are consistently in violation of the Code.

"Nestlé's leadership role in the global undermining of breastfeeding doesn't stop there. Nestlé has the largest global market share of the infant feeding market. As the market leader, when Nestlé targets new mothers and pregnant women with the promotion and advertising of its infant formulas, other companies follow suit. These violations contribute to the estimated 1.5 million children who die annually because they are not breastfed. (World Health Organization and UNICEF estimate.)

"...In my opinion, your association with Nestlé, a corporation that repeatedly put profits over the well being of our most vulnerable children – young infants – contradicts this statement. In light of all of the above, I urge you to seriously reconsider your acceptance of Nestlé's sponsorship."

The following study is an example of the life-giving benefits of breastfeeding that formula companies like Nestlé diminish.

Breast-Feeding May Protect Against Celiac Disease

Ivarsson, A. et al. *Am J Clin Nutr*
75:914-21, 2002

A groundbreaking study from the University of Sweden demonstrated that when infants are breastfed during the time of introduction of gluten-containing foods, their risk for developing celiac disease was lower than for those who discontinued breastfeeding during this time.

Celiac disease may be triggered by an autoimmune response when an infant is exposed to a food containing gluten proteins. In order to investigate the impact of breastfeeding on this response, Ivarsson and her team of researchers looked at the breastfeeding patterns of 627 children with celiac disease and 1254 healthy children to determine the effect of breastfeeding during the time of introduction of gluten-containing foods on the outcome of the development of celiac disease.

An astounding 40 per cent risk reduction was reported for the development of celiac disease in children at two years of age or younger who were breastfed when dietary gluten was introduced. And the effect was even more pronounced in infants who continued to be breastfed after dietary gluten was introduced, the authors noted.

They also observed that the risk for celiac disease appeared to be greater when gluten-based foods were introduced into an infant's diet in large amounts. (Editor's note – La Leche League International's recommendations of exclusive breastfeeding for six months, then starting solid foods with fruits and vegetables—rather than infant cereals—and continuing breastfeeding to the age of two and beyond, is sound advice.) ❖

Abstracts

The Association Between Duration of Breastfeeding and Adult Intelligence

Mortensen, E. L., et al. JAMA 287:2365-2371, 2002

More studies are confirming the important association between breastfeeding and intelligence development. This interesting Danish study, using a prospective longitudinal methodology, studies a sample of 973 men and women, and a sample of 2280 men. The samples were divided into 5 categories based on duration of breastfeeding as assessed by physician interview with mothers at the 1-year post partum examination.

In the men and women samples the Wechsler Adult Intelligence Scale at a mean age of 27.2 was used. For the men only sample group, the Borge Priens Prove Test was used at a mean age of 18.7 years.

Confounding factors considered were parental social status, education, single mother status, mother's height, age, and weight gain during pregnancy, estimated gestational age, birth weight, birth length, and indexes of pregnancy and delivery complications.

The results demonstrated a significant positive association between IQ outcomes and the duration breastfeeding in two separate sample populations. ❖

Exclusive Breastfeeding Boosts IQ of small Babies

Rao, M. R. et al. Acta Paediatrica 91: 267-74, 2002

Even though full term babies may be small for gestational age, breastfeeding exclusively for the first six months enhances the IQ of infants weighing less than six pounds at birth, a study from Norway determined.

Importantly, small infants who received only breastmilk for the first six months of life scored an average of 11 points higher on IQ tests at age 5 years than infants who received formula and solid food in addition to breastmilk.

The study also debunked the notion that small babies will grow faster if they receive some formula and solid foods.

The study examined 220 full term infants weighing less than 6 pounds, and 229 full term infants weighing more than 6 pounds. The infants were examined for motor skills and mental abilities at 3, 6, 9 and 13 months and then at the age of 5 years.

The small for age babies who were given supplemental foods in addition to being breastfed scored an average of 3 points lower in IQ tests at the age of 13 months than their exclusively breastfed peers.

Exclusive breastfeeding also improved the IQ scores of normal sized infants. At the age of 5 years, those who had received only breastmilk for the first six months scored an average of 3 points higher on intelligence tests than their supplemented peers. ❖

Infant Acceptance of Breastmilk After Maternal Exercise

Wright, Kc.S. et al. Pediatrics 109:585-589, 2002

A new study can set aside questions about breastfeeding and exercise. A previous study, which had received wide publicity, had noted that the build up of lactic acid after intensive exercise resulted in poor acceptance of breastmilk.

This study again examines the composition of post exercise breastmilk and acceptance by the infant while controlling for maternal diet, exercise intensity and the method, timing and assessment of infant feeding. Milk acceptance by the infant was tested by 24 mothers and each feeding episode was videotaped and viewed by three lactation consultants. There were no differences for maternal skin temperatures, breastmilk temperature and infant milk acceptance. The authors concluded that moderate or even high-intensity exercise during lactation does not impede infant acceptance of breastmilk consumed one hour after exercise. ❖

Breastfeeding and lowering the risk of childhood obesity

Armstrong, J. et al. Lancet 359:2003-04, 2002

More research confirming the artificial feeding and obesity link. A large Scottish study to determine the impact of infant feeding on childhood obesity looked at the body-mass index of 32,200 children aged 39 to 42 months. After elimination of confounding factors such as socioeconomic status, birth weight and sex, the prevalence of obesity was significantly lower in the breastfed children; leading to the conclusion that breastfeeding is associated with a reduction in childhood obesity risk. ❖