

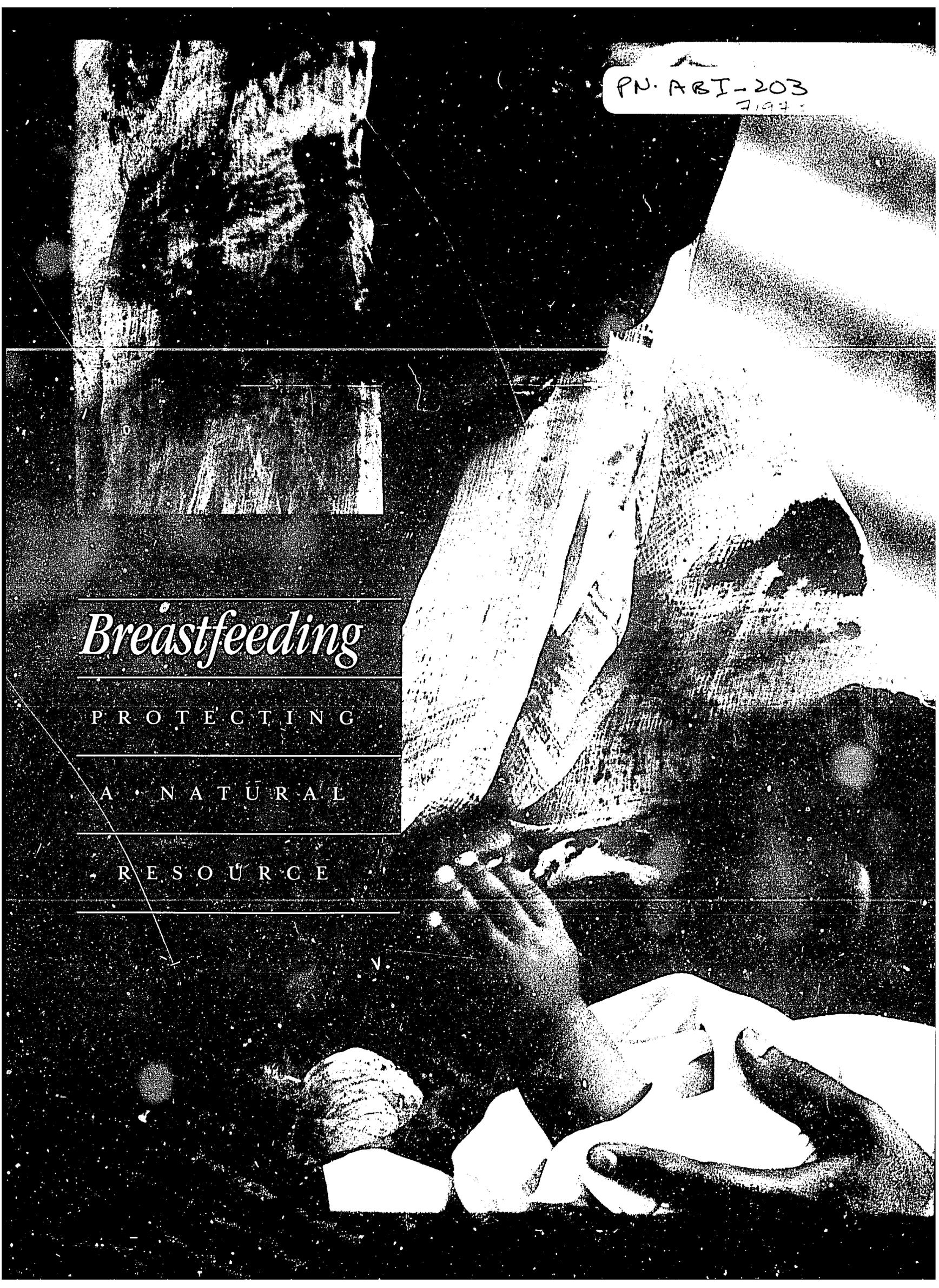
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Breastfeeding

PROTECTING

A NATURAL

RESOURCE



The triad of infectious disease, malnutrition and high fertility constitutes the substratum of the pathology of underdevelopment. Breastfeeding is the most powerful and beneficial biocultural heritage of mankind with a significant impact on all the components of the triad.

DR. VULMIRI RAMALINGASWAMI,
Senior Advisor, Health and
Nutrition
UNICEF, 1988

1 INTRODUCTION

1.1 BENEFITS OF BREASTFEEDING

Breastfeeding Protects Infants Against Death and Disease

Breastfeeding Provides Optimal Nutrition

Breastfeeding Benefits Women's Health

Breastfeeding Promotes Childspacing and Reduces Fertility Rates

Breastfeeding Saves Money

1.2 PROMOTION AND SUPPORT OF BREASTFEEDING

Changing Hospital and Health Care Practices

Improving Information, Education and Communication Campaigns

Supporting Working Women to Breastfeed Successfully

Building Family, Community and Political Support

27 CONCLUSION

Introduction

Around the world, people want to lead healthy lives, raise well-nourished children and provide them with opportunities for the future. Governments invest in public health measures and family planning programmes to help achieve these goals, yet their resources are scarce and the demands upon them heavy.

There is good news, however. Breastfeeding is a natural resource that can make a major contribution to health and family planning goals. Moreover, studies repeatedly have shown that breastfeeding programmes have measurable impact. If more women were to exclusively breastfeed their infants for a longer time — and if public policy-makers were to support this natural method of infant feeding — fewer infants would die, women and their children would be healthier and public health and family planning programmes would save money.

Research documents that:

Breastfeeding saves infants' lives — Breastfeeding, especially exclusive breastfeeding, provides protection against diarrhoea and common life-threatening infectious diseases. Breastmilk contains a variety of immunological and other factors that protect against infection and destroy harmful bacteria and viruses. When diarrhoeal disease or other infections do occur, they are less severe among breastfed infants and can be treated more easily.

Breastfeeding promotes the child's growth and development — It provides the best possible nutrition for both physical and mental development, supplying all the nutrients and fluids most infants need for the first six months of life. In addition, breastfeeding does not expose babies to the risks of contaminated breastmilk substitutes, bottles and artificial nipples.

Breastfeeding is good for women's health and welfare — For the mother, breastfeeding may reduce the risk of post-partum haemorrhage and is associated with lower risks of ovarian and breast cancer. It also provides her with emotional satisfaction, a unique sense of bonding with the child, natural childspacing and financial savings.

Breastfeeding complements family planning — The hormonal suppression of ovulation associated with full breastfeeding can effectively prevent pregnancy in the period before the mother's menstrual cycle resumes during the first six months of the baby's life and reduces the probability of pregnancy thereafter. Longer intervals between pregnancies mean healthier mothers and babies, lower maternal and infant mortality and lower fertility rates.

Breastfeeding saves money — Breastmilk is the least expensive food for infants and the best. Breastfeeding mothers have no need to purchase breastmilk substitutes. Because infant formulas generally are expensive imported products, breastfeeding can save families money and reduce the demand for foreign exchange. Breastfeeding's positive effect on maternal and child health can also reduce the burden on public health budgets.

Breastfeeding promotion and support programmes work — In some countries, both the initiation and the duration of breastfeeding have increased impressively as national policy-makers, the medical community, support groups and families have begun to recognize the many benefits of breastfeeding and to strengthen their support for it.

Breastfeeding is the best choice. There is renewed interest in breastfeeding. Women around the world, including those living in cities and employed in the modern sector of the economy, can breastfeed successfully. Despite the barriers to breastfeeding that often accompany an urban way of life and women's modern employment, the benefits of breastfeeding make it worthwhile for society to consider and, where possible, overcome these obstacles. Exclusive breastfeeding for the first four to six months will repay these efforts with positive health consequences for mother and child.

This booklet describes the benefits of breastfeeding and identifies specific actions that policy-makers can take — and that already are being taken in some countries — to preserve and promote this natural resource.



COLOMBIA:

Supportive hospital routines, such as keeping mother and baby together immediately after birth, can help a woman to breastfeed successfully.

Benefits of Breastfeeding

In the past decade, research has conclusively documented the significance of breastfeeding for child survival, maternal health, childspacing and lower fertility. The benefits of breastfeeding are many, and its costs are low.

BREASTFEEDING PROTECTS INFANTS AGAINST DEATH AND DISEASE. In most settings world-wide, breastfed children are much less likely to die or become ill, especially when colostrum (the first breast fluid after birth) is given and breastfeeding is exclusive for at least four to six months. Breastmilk is

not contaminated with the bacteria and viruses that cause diarrhoeal disease and respiratory infections — the major killers of children throughout the developing world. Both early and more recent studies confirm that breastfed infants are less likely to develop diarrhoea, and those who do suffer from diarrhoea are less likely to develop complications.¹ For example, a review

of nine studies from five countries in the early part of this century show a 9 to 25 per cent increased survival rate from diarrhoea for breastfed infants in the first six months of life, compared with bottle-fed babies and depending on whether the infants were exclusively or partially breastfed.² Studies in the late 1980s in Brazil and the Philippines similarly document that breastfed infants are less likely to die from diarrhoea, as well as respiratory disease, than non-breastfed infants³ (see Box 1 and Figure 1).

Box 1

BREASTFEEDING PROTECTS AGAINST MANY DISEASES

One study in Brazil shows that an exclusively breastfed infant is:

- 14.2 times less likely to die from diarrhoea
 - 3.6 times less likely to die from respiratory disease
 - 2.5 times less likely to die from other infections
- than a non-breastfed infant. Exclusive breastfeeding is best.

SOURCE: Victora, C., et al, "Infant Feedings and Deaths due to Diarrhea: A Case-Control Study, American Journal of Epidemiology, 129(5), 1989.

To bottle-feed safely requires a clean water supply, fuel sources, utensils, refrigeration and standards of home hygiene that many families around the world cannot meet. It also requires education and sufficient money to purchase and properly prepare breastmilk substitutes. Consequently, in poor circumstances, whether in developing or industrialized countries, the use of substitutes all too often leads to a vicious cycle of malnutrition and disease due to overdilution and contamination.

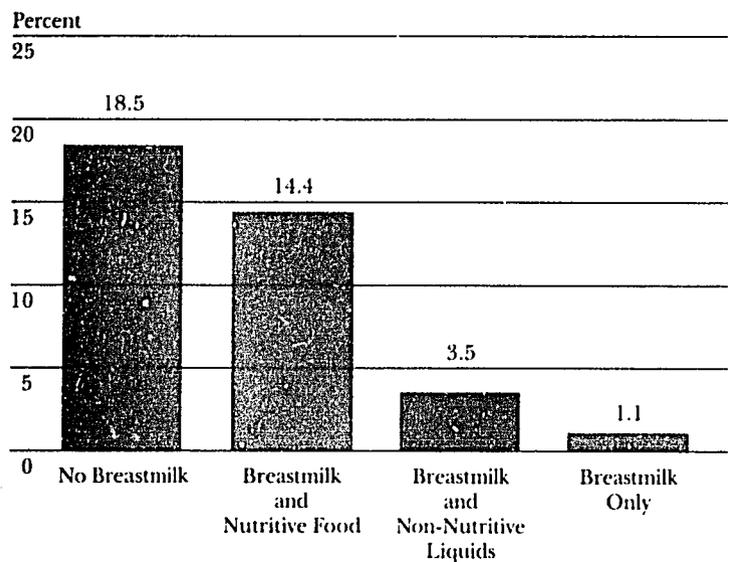
Furthermore, breastmilk contains elements that directly fight infection — immunological and other components that coat the lining of the stomach, intestines and lung, and attack bacteria and viruses.⁴ There are also many non-specific, anti-infective substances in breastmilk. This is important because an infant's immune system is not fully developed in the early months. When a breastfeeding mother is exposed to an infective organism in the environment, she produces specific immunological factors that she passes on to her baby through breastmilk. Babies who receive breastmilk substitutes usually are exposed to these same organisms, as well as to bacteria and viruses from the substitutes themselves and from the bottles and nipples used with them. Most importantly, these babies do not benefit from the maternal antibodies and the many other protective factors contained in breastmilk.

When diarrhoeal disease and other infections do occur among breastfed infants, they are usually less severe and more easily treated.

Breastmilk itself enhances the absorption of oral rehydration fluids, which may be necessary in the treatment of diarrhoea, and is of major importance in providing nutrition in a readily absorbable form during episodes of diarrhoea.

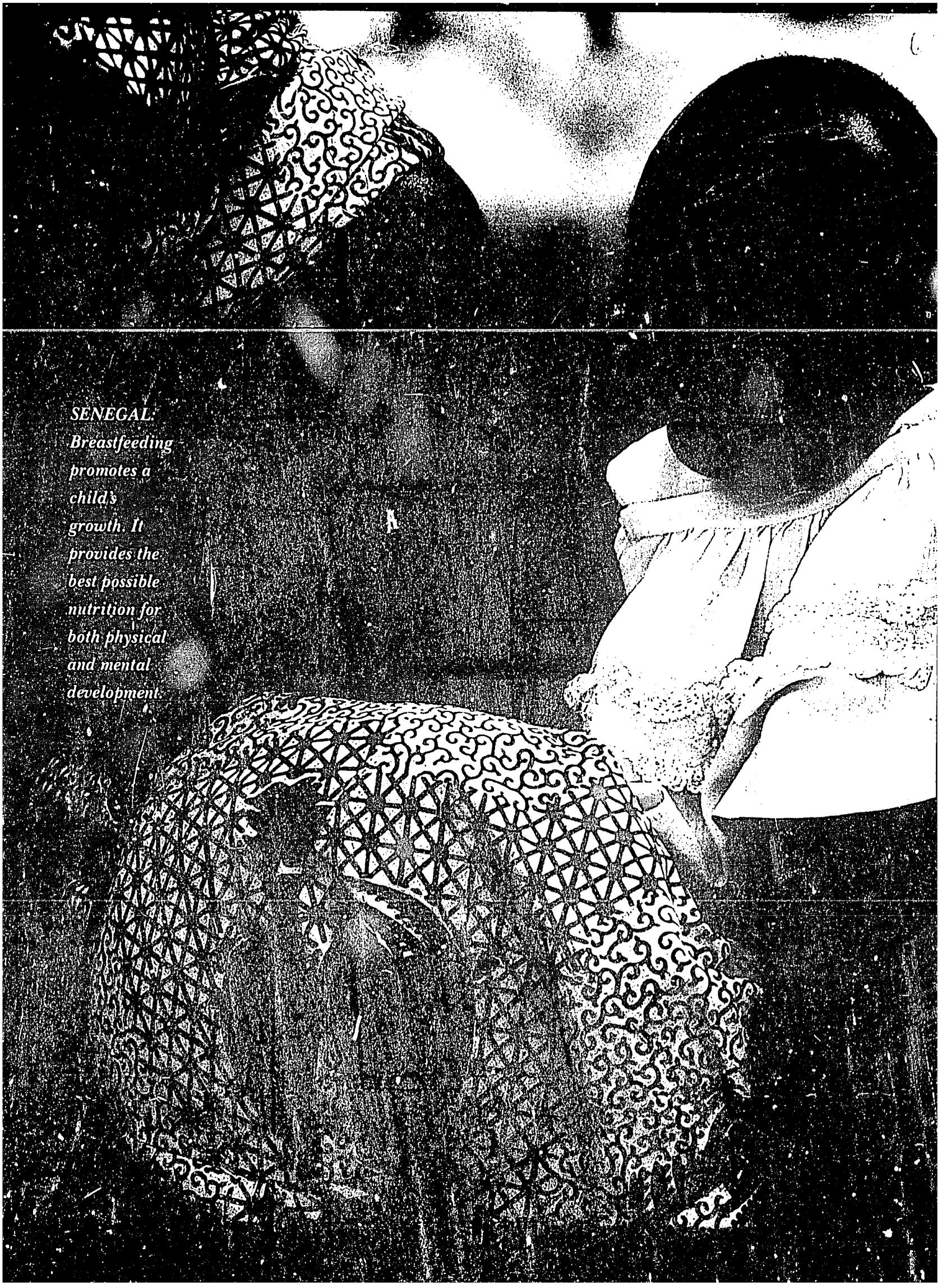
Non-infectious diseases, such as eczema, dental disease, lymphomas (cancer) and diabetes seem to occur less often in children who are breastfed.⁵ The mother-infant body contact and the body temperature of the milk also help prevent hypothermia, or low body temperature, in the infant. All in all, breastfeeding provides a much better chance for optimal child health and development.

Figure 1
LIKELIHOOD OF CONTRACTING DIARRHOEA
ACCORDING TO VARIOUS FEEDING MODES:
INFANTS, 2 MONTHS OF AGE, THE PHILIPPINES*



*Diarrhoea in previous 7 days, Urban Cebu, the Philippines

SOURCE: Popkin, et al., "Breastfeeding and Diarrhoea Morbidity," *Pediatrics*, 1990 (in press)



*SENEGAL:
Breastfeeding
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nutrition for
both physical
and mental
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BREASTFEEDING PROVIDES OPTIMAL NUTRITION. Breastfed children are less likely to be malnourished than other children. No substitute can provide the nutritional equivalent of human breastmilk: it offers the best balance of proteins, growth stimulants and other nutrients needed for an infant's healthy physical and mental development. For the first six months of life, the well-nourished mother can provide through breastmilk alone all of the nutrients and fluids an infant needs.

*No substitute can provide
the nutritional equivalent
of human breastmilk.*

The importance of breastmilk for nutrition stems from its unique composition. Its high carbohydrate and fat content favours growth during the early months of life. Premature infants and those with low birth weights have particular need of the nourishment breastmilk provides.⁶ Breastmilk is physiologically adapted and changes over time to suit the needs of premature infants, newborns and older infants.⁷

Milk direct from the mother's breast cannot be diluted or spoiled. It is easy to digest and contains none of the harmful or difficult-to-digest components found in substitutes.

In addition, the activity of breastfeeding promotes proper development of facial bones and muscles because of the feeding actions required.⁸ It also may contribute to a child's psycho-social development.

BREASTFEEDING BENEFITS WOMEN'S HEALTH. Breastfeeding benefits maternal health in several important ways. Immediately after delivery of her child, suckling at the breast may reduce the risk to the mother of post-partum haemorrhage.⁹ Suckling stimulates the release of oxytocin, which helps milk release and flow and also causes contraction of the uterus. The sooner the uterus contracts after delivery, the less likely there will be prolonged bleeding.

Breastfeeding also lowers the risk of at least two kinds of cancer. The risk of ovarian cancer is significantly lower among women who have breastfed.¹⁰ Studies also have shown that breastfeeding helps prevent breast cancer, primarily among pre-menopausal women. The risk of breast cancer for

women who breastfeed is half of what it would have been had they not breastfed their infants.¹¹ Researchers also note a decreasing risk of breast cancer associated with an increasing duration of breastfeeding.¹²

Breastfeeding may also offer women psychological benefits through the emotional bond that develops between the breastfed infant and its mother.¹³ Breastfeeding causes hormonal changes, and with the production of brain mediators and other physiological factors that result from breastfeeding, it seems likely that there may be additional effects on the mother. Some of these changes enhance the lactating woman's metabolic efficiency, such that her additional energy needs are reduced.¹⁴ Well-nourished women utilize fat stores for their increased energy requirements, but even marginally nourished women can breastfeed successfully if their food intake is adequate. It is clear that the dictum "feed the mother to feed the baby" is especially important for the long-

term welfare of marginally nourished women and their children.

BREASTFEEDING PROMOTES CHILDS PACING AND REDUCES FERTILITY RATES. Breastfeeding helps to space births. Full or nearly full breastfeeding delays the resumption of ovulation and the return of the menstrual cycle; this is most reliable in the first six months. Lactational amenorrhoea, the breastfeeding-related suppression of the menstrual cycle after birth, is associated with a decreased

Box 2

BREASTFEEDING AND FAMILY PLANNING

Breastfeeding can play an important family planning role by helping to increase the interval between births. If the following three conditions are **all met**, breastfeeding provides a measurable protection against another pregnancy. This is known as the Lactational Amenorrhoea Method.

Breastfeeding provides about 98 per cent protection against another pregnancy only as long as:

- the baby is under six months old; and
- the mother is fully breastfeeding, day and night; and
- the mother is amenorrhoeic (i.e., has not experienced menstrual bleeding after 56 days post-partum).

As soon as the baby reaches six months of age, or menses return, or breastfeeding changes, a woman should use a complementary family planning method. Women should continue breastfeeding, however, even if they are using another family planning method.

The best family planning methods for breastfeeding women are non-hormonal methods such as the condom, diaphragm, spermicide, vasectomy, tubal ligation or intrauterine device. Natural family planning has also been successfully used by breastfeeding women.

No study as yet has shown any of the accepted contraceptive methods to be harmful to nursing infants, but a contraceptive containing estrogen (i.e., the Pill) may reduce breastmilk output and is not the preferred method. For this reason, the mini-Pill (progesterin only) may be the best alternative for women who prefer the Pill. Other low-dose progesterone-only methods are equally appropriate. When breastfeeding is no longer providing a significant proportion of the child's food needs, concerns related to the possibility of a decrease in milk production from using the Pill are reduced.

SOURCES: *Labbok, M.H., and Krasovec, K. eds., Guidelines for Breastfeeding in Child Survival and Family Planning Programs (Washington, D.C.: Georgetown University, IISNFP, 1989).*

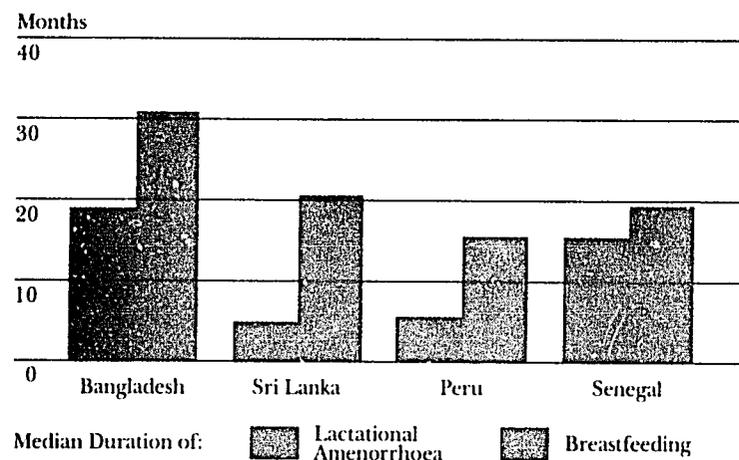
Kennedy, K., "Consensus Statement on the Use of Breastfeeding as a Family Planning Method," Contraception, 35(5), 1989.

ability to become pregnant. Although the exact biological mechanism is not entirely clear, many studies have demonstrated the relationship between duration, frequency and intensity of breastfeeding, and an increased interval between births.¹⁵

If a woman is fully or nearly fully breastfeeding, amenorrhoeic and less than six months post-partum, she is about 98 per cent protected against an unplanned pregnancy. Altogether this is referred to as the Lactational Amenorrhoea Method.¹⁶ To prevent or postpone a subsequent pregnancy, a woman should initiate a reliable complementary family planning method as soon as her menses resume, or when her baby reaches six months of age, or when she is no longer fully breastfeeding. A woman should not stop breastfeeding, however, when she starts using a complementary family planning method. She should continue intensive breastfeeding for added childspacing protection, as well as for the health benefits to herself and the child.¹⁷ Even if she should become pregnant, she should continue to breastfeed her infant and, if necessary, gradually add other foods (*see Box 2*).

Although the childspacing effect is most reliable during exclusive breastfeeding and during the first six months, many women who breastfeed fully or almost fully for longer periods have been protected against pregnancy considerably beyond six months. In countries where the duration of breastfeeding is long — a median duration of 19 months in Senegal or 31 months in Bangladesh, for example — breastfeeding contributes greatly to delaying conception. It is important to remember that the effect of breastfeeding on fertility is significant primarily during the period before menses return (*see Figure 2*).

Figure 2
DURATION OF BREASTFEEDING AND LACTATIONAL AMENORRHOEA



SOURCES: *World Fertility Survey, Bangladesh, 1979* (Voorburg, Netherlands: International Statistical Institute); *Demographic and Health Surveys: Peru, 1986; Senegal, 1986; Sri Lanka, 1987* (Columbia, Maryland: IRD/Macro Systems).

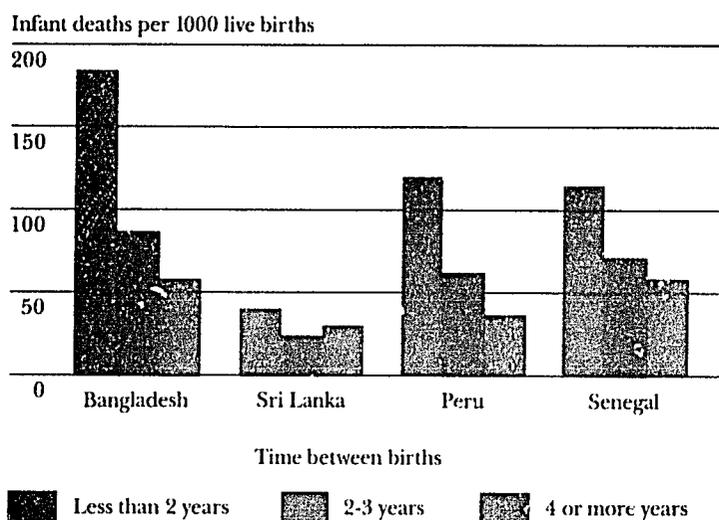
*SRI LANKA:
Breastfeeding
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Longer intervals between births, approaching three years or more, allow women time to regain their strength and nutritional well-being before having another baby.¹⁸ A mother who is healthier can devote more attention and energy to meeting the needs of her older children and can sustain breastfeeding for the youngest one. On the average, babies born less than two years after their next oldest sibling are twice as likely to die as babies born after at least a two-year interval. A three-year interval provides still more protection (see Figure 3).¹⁹

Fertility rates in many developing countries are far lower than they would be if there were an absence of breastfeeding. A study of five African countries, for example, determined that lactational amenorrhoea and sexual abstinence related to breastfeeding accounted for a 33 per cent reduction of the maximum possible fertility, whereas use of modern family planning methods accounted for only an additional 5 per cent reduction.²⁰ Figure 4 illustrates the current effect of breastfeeding and of contraceptive use on the total fertility rate in selected countries.

Figure 3
THE RELATIONSHIP BETWEEN BIRTHSPACING AND INFANT MORTALITY



SOURCES: World Fertility Survey, Bangladesh, 1979 (Voorburg, Netherlands: International Statistical Institute). Demographic and Health Surveys: Peru, 1986; Senegal, 1986; Sri Lanka, 1987 (Columbia, Maryland: IRD/Macro Systems).

BREASTFEEDING SAVES MONEY. Breastfeeding offers important economic advantages to families, health care providers, family planning programmes and national budgets:

Savings for the family—Breastmilk substitutes are expensive, and bottle-feeding requires the purchase of special equipment. The costs vary from one country to another, with an average cost for formula in developing countries of US\$22 per month for a six-month-old infant,²¹ an amount equal

to or greater than the average monthly per capita income in many countries. Poor families generally cannot afford to purchase the required amount of infant formula or other breastmilk substitutes, so

their children often receive diluted mixtures or less nutritious substitutes that cannot support proper growth and development.

The production of breastmilk does have an energy cost to the mother, but meeting her additional energy needs is much less expensive than purchasing breastmilk substitutes. The savings to the family budget can be applied to improving the diet of the lactating mother and other members of the family. Healthier family members require fewer health care expenditures, and breastfeeding mothers employed in the modern sector typically miss fewer work days to care for sick children.

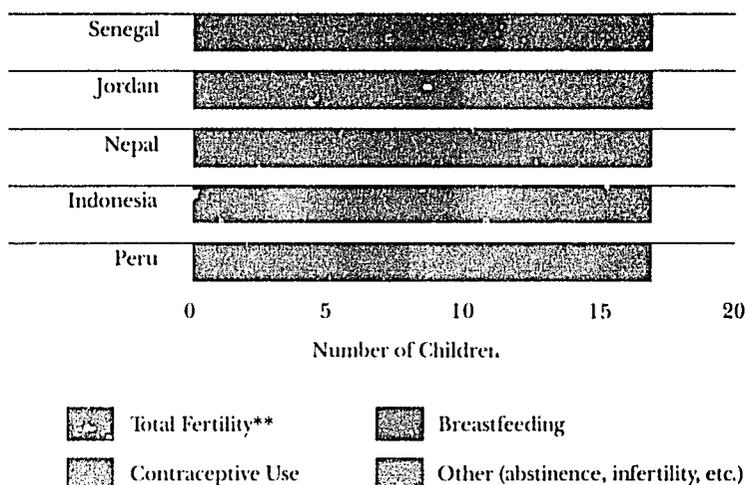
Savings for health care providers —

When mothers breastfeed, hospitals save money. Mothers and their babies who room together, as

they should for the optimal establishment of breastfeeding, require fewer resources and less staff time. Hospitals with immediate post-partum breastfeeding and rooming-in spend less on nursing bottles, nipples, infant formula and glucose water. One hospital in the Philippines reported savings on drugs used to contract the uterus.²² At a hospital in Honduras expenditures for formula dropped from US\$40,000 to only US\$6,000 in one year.²³ Because infants remain healthier, hospital costs are also lower for treatment of neonatal diarrhoea and other infections.

After instituting changes favouring breastfeeding, a special-care unit of a hospital in Bombay cut in half expenditures for milk and medicine per high-risk infant.²⁴ Similar savings have been reported in hospitals elsewhere in India,²⁵ Honduras²⁶ and Indonesia.²⁷ The need for incubators and

Figure 4
CONTRIBUTION OF BREASTFEEDING AND CONTRACEPTIVE USE IN REDUCING MAXIMUM POTENTIAL FERTILITY*



*"Potential Fertility" is the estimated biological maximum number of children (17) a woman could bear.

**"Total Fertility" is the number of children an average woman will bear in her lifetime.

SOURCE: Bulatao, R.A., "Reducing Fertility in Developing Countries: A Review of Determinants and Policy Levels," Staff Working Paper #680 (Washington, D.C.: World Bank, 1984). Data is from World Fertility Surveys, 1976-78 (Voorburg, Netherlands: International Statistical Institute).

special feeding equipment for low birth-weight infants can be reduced if these children are breastfed or if they are spoon-fed breastmilk and kept close to their mothers' bodies. This "kangaroo method"²⁸ helps overcome the typical low birth-weight problems of hypothermia and immature digestion.

Savings for national family planning

programmes — In most developing countries, the childspacing effect of breastfeeding results in lower fertility. In Honduras, breastfeeding has played a major role in the reduction of fertility. If mean duration of breastfeeding had not increased during the 1981 to 1987 period, fertility in urban areas would have increased by a whole birth per woman on average.²⁹ If the duration and extent of breastfeeding decline nationally, a significant increase in contraceptive use becomes necessary simply to maintain the current level of fertility. To serve the additional couples at risk of pregnancy, developing nations would need to invest even more money in expanding their family planning programmes (*see Figure 5*).

In parts of the developing world where breastfeeding is declining and family planning programmes are not widely used, an investment in promoting breastfeeding and the Lactational Amenorrhoea Method for childspacing is an effective and inexpensive way to reduce fertility, and it complements other family planning methods.

Figure 5
CONTRACEPTIVE PREVALENCE REQUIRED TO MAINTAIN CURRENT FERTILITY RATES IF DURATION OF BREASTFEEDING WERE TO DECLINE

Country	Contraceptive Prevalence	Contraceptive Prevalence Needed with 25% Decline	Contraceptive Prevalence Needed with 50% Decline
Guatemala (1987)	23%	32%	46%
Peru (1986)	46	51	57
Ghana (1988)	13	24	34
Senegal (1986)	11	23	35
Morocco (1987)	36	41	47
Indonesia (1987)	48	53	58

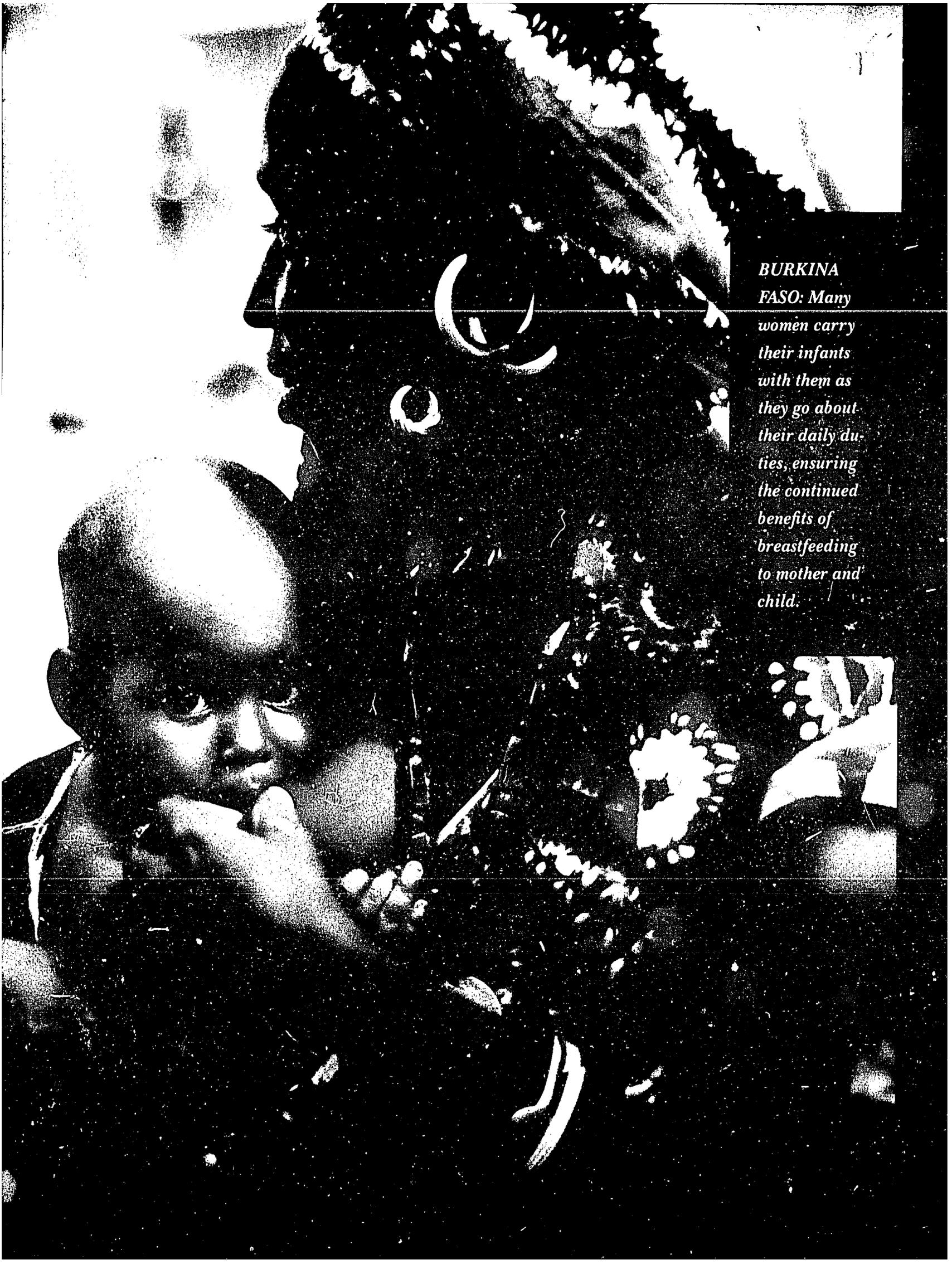
SOURCE: *Demographic and Health Survey data using the aggregate model from Bongaarts, John and Potter, Robert, Fertility, Biology and Behavior: An Analysis of the Proximate Determinants (New York: Academic Press, 1983).*

Savings for national budgets— On a national level, the widespread practice of breastfeeding saves foreign exchange by reducing the demand for breastmilk substitutes, bottles and other imported supplies, especially if the cost of formula increases. Meeting a breastfeeding mother's additional energy needs is much less expensive than purchasing imported breastmilk substitutes for the infant. A study in

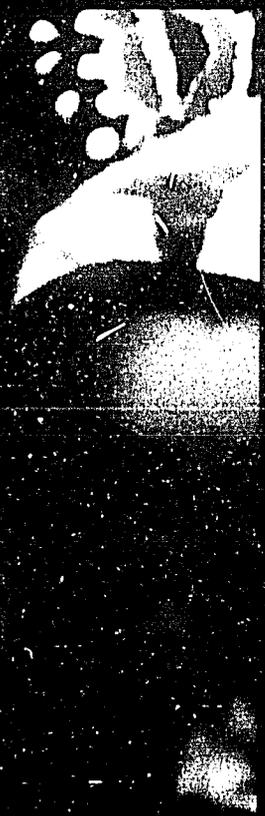
... it costs far more to use formula than to give food supplements to the mother.

1979 concluded that it costs four to five times more to feed formula to an infant than to give food supplements to the mother. Even if the mother's food were imported, it would cost less than one half the foreign exchange than imported formula.³⁰

An increase in breastfeeding could reduce the burden on family planning and maternal and child health programmes due to the decreases in fertility and illness. According to one analysis, the annual savings in Indonesia from lower levels of diarrhoeal disease that would result from an increase in breastfeeding could be equivalent to 20 per cent of the total national health budget. If, on the other hand, breastfeeding declined, Indonesia would have to increase its family planning budget by some US\$80 million per year to compensate.³¹



**BURKINA
FASO:** *Many women carry their infants with them as they go about their daily duties, ensuring the continued benefits of breastfeeding to mother and child.*



Promotion and Support of Breastfeeding

Breastfeeding promotion and support programmes work. Breastfeeding is the natural and traditional way mothers feed their infants, but it has declined in the wake of modernization and urbanization. In cities, women are more likely to give birth in hospitals, to work in the wage sector of the economy and to live without a network of family and social support for breastfeeding. Most hospitals do not emphasize breastfeeding; most public health programmes do not promote it; and employers rarely provide working mothers with adequate opportunities to breastfeed. Women in rural areas breastfeed more often than women in urban areas, perhaps because they do not face these obstacles and are less exposed to the commercial formula promotion found in many cities and central hospital facilities.

Whether they work in the modern sector and live in cities or lead more traditional lives, virtually all women can produce enough milk to nourish their infants. However, if women, their children and societies are to receive the full benefits of breastfeeding, policy-makers in the medical community, government and industry must increase their support of women to help them make the choice to breastfeed.

CHANGING HOSPITAL AND HEALTH CARE PRACTICES. Hospital routines and other health care practices frequently influence a woman's decision whether or not to breastfeed. They also can make it difficult for a woman to breastfeed successfully. Many hospitals and health professionals inadvertently discourage breastfeeding by routinely separating infants from their mothers immediately after birth, administering lactation suppressants, providing supplemental bottle-feeding and/or enforcing inflexible breastfeeding schedules (*see Box 3*).

Incorrect information and practices concerning breastfeeding, such as in-hospital bottle-feeding that jeopardizes the early establishment of an adequate supply of breastmilk, are far too common among health professionals.³²

For example, a Jamaican study found that only 5 per cent of women whose infants received supplemental bottle-feeding in the hospital returned to full breastfeeding at home.³³

Supportive hospital practices, on the other hand, stimulate breastfeeding. A rooming-in project in Costa Rica markedly increased the duration of breastfeeding — 40 per cent more mothers breastfed for 8 to 11 months (*see Figure 6*).³⁴

In the PROALMA project in Honduras, in which mothers and their babies roomed together and health workers were trained in the practices that promote breastfeeding, more than 90 per cent of mothers initiated breastfeeding and the hospitals in the project completely stopped giving breastmilk substitutes to breastfed infants. As a result of these and other programme initiatives, the average duration of breastfeeding rose dramatically during the project, from six months in 1982 to more than one year in 1989, and the use of infant formula declined significantly.³⁵

Box 3
RECOMMENDED BREASTFEEDING BEHAVIOURS

To promote optimal child survival and childspacing, a mother should:

- Begin breastfeeding as soon as possible after her child is born.
- Breastfeed exclusively until her baby is four to six months old.
- Breastfeed frequently, both day and night, whenever her infant is hungry. In the first weeks this may be every one to two hours, later every three to four hours. No interval should exceed four to six hours during full breastfeeding.
- Have access to food and drink sufficient to satisfy her own hunger.
- Continue to breastfeed, even if she or her baby becomes ill.
- Avoid using bottles, pacifiers (dummies) or artificial nipples.
- Breastfeed first even when it becomes appropriate to introduce supplemental or semi-solid foods into her child's diet.

SOURCE: Labbok, M.H. and Krasovec, K., eds., *Guidelines for Breastfeeding in Child Survival and Family Planning Programs* (Washington, D.C.: Georgetown University, IISNFP, 1989).

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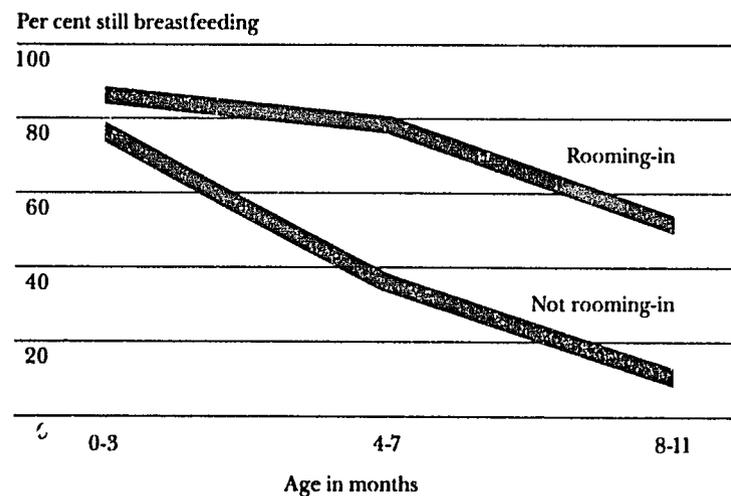
Breastfeeding immediately after delivery benefits the mother by stimulating milk flow and causing healthy contraction of the uterus.



A breastfeeding promotion project in Thailand produced equally impressive results. Eight hospitals in Bangkok developed breastfeeding clinics, in which trained health workers offered expectant mothers breastfeeding classes during antenatal visits. As a result, rooming-in became routine following normal deliveries in most of the participating hospitals, the percentage of mothers initiating breastfeeding within 24 hours of their child's birth increased, and the proportion of babies still being exclusively breastfed at six weeks of age averaged 50 per cent in all the hospitals, with a range of 20 to 74 per cent.³⁶

Changing hospital procedures and training hospital and maternity staff are critical steps in support of breastfeeding. Ministry of Health officials, hospital administrators and health professionals have important roles to play in making sure these and other measures are taken, including restricting access of infant-formula companies to hospitals and prohibiting both the advertising of breastmilk substitutes in health facilities and the distribution of free samples and promotional literature to mothers and hospital staff. WHO and UNICEF have issued a joint statement that includes "Ten Steps to Successful Breastfeeding", which can act as a framework for planning hospital procedural changes (see Box 4).

Figure 6
**THE IMPACT OF BREASTFEEDING PROMOTION:
ROOMING-IN, COSTA RICA**



SOURCE: Mata, L., "The Importance of Breastfeeding for Optimal Child Health and Well-being," *Clinical Nutrition*, 3(1), 1984.

Support for breastfeeding must also continue in health-related programmes that serve infants and mothers. Preliminary data from a study in Chile shows that when changes in hospital practice were coupled with a free clinic follow-up, the proportion of mothers who were still fully lactating and

Box 4

TEN STEPS TO PROMOTE SUCCESSFUL BREASTFEEDING

Every facility providing maternity services and care for newborn infants should:

1. Have a written breastfeeding policy that is routinely communicated to all health care staff.
2. Train all health care staff in skills necessary to implement this policy.
3. Inform all pregnant women about the benefits and management of breastfeeding.
4. Help mothers initiate breastfeeding within a half-hour of birth.
5. Show mothers how to breastfeed and how to maintain lactation even if they should be temporarily separated from their infants.
6. Give newborn infants no food or drink other than breastmilk unless *medically* indicated.
7. Practise rooming-in — allow mothers and infants to remain together 24 hours a day.
8. Encourage breastfeeding on demand.
9. Give no artificial nipples or pacifiers (also called dummies and soothers) to breastfeeding infants.
10. Foster the establishment of breastfeeding support groups and refer mothers to them after discharge from the hospital or clinic.

SOURCE: WHO/UNICEF Joint Statement, Protecting, Promoting and Supporting Breastfeeding: The Special Role of Maternity Services, 1989.

amenorrhoeic at six months increased from 16 to 50 per cent.³⁷ Other health programmes, although meaning well, may inadvertently disrupt breastfeeding and confuse mothers with inconsistent messages related to infant feeding. For example, before concluding that food supplements are necessary, programme personnel should first assure that the mother is properly and frequently breastfeeding her child. This is particularly important not only for a child under four months of age but also during the four-to-six-month period, when supplementation is too often suggested. When giving supplemental foods, mothers should breastfeed *first* so that their babies will continue to receive the benefits of breastmilk and the supply of milk will be maintained. Diarrhoeal control programme

personnel should consider full breastfeeding a key element both for prevention of diarrhoea and for maintaining adequate nutrition of the infant during diarrhoeal episodes.

All health care programmes should encourage a mother to maintain her milk supply when her child is too ill to breastfeed and, if other supplements are necessary, to feed the child with a spoon or cup rather than an artificial nipple. Immunization programmes should not miss the opportunity to

counsel mothers on breastfeeding's anti-infective and protective effects. Family planning programmes should promote breastfeeding for childspacing and provide breastfeeding mothers with appropriate, complementary family planning options. Guidelines are available to help primary health care and family planning programmes support breastfeeding.³⁸

Health professionals' organizations — especially those of nurses, midwives, obstetricians and paediatricians — should take active steps to develop national strategies to promote breastfeeding. Additionally, these groups should assume the responsibility for the implementation of such strategies in many sectors. The WHO/UNICEF “Code of Marketing of Breastmilk Substitutes” fully spells out the responsibilities of health workers and health programmes in this regard.³⁹

IMPROVING INFORMATION, EDUCATION AND

COMMUNICATION CAMPAIGNS.

Well-designed information, education and communication campaigns can greatly affect the prevalence and duration of breastfeeding. Such efforts can educate and motivate mothers, health care providers, community leaders and national policy-makers by presenting the benefits of breastfeeding and discouraging the early introduction of unnecessary supplements. Radio, television,

newspapers, magazines and even comic books have been used successfully to promote breastfeeding.⁴⁰ A mix of media is generally most effective. Mass media can play a particularly important role by both reinforcing a positive image of breastfeeding and providing instruction on how to breastfeed. Schools, non-formal education and social groups are effective interpersonal channels for the promotion and communication of information.

Although a breastfeeding booklet, poster, slide presentation or radio series may stimulate a wave of interest in breastfeeding, new evidence underscores the need for continuous promotion of breastfeeding, with direct support of mothers in order to sustain and increase its prevalence and duration. Ideally, a commitment should be made to a long-range communication strategy, which, whenever possible, links breastfeeding promotion to direct support of mothers and to other maternal and child health programmes, including nutrition, diarrhoeal disease control, family planning and growth monitoring.⁴¹

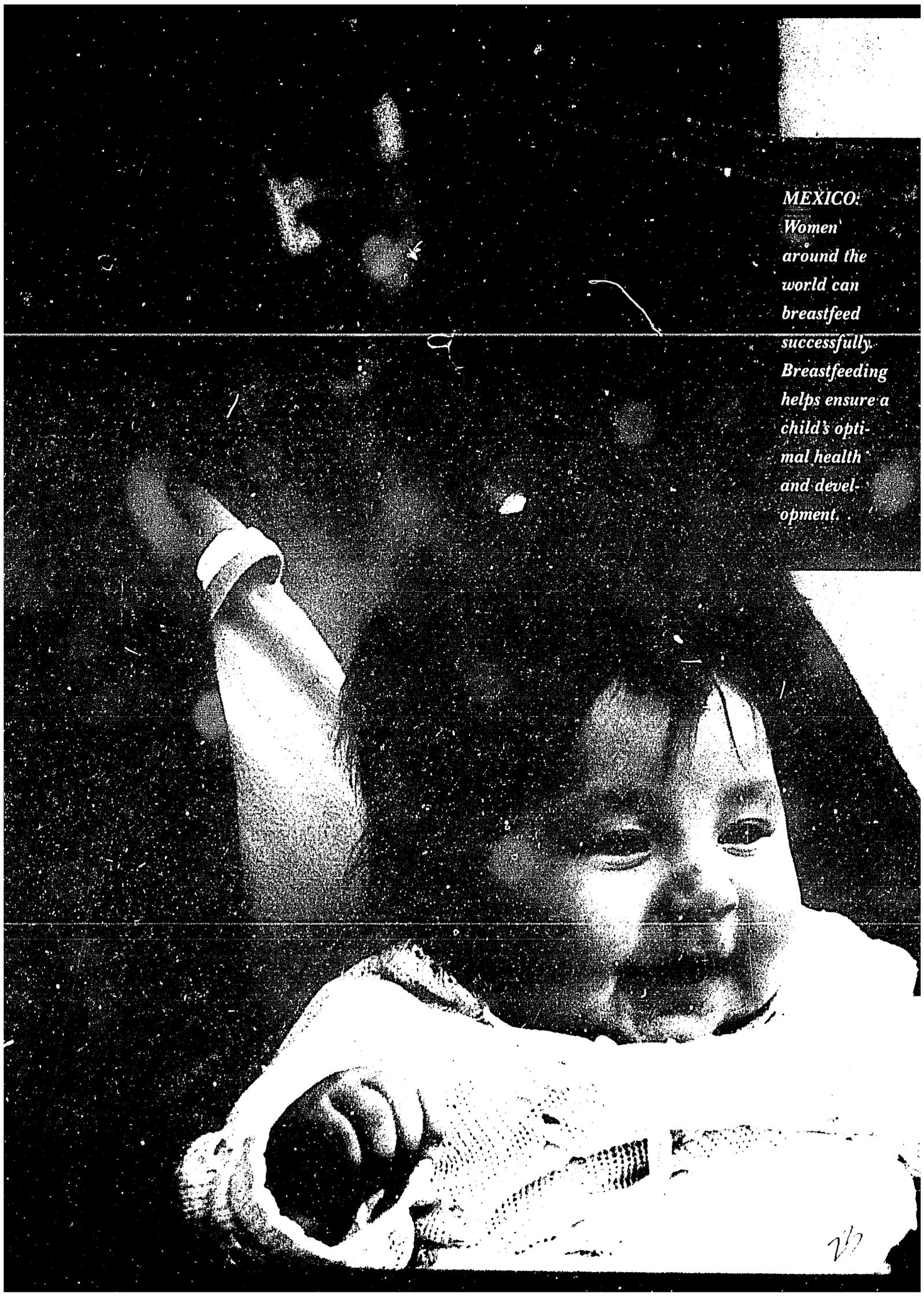
Modernization and women's growing roles as wage earners are compatible with breastfeeding.

SUPPORTING WORKING WOMEN TO BREASTFEED SUCCESSFULLY. Modernization and women's

growing roles as wage earners are *not* incompatible with breastfeeding, as many people believe. Studies show that women can live in an urban environment, maintain paid employment and breastfeed their infants, even for extended periods.¹² To do so, however, they need support and encouragement. To maintain an adequate milk supply, women must either allow their babies to suckle frequently, or they must “express” milk frequently. If mothers breastfeed according to a predetermined schedule, or give their babies regular supplements, or if there are long intervals between feedings, breastmilk production declines. However, maintenance of even this lower level is still very beneficial for the child's health.

Studies in the developing world confirm that only a minority of women mention their work as a reason for not breastfeeding or for adding infant formula.¹³ Many women who work in agriculture or in other non-formal situations carry their infants with them. Women whose duties or employment require separation from their children clearly face greater obstacles. But mothers around the world have found ways to overcome these barriers, including working flexible hours and part-time or shorter shifts, and practising “reverse rhythm” breastfeeding, a term to describe breastfeeding during the night, with milk expression during the day.¹⁴

Workplace support of breastfeeding contributes to the ease of continuing breastfeeding. The most effective policies include those endorsed by the International Labour Organization (ILO) for national consideration: paid maternity leave (with government support so that there will not be a financial incentive to discriminate against women in hiring), job security after delivery with no loss of seniority, establishment of facilities for child care and breastfeeding at the workplace or in the community, provision of nursing breaks without loss of pay and flexible employment arrangements for nursing women.¹⁵ In addition, the many women working in agriculture, at home or in the non-formal sector should receive breastfeeding information and support to breastfeed successfully.



MEXICO:

*Women
around the
world can
breastfeed
successfully.*

*Breastfeeding
helps ensure a
child's opti-
mal health
and devel-
opment.*

27

During the 1980s, many countries established legislation that incorporated the ILO provisions concerning the workplace and employers' responsibilities. Individual companies that employ large numbers of women sometimes have taken the lead, voluntarily adopting policies to support breastfeeding. Such policies can be viewed as a social responsibility — an expression of the value that the community places on a well-fed, well-nourished, healthy child — rather than as a privilege for the working mother.

Such policies are also good management. Studies show that an increase in breastfeeding results in healthier mothers and infants and fewer pregnancies, and therefore less sick leave, higher employee morale and lower turnover. The higher productivity that results from an increase in breastfeeding may easily justify the initial capital expenditures to establish new employer policies and programmes.

BUILDING FAMILY, COMMUNITY AND POLITICAL SUPPORT. *Developing woman-to-woman*

programmes — Woman-to-woman counselling for support of breastfeeding is as old as the human race. In recent decades, however, traditional systems that supported the establishment and maintenance of breastfeeding have deteriorated and there is a need to develop new methods to replace them. This support may be sponsored by hospitals, government or private health care providers or community organizations. At least three models that are moderate in cost have appeared around the world.

The hospital-based or clinical model generally uses outreach nurses or certified lactation-support personnel to provide in-hospital and follow-up support, the latter through telephone hotlines and home visits. The effectiveness of clinical programmes increases greatly when these programmes develop their own mother support system or coordinate with private, non-profit community groups that offer breastfeeding counselling and support. These non-medical groups comprise a second model using trained peer counsellors, who may function in the primary health-care setting, in the home, or through community lectures and contacts. Examples include: Breastfeeding Information Group, Kenya

and FEMAP, Mexico. In other countries — Indonesia, for example — government programmes may provide similar support.

The third model, grassroots woman-to-woman counselling, has been spread most widely through groups like La Leche League International (LLLI), which emphasizes the support of one breastfeeding mother to another. LLLI now exists in 46 countries and serves more than 100,000 women in the world each month through group meetings, telephone help, referrals, materials or individual one-on-one support.¹⁶ Similar national support groups exist in about 50 countries and are organized by the Australia-based International Breastfeeding Association (IBA).¹⁷ This model of experienced woman-to-woman support closely reflects and may more adequately replace the traditional counselling that has disappeared in many places.

Enhancing women's nutrition — The family can support breastfeeding by recognizing the nutritional needs of females. Adequate nutrition during childhood, pregnancy and lactation is critical, because a woman's health and nutritional status affect her risk of maternal morbidity and mortality as well as the growth and development of the foetus and later, the infant. During pregnancy, a woman's body simultaneously nourishes her foetus via the placenta and prepares itself for breastfeeding. After the umbilical cord is cut, she continues to nourish her child through lactation, using her own nutrient and energy stores. If the mother is in poor health, or suffers from malnutrition, she will still produce good quality milk for her infant, but her nutrient and energy stores may be inadequate.¹⁸ In these cases, it is vital that a woman has the opportunity to supplement her diet during both pregnancy and lactation.

Women and young girls must receive an adequate share of the family's food to create these stores if they are to be healthy mothers who produce healthy, intelligent children. Increased consumption of a variety of foods normally eaten, especially those high in calories, will meet a woman's energy requirements. Expensive, high-protein foods or supplements are *not* necessary. The alternative of using a breastmilk substitute to feed the infant is much more expensive and dangerous for both mother and child.

Breastfeeding offers economic advantages to families, health care and family planning programmes, and national budgets.

Changing social and political policies — In some developing countries political leadership has achieved effective policies to support breastfeeding.⁴⁹ Ghana and Jamaica have restricted the import

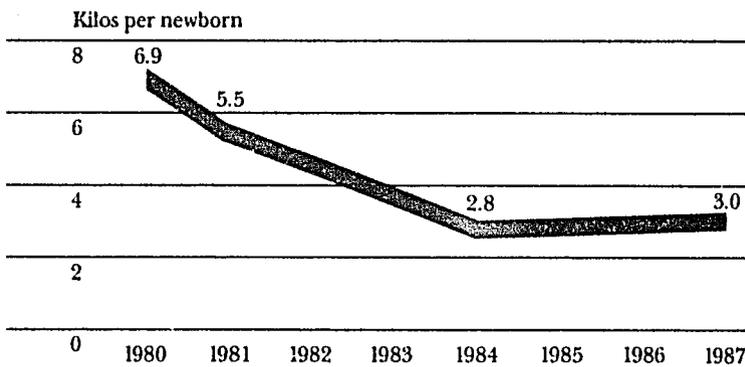
of infant formula, and Algeria nationalized all imports of breastmilk substitutes, eliminating advertising and promotion of these products by multinational corporations. Papua New Guinea banned the sale of baby-feeding bottles except in the case of emergencies, when their use must be authorized by a physician's prescription.

In Honduras, three factors combined to produce a significant increase in the duration of breastfeeding in the 1980s: an established, effective hospital-based support programme and a mass media campaign, followed by a dramatic increase in the cost of imported breast-milk substitutes (*see Figure 7*). While the price increase in this case was due to an economic crisis, political leaders can consider the power of tariffs to contribute to similar changes.⁵⁰

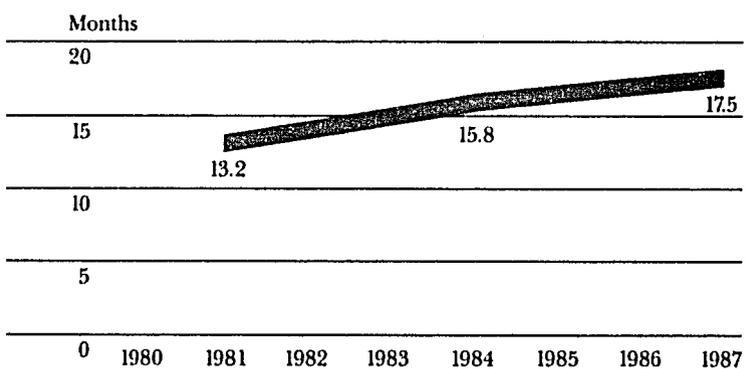
Policy-makers and planners at the national and community levels have a primary role to play in determining the most appropriate actions to

take to promote and support breastfeeding. Leaders in health, education, industry, social support groups and media all can help create a supportive setting in which women are able to obtain accurate information, receive counselling and have the time to breastfeed successfully.

Figure 7
INFANT FORMULA IMPORTS IN HONDURAS



MEDIAN DURATION OF BREASTFEEDING OF HONDURAN INFANTS



SOURCE: Popkin, B., et al., "An Evaluation of a National Breast-feeding Promotion Program in Honduras," *Journal of Biosocial Science*, October 1990 (in press).

Conclusion

Breastfeeding is unique. No other single intervention provides so many benefits.

Breastfeeding:

- Lowers infant mortality and morbidity.
- Provides excellent nutrition for infants, a high-risk group, and contributes to their growth and development.
- Improves women's health.
- Enhances childspacing.
- Provides economic benefits for the family and for the nation.

Breastfeeding, a vital natural resource, can be successfully promoted through a variety of programmes and approaches. Like many natural resources, however, it is vulnerable and susceptible to changes, particularly changes associated with rapid urbanization. Policy-makers, programme managers and women themselves must create an environment of knowledge, skills and support if breastfeeding is to flourish. **The future of breastfeeding depends on knowledgeable and committed leadership.**

Policy-makers and planners have a primary role to play in determining the most appropriate actions to take to promote and support breastfeeding.

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