UNICEF/95-0133/Charton

Putting babies before business

The Right Reverend Simon Barrington-Ward

For babies everywhere, the benefits of breastfeeding are undisputed. But for babies in developing nations, breastfeeding is imperative: Their very survival depends on the immune-boosting properties of mother's milk. For them, infant formula is not just inferior; it can cause disease or even death. Poor families often over-dilute costly formula with unclean water and mix it in unclean bottles, adding to the risk. Yet, despite international pleas and a marketing code agreed to 16 years ago, manufacturers still market infant formula and other substitutes unethically around the world. It is time for them to stop.

Not all miracles stand up to scientific scrutiny, but breastmilk is one that does. It is without doubt one of the world's greatest life-savers. The most sophisticated science has taken a long time to recognize and prove what mothers and midwives always knew—breastfeeding is best for babies and there is no substitute of equal value.

Breastmilk is a 'live' and incredibly complex substance, containing all the nutrients vital for nourishment, as well as growth factors believed to help in tissue development and antibodies to fend off infections. It is always at the right temperature, requires no mixing, sterilization or equipment, and is safe regardless of the quality and availability of water. Its composition changes from feeding to feeding, and even within feedings, and the amount is triggered by the mother's hormonal response to the needs of the baby. Breastfeeding encourages bonding between mother and baby and discourages conception.

The World Health Organization and UNICEF recommend that babies be fed breastmilk only—nothing else, not even water—for about the first six months of life. Worldwide, reduction of formula feeding and improved breastfeeding practices could save an estimated 1.5 million children a year.

So why are only an estimated 44 per cent of infants in the developing world (even less in the industrialized countries) exclusively breastfed? One factor has to be the relentless promotion of breastmilk substitutes. It is no accident that breastfeeding levels are high in countries like Burundi and Rwanda, where there is little marketing.

I am now firmly persuaded that the promotion regularly practised by the infant formula companies is unethical and that it flouts the International Code of Marketing of Breast-milk Substitutes, to which they signed on. In fact, they helped draft the Code, which seeks to protect breastfeeding as "an unequalled way of providing ideal food for the healthy growth and development of infants."

The World Health Assembly adopted the Code in 1981 as a recommendation to its member States. They in turn are urged to translate it into national legislation ensuring that breastmilk substitutes are not marketed or distributed in such a way as to interfere with the protection, promotion and support of breastfeeding.

All along, the industry has insisted that it was 'self-monitoring' to ensure that its members followed the Code. The International Baby Food Action Network (IBFAN), a non-governmental organization, suspected otherwise, and it doggedly set about to collect evidence. Enough violations of the Code accumulated to justify a consumer boycott of infant formula manufacturers.

Based on IBFAN's findings and showing good-faith efforts to be fair, the groups that imposed the boycott have lifted and then reinstated it over the years. Currently, church and consumer groups, businesses and trade unions in 17 countries are active in the boycott in response to findings by IBFAN.

But rather than redressing the marketing wrongs, the infant formula manufacturers' lobby has wilfully misinterpreted the Code: Despite the word 'International' in its title, the manufacturers insist that the Code applies only to developing countries. They have also hammered away to discredit IBFAN's findings, particularly with governments and United Nations agencies.

Cracking the Code

In 1994, the Church of England called for a hiatus in the slanging match between the manufacturers and IBFAN. The Church suspended its support for the boycott while it sought unbiased, independent research into baby formula marketing practices.

To obtain that information, we joined in creating the Interagency Group on Breastfeeding Monitoring (IGBM), formed with 27 organizations including Christian Aid, OXFAM, Save the Children and the UK Committee for UNICEF. Now we have stark new evidence in the form of a report, *Cracking the Code*, which proves that 32 companies, including

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Gerber, Mead Johnson, Nestlé, Nutricia and Wyeth, have been routinely ignoring the Code.

Cracking the Code reports on a study undertaken between August and October 1996 in Bangladesh, Poland, South Africa and Thailand. In each country, the study involved interviews with 800 pregnant women and new mothers and 120 health workers in 40 facilities. The results showed that, among other violations of the Code, the formula companies have been distributing marketing literature promoting formula over breastmilk and giving away formula to maternity hospitals and mothers—from 1 in 12 mothers surveyed in Poland to 1 in 4 in Thailand.

Free samples, especially those handed out by health professionals, are a particularly insidious form of promotion. A mother can easily switch from breast to bottle, but from bottle to breast is another story. After being fed with free samples of formula even for just a few days, the baby, used to an artificial teat, is fussy about accepting the breast. While the baby has been drinking formula, the mother's milk production has declined.

Now the worried mother has a cranky and hungry baby on her hands, and she is convinced she must give up the breast and use formula for the duration. Rarely are such problems—and their solutions—explained to women when 'gifts' of baby formula are thrust into their hands. And when a doctor or nurse is providing the 'gift', it carries the health profession's implicit stamp of approval.

The industry has complained that the IGBM study is biased and unscientific. This is rubbish. Independent coordinators supervised the study in each country, and the many organizations that sponsored it would not have gone through this exercise without firm assurances that rigorous research protocols would be observed.

The Church of England suspended its support of the boycott as an act of good faith while the study was undertaken. The industry's criticism of the study adds up to this: The multinationals simply are not about to acknowledge their own unethical practices in countries that offer promising market potential.

It is now clear to me that the only way to end these practices is by threatening the commercial interests that drive them.

To concentrate its effectiveness, the consumer boycott has targeted one company: Nestlé. But that is not to suggest that the others are pure in their motives and actions—quite the contrary. They go about the same business, obscured in the shadows, while the light is shined on Nestlé. And if the IGBM had the resources to survey more countries, I have no doubt that we would find many more companies violating the Code.

These violations are not innocent; they are wilful. The companies have a moral obligation to abide by the Code, but instead they have treated it like something they can ignore with impunity until they are caught. They bank on the fact that developing countries do not have the resources to police the companies. *Cracking the Code* was our response to this implied challenge, and I hope it puts the manufacturers on notice that those countries have allies in the effort to put babies before business.

The body as a machine

The companies' aggressive efforts to replace something safe and naturally perfect with a manufactured commodity is a continuation of a long campaign that began during the Industrial Revolution. It has its roots in the mechanistic philosophy that viewed the human body as a machine that could be rationally managed.

The first breastmilk substitute was sold in the mid-1860s, and Henri Nestlé, a chemist working in Frankfurt, brought his product to market soon after. Mixing meal and cow's milk in "correct scientific proportion," he said in 1867, results in "a food which is all that could be desired." But he was wrong, along with any number of others who promoted supposedly 'scientific' techniques, such as bloodletting.

In the four countries surveyed, 32 companies have been routinely ignoring the Code.

The move towards infant formula became epidemic in the industrialized countries after the Second World War and is spreading in rapidly urbanizing parts of the developing world. Despite their claims, though, industry has never developed a product on a par with breastmilk. In fact, the best that science has done in this area is to prove that women's bodies know better than any manufacturer what to feed their babies, and when.

Of course, the impact of inappropriate infant feeding is immeasurably greater in developing countries. Lack of safe water for mixing the formula and contamination of feeding bottles are the main reasons why formula-fed babies die; another is that families cannot afford adequate supplies of formula, so they dilute it too much.

Compared to babies who are exclusively breastfed, those who are fed formula have 10 times the risk of incurring bacterial infections requiring hospitalization, 4 times the risk of meningitis and 3 to 4 times the risk of developing middle ear infections and gastroenteritis.

The risk, though, is not just in the developing world. In terms of lifelong chronic illness in industrialized countries, formula-fed babies have increased levels of asthma, allergies, eczema, diabetes and ulcerative colitis—and 5 to 8 times the risk of childhood lymphomas. Children who are not breastfed have lower scores on mental development tests and their vision is not as sharp. It is all noted in the scientific literature.

No one wants to impose breastfeeding on mothers. When women have the resources to afford adequate supplies of formula, safe water and fuel to sterilize bottles and synthetic nipples, formula may be an appropriate alternative for those who do not wish to breastfeed.

Formula is not the optimal choice, however, and women should be told that. Quite frankly, I question how much true 'choice' is involved when doctors, mothers and all the rest of society have been inundated with messages that disparage breastfeeding, in ways both subtle and blatant.

Some few mothers are unable to lactate, but there would be far fewer if all mothers were helped to begin breastfeeding immediately following delivery, rather than having a bottle thrust right into the baby's mouth.

The industry, along with many women's groups, says infant formula frees women who work outside the home from the tether of breastfeeding. That, they argue, is why bottle-feeding spreads in tandem with urbanization.

But is bottle-feeding really more convenient than breastfeeding? Is it easier to buy, prepare, tote, refrigerate and heat bottles of formula? The perceived inconvenience of breastfeeding should also be weighed against the later inconvenience of having to stay at home from work to care for formula-fed children, who, statistics tell us, are more sickly than breastfed children.

Employers undoubtedly need to do more to accommodate breastfeeding mothers, and they should be encouraged by

supportive government policies. Adequate, paid maternity leave, high-quality infant care at or near the workplace and facilities to express and store breastmilk would go far to encourage working mothers to begin breastfeeding and continue it after returning to work. Given its benefits for babies' health, it is in employers' interest to support the practice—to reduce absenteeism.

People in poor countries are often persuaded by advertisements that bottle-feeding is the modern thing to do. Having lived in Nigeria and travelled through much of Africa and Asia, I can report that formula manufacturers regularly use images of white doctors surrounded by black or Asian babies to promote their products as being the modern, healthy, 'first world' way to bring up a baby. It is a very potent and persuasive message, trading on images of modernization.

The true costs of formula

The price of bottle-feeding is an issue for finance ministers as well as families. From China to Zambia, when developing countries import breastmilk substitutes, they are exporting scarce foreign exchange that is desperately needed for other vital priorities. On top of that, precious health care funds are spent on illnesses wrought by artificial feeding.

If the 51 per cent of Indian mothers who exclusively breastfeed were to stop, replacing all their breastmilk with formula would cost about $2.3 billion. In Indonesia, a study in the 1980s calculated that mothers produced over 1 billion litres of breastmilk annually; equivalent supplies of commercial milk would cost $400 million. Savings in health costs and reduced fertility rates related to breastfeeding were estimated to be another $120 million. In Haiti, where just 3 per cent of infants are exclusively breastfed, infant formula costs $10 a week, or more than twice a typical income.

That is why it is so devastating when free samples end and the mother finds that her milk has diminished. For those who cannot afford adequate supplies of formula, the temptation to overdilute it is enormous.

Compare the cost of formula with the cost of feeding a mother so that she can properly breastfeed. Ideally, she needs an additional 500 calories a day above her normal diet, something easily achieved at far less than the cost of formula. In India, for example, five days' worth of that extra food costs less than 15 rupees (45 cents). By comparison, a five-day supply of formula costs about 130 rupees ($3.70). In the Philippines, Jose Fabella Hospital saved more than $100,000, an astounding 8 per cent of its annual budget, within one year of becoming a baby-friendly hospital, promoting and supporting exclusive breastfeeding of infants.

The Baby-Friendly Hospital Initiative is one approach to improving breastfeeding rates. A hospital is designated 'baby-friendly' when staff have agreed not to distribute or otherwise promote artificial baby milk and to implement specific steps to support breastfeeding.

This is an excellent initiative, but it does not protect women after they go home from the hospital, nor does it protect the many women in developing countries who give birth at home. There, messages promoting formula reach them via the media, formula company sales representatives and the commercial influence of health care workers through so-called professional education.

To rein in the multinationals, we need rigorous laws to enforce the International Code of Marketing of Breast-milk Substitutes in all countries. Such laws are crucial both to redress practices that have undermined breastfeeding and to prevent such practices in countries where commercial pressures have yet to gain a foothold. Compliance with the Code must be enforced by committed governments.

UNICEF/93-1821/Andrew

Exclusive breastfeeding for the first six months of life promotes healthy growth and a strong immune system.

Such national laws are not easily enacted. The industry grows more powerful every day, thanks to economic globalization. Yet 16 countries have managed to achieve full compliance with the Code, meaning that they have adopted appropriate laws. (*See league table.*) Of course, whether those laws are adhered to completely is another question.

Challenging laws

Not surprisingly, the industry has challenged some of these new laws in national courts. Their arguments can verge on the ludicrous: In India, Nestlé argued that it could not meet the law's requirement that a notice about the superiority of breastmilk appear in a panel at the centre of formula tins—because one cannot pinpoint the centre on a cylindrical tin!

Legal measures are only a beginning. We also need advocacy programmes to dispel the myths about breastfeeding. In the United States, social attitudes are such that mothers who breastfeed in public places frequently face harassment, sometimes even by police officers unaware that it is legal to breastfeed in public. More countries should offer the kind of explicit support provided by the Canadian province of Quebec, where women on public assistance who breastfeed receive an extra $50 per month.

Finally, the industry should ask itself why it continues its stubborn pursuit of this market, given the cost to its image. The multinationals seem to believe they can wear down the opposition, but I have yet to hear IBFAN—or anyone else who knows the facts—cry 'uncle' in this battle to save 1.5 million infant lives each year. Surely profits from synthetic baby milk cannot be so great that these multinational companies are willing to endanger their income on other products by doggedly pursuing unethical marketing strategies for formula.

Artificial baby milk should not be advertised in any way, and that must be final. Although there is a place for synthetic baby formula, that place is behind the chemist's counter. Women should have to think consciously about their decision to use formula rather than breastmilk. They are free to decide to use formula, but that choice must be informed by the truth about what bottle-feeding will cost them and their babies. ■

NUTRITION LEAGUE TABLE

PROTECTING BREASTFEEDING FROM UNETHICAL MARKETING

The first step on the road towards healthy nutrition is protecting, supporting and promoting breast-feeding. A key vehicle for that effort is the International Code of Marketing of Breast-milk Substitutes. Adopted by the World Health Assembly in 1981, it calls on all countries to regulate marketing of breastmilk substitutes to prevent breast-feeding from being undermined.

How countries enforce the Code

The International Code of Marketing of Breast-milk Substitutes aims to promote infant nutrition by protecting breastfeeding from inappropriate marketing of infant formula and other breastmilk substitutes. It is a minimum standard, enforceable through "national legislation, regulations or other suitable measures." Only countries that have adopted legally enforceable measures implementing the Code in its entirety are listed in **category 1**. Just 16 countries fall into this category—a disappointing showing considering that the Code is a minimum standard.

Countries in **category 2** have enacted only some of the Code's provisions. For example, the member States of the European Union, based on an EU Directive, have adopted legislation that is weaker than the Code. It provided that legislation only apply to infant formulas (and not to the wider category of breastmilk substitutes, bottles and teats) and that advertising be allowed in baby care and scientific publications.

Category 3 includes countries that have developed voluntary agreements with manufacturers providing no means of enforcement. In Australia this approach has proved reasonably successful. But the widespread violations reported in South Africa and Thailand (*see Commentary*) show the shakiness of such arrangements. Also in **category 3** are countries that have drafted measures or are still examining how best to implement the Code. Many are from Central and Eastern Europe and the Commonwealth of Independent States, where the distribution of breastmilk substitutes was formerly centrally controlled.

SUB-SAHARAN AFRICA

	LEVEL OF COMPLIANCE
Burkina Faso	1
Cameroon	1
Madagascar	1
Tanzania	1
Benin	2
Congo, Dem. Rep.	2
Ethiopia	2
Guinea	2
Guinea-Bissau	2
Mozambique	2
Nigeria	2
Senegal	2
Angola	3
Botswana	3
Burundi	3
Congo	3
Côte d'Ivoire	3
Eritrea	3
Gabon	3
Gambia	3
Ghana	3
Kenya	3
Lesotho	3
Malawi	3
Mali	3
Mauritania	3
Mauritius	3
Namibia	3
Niger	3
Rwanda	3
Sierra Leone	3
South Africa	3
Togo	3
Uganda	3
Zambia	3
Zimbabwe	3
Central African Rep.	4
Chad	4
Somalia	4
Liberia	No data

MIDDLE EAST AND NORTH AFRICA

	LEVEL OF COMPLIANCE
Iran	1
Lebanon	1
Algeria	2
Israel	2
Saudi Arabia	2
Tunisia	2
Turkey	2
U. Arab Emirates	2
Yemen	2
Egypt	3
Iraq	3
Jordan	3
Kuwait	3
Libya	3
Morocco	3
Oman	3
Sudan	3
Syria	3

Only 16 countries have achieved full compliance with the Code, meaning that they have adopted appropriate laws aimed at enforcing it.

CENTRAL ASIA

	LEVEL OF COMPLIANCE
Armenia	3
Georgia	3
Kazakstan	4
Afghanistan	No data
Azerbaijan	No data
Kyrgyzstan	No data
Tajikistan	No data
Turkmenistan	No data
Uzbekistan	No data

EAST/SOUTH ASIA AND PACIFIC

	LEVEL OF COMPLIANCE
India	1
Nepal	1
Philippines	1
Sri Lanka	1
Bangladesh	2
China	2
Indonesia	2
Japan	2
Lao Rep.	2
Mongolia	2
Papua New Guinea	2
Viet Nam	2
Australia	3
Bhutan	3
Cambodia	3
Korea, Rep.	3
Malaysia	3
Myanmar	3
New Zealand	3
Pakistan	3
Singapore	3
Thailand	3
Korea, Dem.	No data

AMERICAS

	LEVEL OF COMPLIANCE
Brazil	1
Costa Rica	1
Dominican Rep.	1
Guatemala	1
Panama	1
Peru	1
Canada	2
Chile	2
Colombia	2
Cuba	2
Mexico	2
Argentina	3
Bolivia	3
Ecuador	3
El Salvador	3
Haiti	3
Honduras	3
Jamaica	3
Nicaragua	3
Paraguay	3
Trinidad/Tobago	3
Uruguay	3
Venezuela	3
United States	4

EUROPE

	LEVEL OF COMPLIANCE
Austria	2
Belgium	2
Denmark	2
Finland	2
France	2
Germany	2
Greece	2
Hungary	2
Ireland	2
Italy	2
Netherlands	2
Norway	2
Portugal	2
Spain	2
United Kingdom	2
Albania	3
Belarus	3
Czech Rep.	3
Latvia	3
Lithuania	3
Poland	3
Russian Fed.	3
Slovakia	3
Sweden	3
Switzerland	3
TFYR Macedonia*	3
Croatia	4
Estonia	4
Moldova, Rep. of	4
Romania	4
Bosnia/Herzegovina	No data
Bulgaria	No data
Slovenia	No data
Ukraine	No data
Yugoslavia, Fed. Rep.	No data

WHAT THE TABLE RANKS

Level of compliance with the International Code of Marketing of Breast-milk Substitutes

WHAT THE RANKINGS MEAN

1 **FULL COMPLIANCE:** Countries that have enacted legislation or other legally enforceable measures that implement the International Code of Marketing of Breast-milk Substitutes in its entirety, as called upon by the World Health Assembly.

2 **PARTIAL COMPLIANCE:** Countries that have enacted legislation or other legally enforceable measures encompassing some of the Code's provisions. These measures therefore do not adhere to the Code as a "minimum standard" as stressed by the World Health Assembly.

3 **SOME ACTION:** Countries that have not enacted legislation or other legally enforceable measures implementing the Code but are in the process or have taken other measures. Examples include voluntary agreements with industry that regulate all or some of the marketing practices covered by the Code, drafting of measures to fully or partially implement it, or establishment of a working group to study how best to implement it.

4 **NO ACTION:** Countries that have taken no steps to implement the Code.

*The Former Yugoslav Republic of Macedonia, subsequently referred to as TFYR Macedonia.

Sources: International Code Documentation Centre, forthcoming *Code Handbook*, and information from UNICEF field offices, 1994–1996.

UNICEF/87-0006/Tolmie

The 'kangaroo' technique, used in the absence of incubators, keeps premature babies, like this one in Colombia, warm and in constant contact with their mothers.

Exclusive breastfeeding: A chance for survival

The lives of almost 1.5 million infants could be saved every year if for the first six months of life they were exclusively breastfed. That means nothing but breastmilk—no solids, no other liquids, not even water.

Data from 69 developing countries, including new estimates from 40 countries since last year's report, show that half of them have exclusive breastfeeding rates below 25%, with 14 countries at 10% or less. In only 15 countries are 50% or more of the infants exclusively breastfed.

The good news is that the number of countries gathering data has more than doubled since 1993, when only 32 developing countries had data on breastfeeding.

For optimal nutrition and protection against disease, exclusive breastfeeding is recommended. After the first six months of life, to ensure their healthy development and survival, babies should be given nutritious food together with breastmilk. They also need good care and access to health services.

10% and under

Developing countries with exclusive breastfeeding rates of 10% or less

	%
Niger	1
Nigeria	2
Angola	3
Côte d'Ivoire	3
Haiti	3
Central African Rep.	4
Thailand	4
Cameroon	7
Paraguay	7
Maldives	8
Senegal	9
Dominican Rep.	10
Togo	10
Trinidad/Tobago	10

50% and over

Developing countries with exclusive breastfeeding rates of 50% or more

	%
Rwanda	90
Burundi	89
Ethiopia	74
Tanzania	73
Uganda	70
Egypt	68
Eritrea	65
China	64
Mauritania	60
Bangladesh	54
Turkmenistan	54
Bolivia	53
Iran	53
India	51
Guatemala	50

Data refer to infants under four months of age.

Sources: DHS, MICS and other nationwide surveys, 1987–1996.

One in five babies too small at birth

One in five babies born in developing countries weighs less than the standard for a healthy-sized baby: 2.5 kg (about 5.5 pounds). The four countries with the highest rates of underweight births—Bangladesh, India, Pakistan and Sri Lanka—are all in South Asia. It is also the region with the highest rates of child malnutrition, underscoring the fact that low-birthweight babies are more susceptible to disease and tend to grow up malnourished.

Low birthweight is a major factor in the global total of more than 5 million yearly neonatal deaths. In developing countries, low birthweight usually results from maternal malnutrition.

Some developing countries—including Argentina, Chile, Costa Rica, Ghana, Jordan, Kuwait, Mongolia, Paraguay, Saudi Arabia, Singapore, Turkmenistan and the United Arab Emirates—have reduced low-weight births to levels equal to or lower than those of industrialized countries.

From age 1 to 3, children born underweight face increased risk of seizures, blindness and deafness, cerebral palsy and mental retardation. Low birthweight is also linked to a small impairment in cognitive development.

Most data on underweight births come from hospital records, leaving out the many babies born at home. How this factor skews the data is uncertain. A hospital birth may indicate higher income and therefore better nutrition, or it could indicate a higher-risk birth, possibly skewing the data towards lower birthweight.

15% or more

Developing countries with 15% or more low-birthweight babies, and their rate of institutional births

	% institutional births	% low-birthweight babies
Bangladesh	5	50
India	26	33
Pakistan	13	25
Sri Lanka	94	25
Papua New Guinea	–	23
Burkina Faso	43	21
Guinea	25	21
Afghanistan	5	20
Guinea-Bissau	–	20
Malawi	55	20
Mozambique	27	20
Togo	8	20
Angola	16	19
Yemen	12	19
Lao Rep.	7	18
Madagascar	45	17
Mali	24	17
Rwanda	25	17
Viet Nam	70	17
Congo	–	16
Ethiopia	10	16
Kenya	44	16
Myanmar	–	16
Namibia	67	16
Nigeria	31	16
Somalia	2	16
Central African Rep.	50	15
Congo, Dem. Rep.	–	15
Haiti	20	15
Iraq	49	15
Nicaragua	59	15
Niger	16	15
Philippines	28	15
Sudan	18	15

Less than 10%

Developing countries with less than 10% low-birthweight babies, and their rate of institutional births

	% institutional births	% low-birthweight babies
Chile	98	5
Paraguay	55	5
Turkmenistan	90	5
Costa Rica	98	6
Mongolia	97	6
U. Arab Emirates	95	6
Argentina	90	7
Ghana	42	7
Jordan	78	7
Kuwait	97	7
Saudi Arabia	86	7
Singapore	99	7
Botswana	66	8
Malaysia	90	8
Mexico	63	8
Oman	82	8
Tunisia	86	8
Turkey	60	8
Uruguay	96	8
Algeria	76	9
China	51	9
Cuba	99	9
Honduras	45	9
Iran	65	9
Korea, Rep.	99	9
Morocco	37	9
Panama	84	9
Venezuela	97	9

Sources: WHO and updates from UNICEF field offices, 1990–1994 (low birthweight).

Stunting: A scar and a wound

Stunting (low height for age) in children under age 5 is an indicator of long-term or chronic malnutrition, reflected by inadequate growth of the long bones in a child's body. Stunting is caused by insufficient or poor quality food, poor feeding patterns, inadequate care of children and women, frequent infection and poverty. Malnutrition, mostly in mild or moderate forms, contributes to more than half of all child deaths and to diminished capacities for those who survive. Low birthweight may be a result of the mother's stunting (because of her poor nutrition) and is a significant precursor to childhood stunting.

In 35 countries (44% of the 80 countries that have data), at least one in every three children under 5 is stunted. In 10 of those countries, half or more of the children are stunted.

Stunting weakens immunity, impairs learning capacity and work performance and affects overall quality of life. For girls, it presents an additional risk: It is associated not only with low adult height but also with smaller pelvic size, increasing the risk of obstructed labour and thereby of maternal mortality.

Stunting can be either the 'scar'—reflecting an early period of growth failure—or the 'wound'—an indication of ongoing deficient growth. Height variations resulting from ethnic differences do not affect stunting data, as such variations do not tend to show up until adolescence.

Children of stunted parents tend to suffer the same fate—adults who began life stunted but whose diets later improved still tend to give birth to stunted children.

One third or more

Developing countries where 33% or more of under-5s are stunted

	%
Eritrea	66
Ethiopia	64
Bangladesh	63
Bhutan	56
Mozambique	55
Zambia	53
India	52
Guatemala	50
Madagascar	50
Pakistan	50
Lao Rep.	48
Malawi	48
Rwanda	48
Nepal	47
Tanzania	47
Viet Nam	47
Congo, Dem. Rep.	45
Myanmar	45
Botswana	44
Mauritania	44
Burundi	43
Nigeria	43
Honduras	40
Yemen	39
Cambodia	38
Uganda	38
Peru	37
Sierra Leone	35
Central African Rep.	34
Ecuador	34
Kenya	34
Sudan	34
Togo	34
Lesotho	33
Philippines	33

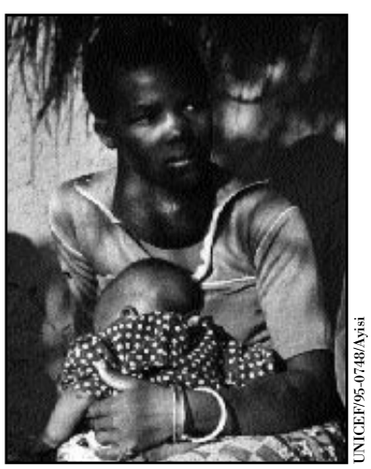
One tenth or less

Developing countries where 10% or less of under-5s are stunted

	%
Chile	3
Trinidad/Tobago	5
Jamaica	6
Venezuela	6
Costa Rica	8
Panama	9
Mauritius	10

Sources: DHS, MICS and other nationwide surveys, 1987–1996.

Slow starters catching up in salt iodization



UNICEF/95-0748/Ayisi

Mozambique – now iodizing 62 per cent of its salt to combat iodine deficiency disorders, including goitre and mental retardation.

Three years ago, 48 developing countries were reported in *The Progress of Nations* as having no active salt iodization programmes. Today, most of them have begun to iodize their salt or import iodized salt. Progress in 14 of them has been dramatic, with salt iodization levels crossing the 50% mark. Topping the chart are Tunisia (98%), Lebanon (92%) and Zambia (90%). Ten of the countries with no data are either known to be producing iodized salt, have enacted legislation to do so or have installed the iodizing equipment.

It was estimated that up until 1990, about 40 million infants—one third of all babies born each year in the world—were at some risk of mental impairment due to iodine deficiency in their mothers' diets. This year, because of the worldwide increase in the use of iodized salt, 12 million children are expected to be spared that risk. And the number of babies born cretins (suffering from severe and irreversible mental and physical damage) is expected to have dropped by more than half, from around 120,000 in 1990 to under 55,000 worldwide.

Progress in salt iodization*

	% salt iodized
Tunisia	98
Lebanon	92
Zambia	90
Indonesia	85
Iran	82
Burundi	80
Jordan	75
Sierra Leone	75
Uganda	69
Paraguay	64
Mozambique	62
Viet Nam	59
Malawi	58
Iraq	50
Cuba	45
Mongolia	42
Philippines	40
South Africa	40
Benin	35
Chad	31
Central African Rep.	28
Burkina Faso	22
Yemen	21
Mali	20
Turkey	18
Myanmar	14
Congo, Dem. Rep.	12
Angola	10
Ghana	10
Haiti	10
Senegal	9
Niger	7
Korea, Dem.	5
Togo	1
Afghanistan	–
Cambodia**	–
Congo**	–
Côte d'Ivoire**	–
Egypt**	–
Guinea**	–
Guinea-Bissau**	–
Lesotho	–
Liberia	–
Malaysia**	–
Morocco**	–
Papua New Guinea**	–
Somalia	–
Sudan**	–

*Progress among the 48 developing countries that had no salt iodization programmes in 1994.

**Some salt is iodized and efforts to increase availability of iodized salt are under way.

Sources: UNICEF field offices, DHS, MICS, 1993–1996.