



# Breastfeeding Briefs

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## The Global Strategy on Infant and Young Child Feeding

On 18 May 2002, the 55<sup>th</sup> World Health Assembly (WHA) adopted the Global Strategy on Infant and Young Child Feeding (GS).<sup>1</sup> The full text of the GS is included in another WHA document,<sup>2</sup> and is available online at [www.who.int/gb/EB\\_WHA/PDF/WHA55/ea5515.pdf](http://www.who.int/gb/EB_WHA/PDF/WHA55/ea5515.pdf). The GS is a guide for country-specific approaches to improving feeding practices. It is not an innovative document, but strongly reaffirms commitments to implementation of the Innocenti Declaration, including the *International Code of Marketing of Breastmilk Substitutes* and the Baby Friendly Hospital Initiative. And it clearly defines optimal feeding, as in WHA Resolution 54.2 of 2001, as exclusive breastfeeding for the first six months of life; continued breastfeeding for up to two years of age or beyond; and timely, adequate, safe and properly fed complementary feeding. The GS considers good nutrition an essential component of the health and human rights of women and children, and a key contribution to poverty reduction.

There is, however, new emphasis on women and children living in special circumstances: malnourished infants and young children who need immediate access to more and better food; low birth weight infants, for whom breastfeeding is particularly crucial; infants and children who are victims of natural or man-made emergencies; HIV-infected women, who need adequate counselling for an informed decision about infant feeding that suits their situation and subsequent practical support; disadvantaged groups, such as orphans and children in foster care, adolescent mothers, women with disabilities or dependence, mothers who are imprisoned or belong to otherwise disadvantaged groups.

The GS, unanimously endorsed by all Member States of WHO, states that Governments carry the primary obligation to formulate, implement, monitor and evaluate national policies and plans, with adequate resources. In this sense, the GS represents a powerful instrument for advocacy and action to be used by all concerned parties. But the GS recognizes as well that success in the implementation of effective interventions will be achieved only if all these parties fully contribute. Among them, international organizations, health professional bodies, employers, educational authorities, the mass media, and NGOs, including community-based support groups.

A special paragraph, one that raised the hottest discussion during this session of the WHA, is devoted to manufacturers and distributors of industrially processed foods. Recognizing that "low-cost complementary foods, prepared with locally available ingredients using suitable small-scale production technologies in community settings can help to meet the nutritional needs of older infants and young children" (para 16), the GS invites commercial enterprises to ensure "that processed foods ... meet applicable Codex Alimentarius standards" and "that their conduct at every level conforms to the International Code, subsequent relevant WHA resolutions, and national measures that have been adopted to give effect to both" (para 44). The GS states as well that international organizations should facilitate the work of Governments to ensure "that the International Code and subsequent WHA resolutions are respected in trade policies and negotiations" (para 48), a clear warning to the possibility that WTO agreements could prevail over WHO recommendations.

Transformed into action by Governments and other concerned parties, the GS will probably achieve its aims in the medium-to long-term. The participation of a wide political and geographical spread of actors in its development should ensure a sense of ownership and a high level of commitment. But putting into practice all its recommendations is not an easy task, and many political and technical obstacles will have to be overcome. Governments, international agencies and NGOs will also need additional financial resources, and great care is needed to ensure that business involvement is confined to the two areas expressed above. The role and duties of different actors should always be clearly spelled out. IBFAN groups, that were successful in achieving this during the development of the GS, must continue to protect the interests of infants and young children from the vested interests of industrial and trade corporations.

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<sup>1</sup> World Health Assembly. Infant and young child nutrition. Resolution WHA 55.25, Geneva, 18 May 2002.

<sup>2</sup> World Health Assembly. Global strategy on infant and young child feeding. Resolution WHA A55.15, Geneva, 16 April 2002.

## Breastfeeding, why...

### Breastfeeding and infant growth

Kramer MS, Guo T, Platt RW, Shapiro S, Collet JP, Chalmers B, Hodnett E, Sevkovskaya Z, Dzikovich I, Vanilovich I. *Breastfeeding and infant growth: biology or bias?* *Pediatrics* 2002;110:343-7

Is prolonged and exclusive breastfeeding (EBF) associated with lower infant weight and length at a later age? This study suggests that it may actually accelerate weight and length gain in the first few months, with no detectable deficit by 12 months. Within a randomised trial conducted in Belarus (see BB 31/32 for details), 17,046 healthy, full-term, singleton breastfed infants weighing more than 2,500 g were followed up at 1, 2, 3, 6, 9, and 12 months for measurements of weight and length. Data were analysed according to randomisation, but also combining the two randomised groups and comparing 1,378 infants weaned in the first month and those breastfed for the full 12 months of follow-up with either 3 months or more (n = 1,271), or 6 months or more (n = 251), of EBF. In the analysis by random assignment, mean weight was significantly higher in the intervention group (i.e., where training for the BFHI was conducted) by 1 month of age (4,341 vs 4,280 g). The difference increased through 3 months (6,153 vs 6,047 g), declined slowly thereafter, and disappeared by 12 months (10,564 vs 10,571 g). Length followed a similar pattern. In the analysis by type of feeding, infants weaned in the first month were slightly lighter and shorter at birth and their weight-for-age and length-for-age declined by 1 month, but they caught up to the other groups by 6 months and were heavier and longer by 12 months.

Simondon KB et al. *Breastfeeding is associated with improved growth in length, but not weight, in rural Senegalese toddlers.* *Am J Clin Nutr* 2001;73:959-67

Some studies have reported that children weaned late show lower height-for-age. Is this explained by their height before weaning or is prolonged breastfeeding the cause of this impaired growth?

This study shows that prolonged breastfeeding actually increased length, and that the negative correlation between height-for-age and duration of breastfeeding is probably due to earlier weaning of healthy, well-nourished children. A cohort of 443 children recruited from dispensaries at 2 months of age was visited in their homes at 6-month intervals when they were approximately 1.5 to 3 years old. Weight, length, arm circumference, and triceps skinfold thickness were measured. Six-month increments were analysed in relation to breastfeeding (breastfed compared with weaned children or breastfeeding duration), and maternal housing. The mean duration of breastfeeding was 24.1 months. At 3 years, height-for-age was greater for those infants who were weaned earlier, but this association disappeared after adjustment for height-for-age in infancy. Length increments were significantly greater in both the second and third years of life in children breastfed for longer duration and tended to be greater in breastfed than in weaned children in the second year of life. In the third year of life, breastfed children had greater length increments than did weaned children in the subgroup with poor housing. Breastfeeding had no significant influence on weight gain.

### Complementary feeding and infant growth

Padmadas SS, Hutter I, Willekens F. *Weaning initiation patterns and subsequent linear growth progression among children aged 2-4 years in India.* *Int J Epidemiol* 2002 Aug;31(4):855-63

In India, malnutrition is still an important problem and breastmilk should be seen as an essential source of nutrients. About 47% of infants are weaned (i.e., first given complementary foods) at 6 months or beyond, and more than 50% of children under 4 years are stunted. This study used cross sectional data on 6,285 children aged 2-4 years from the National Family Health Survey of 1992-1993 to look at the association between weaning and stunting. Children weaned at age 6 months or later had 57-88% higher likelihood of being stunted compared with those weaned before 6 months. Stunting appeared to be considerably lower for children weaned at age 3 months and showed an upward trend thereafter. The effect persisted after controlling for important demographic, health, social and geographical variables. The effect, however, may be due to bias: the cross sectional nature of the study does not allow to control for weight and length at weaning, as in the longitudinal studies summarised above and below.

WHO Working Group on the Growth Reference Protocol, WHO Task Force on Methods for the Natural Regulation of Fertility. *Growth of healthy infants and the timing, type, and frequency of complementary foods.* *Am J Clin Nutr* 2002;76:620-7

There is no evidence of benefit or risk related to growth and the timing of introduction of different types and frequencies of complementary foods at any specific time between 4 and 6 months of age in healthy infants living in environments without major economic constraints and with low rates of illness. This conclusion is drawn from a longitudinal study on breastfeeding and lactational amenorrhea in seven developed countries. Small differences in growth that were statistically significant, but probably not biologically important, were noted among infants in whom complementary foods were introduced at different times. Weight gain was more sensitive to feeding frequencies than were gains in length, but the differences were small. These results, however, may not be valid for populations living in poor environments.

### **Breastfeeding and overweight**

Hediger ML, Overpeck MD, Kuczmarski RJ, Ruan WJ. *Association between infant breastfeeding and overweight in young children.* JAMA 2001;285:2453-60

If a mother is obese, the child might have a higher probability of obesity as well. Breastfeeding may not be as effective as moderating familial factors, such as dietary habits and physical activity, in preventing children from becoming overweight. The authors draw these conclusions from the study of a sample of 2,685 US-born children between the ages of 3 and 5 years, with height and weight measures, and information on infant feeding. A body mass index (BMI) between the 85th and 94th percentile was considered as overweight and a BMI in the 95th percentile or higher was considered as obesity. After adjusting for potential confounders, there was a 37% lower risk of overweight for ever breastfed children compared with those never breastfed. There was no reduced risk of obesity and there was no clear dose-dependent effect of the duration of full breastfeeding on being overweight or obese, and no threshold effect. The strongest predictor of child obesity was the mother's concurrent weight. The rate of obese children nearly tripled with maternal overweight and more than quadrupled with maternal obesity.

Gillman MW, Rifas-Shiman SL, Camargo CA Jr, et. al. *Risk of overweight among adolescents who were breastfed as infants.* JAMA 2001;285:2461-7

Infants who are fed breastmilk more than infant formula, or who are breastfed for longer periods, may have a lower risk of being overweight during older childhood and adolescence. This is the result of a study on 8,186 girls and 7,155 boys aged 9 to 14 years. Overweight was defined as in the above study, but in this one, even controlling for the mother's BMI, breastfed infants were protected against obesity. In the first 6 months of life, 62% of subjects were only or mostly fed breastmilk, and 31% were only or mostly fed infant formula. 48% were breastfed for at least 7 months while 31% were breastfed for 3 months or less. At ages 9 to 14 years, 5% of girls and 9% of boys were overweight. Among those who had been only or mostly fed breastmilk, compared with those only or mostly fed formula, the risk of overweight was 22% lower after adjustment for age, sex, sexual maturity, energy intake, time watching television, physical activity, mother's BMI, and other variables reflecting social, economic, and lifestyle factors. Compared with subjects who had been breastfed for 3 months or less, those who had been breastfed for at least 7 months had a 20% lower risk of overweight.

Armstrong J, Reilly JJ, Child Health Information Team. *Breastfeeding and lowering the risk of childhood obesity.* Lancet 2002;359:2003-4

In Scotland, breastfeeding may be associated with a reduced risk of obesity in childhood. This hypothesis was tested in 1998 and 1999 in a population-based sample of 32,200 Scottish children studied at age 39-42 months. Obesity was defined as in the above studies. The prevalence of obesity was significantly lower by 30% in breastfed children, and the association persisted after adjustment for socio-economic status, birth weight and sex. Maternal BMI was not controlled for.

### **Breastfeeding, how...**

#### **Mothers' weaning decisions**

Simondon KB, Costes R, Delaunay V, Diallo A, Simondon F. *Children's height, health and appetite influence mothers' weaning decisions in rural Senegal.* Int J Epidemiol 2001;30:476-81

In Senegal, the habit of postponing weaning of stunted children very likely explains why breastfed children have lower height-for-age than weaned children. This is the conclusion of a study on maternal reasons for early and late weaning. A cohort of 485 children was investigated with interviews at the ages of 18-28 and 23-33 months. Two-thirds of mothers of breastfed children under 2 years stated that they would wean at the age of 2, while for breastfed children aged 2 years a 'tall and strong' child was the most prevalent rule. The main reasons for weaning prior to 2 years were that the child ate well from the family plate (60%), that the child was 'tall and strong' (46%), and maternal pregnancy (35%). The main reasons for weaning later than 2 years were a 'little, weak' child (33%), food shortage (25%), illness of the child (24%), and refusal of family food (14%). Children breastfed above the age of 2 because they were 'small and weak', had lower mean height-for-age and a greater prevalence of stunting than children breastfed late for other reasons.

### **Adherence to infant feeding recommendations**

Vaahtera M, Kulmala T, Hietanen A, Ndekha M, Cullinan T, Salin ML, Ashorn P. *Breastfeeding and complementary feeding practices in rural Malawi. Acta Paediatr* 2001;90:328-32

Education and family planning may improve adherence to infant feeding recommendations and reduce the incidence of early childhood malnutrition. This is shown by a study on a cohort of 720 newborn babies in Malawi. Monthly interviews of the main guardians indicated that breastfeeding was universal for 18 months. As most babies were given water or other supplements soon after birth, the EBF rates were only 19%, 8%, 2% and 0% at ages 1, 2, 3 and 4 months, respectively. Complementary foods and family foods were introduced at median ages of 2.5 and 6.3 months, i.e. much earlier than recommended. Better adherence to national recommendations was associated with smaller number of children in the family, increased maternal education and some other socio-economic or environmental variables.

### **Infant feeding practices in Tanzania**

Agnarsson I, Mpello A, Gunnlaugsson G, Hofvander Y, Greiner T. *Infant feeding practices during the first six months of life in a rural area in Tanzania. East Afr Med J* 2001;78:9-13

The recommendation to exclusively breastfeed is still not followed everywhere. To assess beliefs, knowledge and practices affecting EBF, a house-to-house survey was conducted on 107 Tanzanian mothers with infants less than 7 months. 64% were put to the breast within 2 to 11 hours. Prelacteal feeds were given to about 25% of infants. The type of prelacteal fluid given was mainly glucose water in hospital and plain water with home deliveries. 46% of the mothers discarded colostrum. The median duration of EBF was about 2 months, and of full breastfeeding, about 4 months. The average duration of EBF, though far below recommended levels, is higher than is found in most studies in Africa and Tanzania. This may be due to the efforts of hospital staff that had received special training on breastfeeding in recent years.

### **... and Brazil**

Marques NM, Lira PIC, Lima MC, da Silva NL, Batista Filho M, Huttly SRA, Ashworth A. *Breastfeeding and early weaning practices in northeast Brazil: a longitudinal study. Pediatrics* 2001;108:e66

In Brazil, breastfeeding is nowadays common, but EBF is still rare and of short duration. This study tries to identify risk factors that may be used to develop interventions. In four small towns of northeast Brazil, 364 mothers were interviewed at delivery to ascertain home support, antenatal care, delivery room practices, and their intentions regarding breastfeeding, pacifiers, and introduction of water, teas, and other milk. Thereafter, daily information about feeding practices was collected at twice-weekly home visits from 0 to 12 months of age. Almost 100% of mothers breastfed their infant, but few intended to breastfeed exclusively, and in the first week, 80% gave water/tea and 56% used a pacifier. The median duration of EBF was 0 days, and the median age for starting other milk was 24 days. The median duration of breastfeeding was 65 days for mothers who started other milk within 1 month and 165 days for other mothers. After adjustment for confounding variables, the main factors associated with introduction of other milk within 1 month were pacifier use in the first week, intention to start other milk in the first month, giving water/tea in the first week, and leaving the maternity ward before breastfeeding was started.

### **Predictors of premature cessation of breastfeeding**

Berra S, Rajmil L, Passamonte R, Fernandez E, Sabulsky J. *Premature cessation of breastfeeding in infants: development and evaluation of a predictive model in two Argentinian cohorts: the CLACYD study, 1993-1999. Acta Paediatr* 2001;90:544-51

To identify factors that are predictors of early weaning is certainly helpful for programme planners. The following may be predictors of premature (prior to 6 months) cessation of breastfeeding: mother breastfed less than 6 months, breastfeeding of previous child for less than 6 months, the condition of the firstborn child, the first mother-child contact occurring after 90 minutes of life, and having an unplanned pregnancy. This is the result of a study on two cohorts of newborn infants with a birthweight of 2000 g or more, a total of 700 babies, recruited in 1993 and 1995 during hospital admittance for childbirth in Cordoba, Argentina.

### **Promotion of breastfeeding in the Gambia**

Semega-Janneh IJ. et al. *Promoting breastfeeding in rural Gambia: combining traditional and modern knowledge.* *Health Policy Plan* 2001;16:199-205

In rural Gambia, delayed initiation of breastfeeding, prelacteal feeding and failure to practice EBF are widespread. In this study, quantitative methods were used to identify current infant feeding practices in twelve rural communities. Qualitative data further indicated that current beliefs and practices were strongly influenced by traditional beliefs and practices. Elders, both women and men, including husbands, kept these very much alive. The results also showed an unexpected support for bottle feeding from both male and female elders who considered it part of the modernisation process. A strategy for promoting early initiation of breastfeeding, use of colostrum and EBF for 6 months should therefore incorporate traditional beliefs and practices into modern messages on optimal breastfeeding. Traditional beliefs and practices in the study setting that could be used in this way include knowledge from the population's acquaintance with the newborns of their livestock. It also includes the traditional practice of mothers taking their very young children with them when going to work in the fields.

### **Unplanned pregnancies and prolonged breastfeeding**

Chinebuah B, Perez-Escamilla R. *Unplanned pregnancies are associated with less likelihood of prolonged breastfeeding among primiparous women in Ghana.* *J Nutr* 2001;131:1247-9

If a pregnancy is unplanned, we should expect the mother to breastfeed less, but only if she is primiparous. This is shown by a study that examined the association between pregnancy intentions and the likelihood of breastfeeding, to determine whether parity modifies it. The analysis was based on last-born children, aged 13-36 months, of women participating in the 1993 *Demographic and Health Survey* in Ghana. Primiparous women with planned pregnancies had a significantly greater median duration of breastfeeding than their counterparts whose pregnancies were unintended (21.1 vs. 18.5 months). Among multiparous women, median breastfeeding duration was similar in both groups (21.5 vs. 21 months).

### **Lack of social support for breastfeeding**

McIntyre E, Hiller JE, Turnbull D. *Attitudes towards infant feeding among adults in a low socioeconomic community: what social support is there for breastfeeding?* *Breastfeed Rev* 2001;9:13-24

To examine infant feeding attitudes and experiences of mothers, fathers and grandmothers, as well as the general community, this study undertook an analysis of the role of social support in influencing breastfeeding in a low socioeconomic area in South Australia. A random telephone survey of over 3,400 adults indicated that there was little support for breastfeeding compared to bottle feeding, with similar barriers to breastfeeding found in all target groups as well as in the general community. These barriers included breastfeeding in public, the convenience of bottle feeding, maternal discomfort of breastfeeding, fathers' involvement with feeding, and the mother's need to have had some previous experience related to breastfeeding. Strategies promoting and supporting breastfeeding should address these issues and should be directed at the community in general rather than at specific groups.

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