World Health Organization

Promoting proper feeding for infants and young children

The challenge

Nutrition and nurturing during the first three years are both crucial for lifelong health and well-being. In infancy, no gift is more precious than breastfeeding; yet barely one in three infants is exclusively breastfed during the first four months of life.

Faulty feeding practices begin with giving any other nourishment but breast milk before complementary feeding is nutritionally required – or with substituting entirely for breast milk, which places babies at risk of illness, even death. When complementary feeding begins, uninformed decisions can also interfere with good nutrition in terms of which foods are given, how much and how often and whether breastfeeding continues, as it should. Nutritionally inadequate or contaminated food, and starting complementary feeding too early or too late are major causes of malnutrition in infants and young children.

The response

Promoting sound feeding practices is one of the main programme areas that the Department of Nutrition for Health and Development focuses on. The Department strives to make significant investments in the protection, promotion and support of sound feeding recommendations. This includes the production of sound, evidence-based technical information, development of guidelines and counselling courses, production of appropriate indicators and maintenance of a Global Data Bank on Breastfeeding and Complementary Feeding.

Exclusive breastfeeding

Breastfeeding is an unequalled way of providing ideal food for the healthy growth and development of infants; it is also an integral part of the reproductive process with important implications for the health of mothers. A recent review of evidence has shown that, on a population basis, exclusive breastfeeding for 6 months is the optimal way of feeding infants. Thereafter infants should receive complementary foods with continued breastfeeding up to 2 years of age or beyond.

To enable mothers to establish and sustain exclusive breastfeeding for 6 months, WHO and UNICEF recommend:

- Initiation of breastfeeding within the first hour of life
- Exclusive breastfeeding – that is the infant only receives breastmilk without any additional food or drink, not even water
- Breastfeeding on demand – that is as often as the child wants, day and night
- No use of bottles, teats or pacifiers

Breastmilk is the natural first food for babies, it provides all the energy and nutrients that the infant needs for the first months of life, and it continues to provide up to half or more of a child's nutritional needs during the second half of the first year, and up to one-third during the second year of life.

Breastmilk promotes sensory and cognitive development, and protects the infant against infectious and chronic diseases. Exclusive breastfeeding reduces infant mortality due to common childhood illnesses such as diarrhoea or pneumonia, and helps for a quicker recovery during illness. These effects can be measured in resource-poor and affluent societies *(Kramer M et al Promotion of Breastfeeding Intervention Trial (PROBIT): A randomized trial in the Republic of Belarus. Journal of the American Medical Association, 2001, 285 (4): 413-420)*

Breastfeeding contributes to the health and well-being of mothers, it helps to space children, reduces the risk of ovarian cancer and breast cancer, increases family and national resources, is a secure way of feeding and is safe for the environment.

While breastfeeding is a natural act, it is also a learned behaviour. An extensive body of research has demonstrated that mothers and other caregivers require active support for establishing and sustaining appropriate breastfeeding practices. WHO and UNICEF launched the **Baby-friendly Hospital Initiative** in 1992, to strengthen maternity practices to support breastfeeding. The foundation for the BFHI are the **Ten Steps to Successful Breastfeeding** described in Protecting, Promoting and Supporting Breastfeeding: a Joint WHO/UNICEF Statement. The evidence for the effectiveness of the Ten Steps has been summarized in a scientific review document.

The BFHI has been implemented in about 16.000 hospitals in 171 countries and it has contributed to improving the establishment of exclusive breastfeeding world-wide. While improved maternity services help to increase the initiation of exclusive breastfeeding, support throughout the health system is required to help mothers sustain exclusive breastfeeding.

WHO and UNICEF developed the 40-hour Breastfeeding Counselling: A training course to train a cadre of health workers that can provide skilled support to breastfeeding mothers and help them overcome problems. Basic breastfeeding support skills are also part of the 11-day Integrated Management of Childhood Illness training course for first-level health workers, which combines skills for adequate case management with preventive care. Evaluation of breastfeeding counselling delivered by trained health professionals as well as community workers has shown that this is an effective intervention to improve exclusive breastfeeding rates (link to graph)

The Global Strategy for Infant and Young Child Feeding describes the essential interventions to promote, protect and support exclusive breastfeeding.

Complementary feeding

When breastmilk is no longer enough to meet the nutritional needs of the infant, complementary foods should be added to the diet of the child. The transition from exclusive breastfeeding to family foods, referred to as complementary feeding, typically covers the period from 6 to 18-24 months of age, and is a very vulnerable period. It is the time when malnutrition starts in many infants, contributing significantly to the high prevalence of malnutrition in children under five years of age world-wide. WHO estimates that 2 out of 5 children are stunted in low-income countries.

Complementary feeding should be *timely*, meaning that all infants should start receiving foods in addition to breastmilk from 6 months onwards. It should be *adequate*, meaning that the nutritional value of complementary foods should parallel at least that of breastmilk. Foods should be prepared and given in a safe manner, meaning that measures are taken to minimize the risk of contamination with pathogens. And they should be given in a way that is *appropriate*, meaning that foods are of appropriate texture and given in sufficient quantity.

The adequacy of complementary feeding (adequacy in short for timely, adequate, safe and appropriate) not only depends on the availability of a variety of foods in the household, but also on the feeding practices of caregivers. Feeding young infants requires active care and stimulation, where the caregiver is responsive to the child clues for hunger and also encourages the child to eat. This is also referred to as active or responsive feeding.

WHO recommends that infants start receiving complementary foods at 6 months of age in addition to breastmilk, initially 2-3 times a day between 6-8 months, increasing to 3-4 times daily between 9-11 months and 12-24 months with additional nutritious snacks offered 1-2 times per day, as desired.

Inappropriate feeding practices are often a greater determinant of inadequate intakes than the availability of foods in the households. WHO has developed a protocol for adapting feeding recommendations that enables programme managers to identify local feeding practices, common problems associated with feeding, and adequate complementary foods. The protocol builds upon available information and proposes household trials to test improved feeding recommendations. WHO recommends that the protocol be used to design interventions for improved complementary feeding, and is included as part of adaptation process of the Integrated Management of Childhood Illness strategy.

Research has shown that caregivers require skilled support to adequately feed their infants. Guidelines for appropriate feeding are included as part of the Integrated Management of Childhood Illness guidelines and training course for first-level health workers. Extending these guidelines, WHO has developed the guide Complementary feeding: Family Foods for breastfed children that gives more detailed guidance for health workers on how to support complementary feeding. The guide is the basis of a 3-day training course for health professionals, which is currently under development.

The Global Consultation on Complementary Feeding, convened by WHO 10-13 December 2001, has resulted in updated recommendations for appropriate feeding practices and guidance for programme managers to put these into action. The background papers that informed this consultation are published in the Special Supplement of the Food and Nutrition Bulletin 2003; 24 (1) and provide an update to the WHO/UNICEF publication Complementary feeding of young children in developing countries: a review of current scientific knowledge, 1998, WHO/NUT/98.1.. The Guiding Principles for Complementary feeding of the Breastfed Child (2003) developed by the Pan American Health Organization, summarize the current scientific evidence for complementary feeding and are intended to guide policy and programmatic action at global, national and community levels.

Based on new knowledge, WHO is spearheading a global process for developing indicators to assess complementary feeding. An informal technical meeting to review and develop indicators for complementary feeding was held in Washington, 3-5 December 2002. The background paper Moving forward with complementary feeding: indicators and research practices guided participants in identifying possible indicators for further research or field validation. WHO in collaboration with partners is coordinating next steps to conduct validations. It is hoped that sufficient information will be available by the end of 2003 to allow for a consensus meeting

Feeding in exceptionally difficult circumstances

WHO recommends exclusive breastfeeding for six months, and sustained breastfeeding with appropriate complementary foods up to two years or beyond. Families in difficult circumstances require specially attention and practical support to be able to feed their children adequately. In such cases, the likelihood of not breastfeeding increases, due to the dangers of artificial feeding and inappropriate complementary feeding. Where-ever possible, mothers and babies should remain together and be provided the support they need to exercise the most appropriate feeding option under the circumstances.

Difficult circumstances refer to situations faced by particularly vulnerable groups such as:

- HIV-infected mothers and their infants
- People suffering the consequences of complex emergencies, including natural or human-induced disasters such as floods, drought, earthquakes, war, civil unrest and severe political and economic living conditions.
- Low birth-weight or premature infants
- Infants and young children who are malnourished
- Adolescent mothers and their infants
- Children living in special circumstances such as foster care, or with mothers who have physical or mental disabilities, or children whose mothers are in prison or are affected by drug or alcohol abuse.

WHO is working on technical guidelines and materials for infant and young child feeding for vulnerable groups, in particular as it relates to HIV and infant feeding, infant feeding in emergency situations, feeding of malnourished children and feeding low-birth weight and premature infants.

The contribution of breastfeeding to mother-to-child transmission of HIV is an area of considerable concern. Evidence shows that up to 20% of infant born to HIV-infected mothers may acquire HIV through breastfeeding, depending on duration and other risk factors. Recent studies indicate a heightened risk of transmission during the early months. However, evidence from one study shows that exclusive breastfeeding in the first three months of life may carry a lower risk of HIV transmission than mixed feeding does. WHO is supporting research to estimate risks of transmission associated with exclusive breastfeeding and early cessation, as well as to develop interventions to ensure safe replacement feeding. Pending new information, the UNICEF/UNAIDS/WHO guidelines issued in 1998 remain valid. For more information on available guidelines and tools, please refer to the page on HIV and Infant Feeding.

Two training modules on Infant feeding in emergencies are being developed as a joint effort by WHO, UNICEF, UNHCR, WFP and international NGOs. A working draft of Module 1, intended for all emergency relief staff, is available. A more detailed module for relief workers caring for mothers and children is under development.

Children who are malnourished are often found in environments where improving the quality and quantity of food intake is particularly problematic. They need extra attention both during early rehabilitation and over the longer term. For infants and young children, continued frequent breastfeeding and, when necessary, relactation are important measures. Guidelines on the management of malnutrition are part of the manual Management of the Child with a serious infection or severe malnutrition, which can be used for improving the quality of care in first-referral level facilities.