

Continued Breastfeeding

Complementary Feeding is giving foods and drinks to "Complement" and not to replace on-going breastfeeding.



Continued breastfeeding achieves a strong emotional bond

Why breastmilk continues to be an ideal food even after 6 months of age

- **Breastmilk is a high quality food.** It is a nutrient-rich and energy-rich food, which is easy to digest.
- **Breastfed babies will never go hungry.** Breastfed babies regulate their own food intake; when hungry they reach to be breastfed.
- **Breastmilk provides protective factors.** The anti-infective factors in the breastmilk provide protection against illnesses and reduce the severity of those that occur.
- **Breastfeeding helps recovery from illness.** Sick babies often do not feel like eating foods, but their appetite for breastmilk is still intact.

Disadvantages of introducing family foods before 6 months are:

- Foods may be difficult to eat and digest.
- Babies will take less breastmilk, so that highly nutritious breastmilk is replaced by less nutritious solids.
- Risk and severity of diarrhea and other infections is increased.
- Risk of diseases like allergies and asthma is increased.
- The contraceptive effect of breastfeeding is interfered by early introduction of solids.

Disadvantages of introducing family foods too late are:

- Child does not receive required nutrients.
- Growth and development slows down or stops.
- Risk of deficiencies and malnutrition.
- Increased risk of ill health.

On average, breastfed babies of 6-8 months obtain around 70% of their energy needs from breastmilk, this falls to around 55% at 9-11 months, and 40% at 12-23 months. Breastmilk is also a major provider of protein, vitamins, minerals, essential fatty acids and protective factors. It provides more calories and nutrients per ml than most of the other foods. If babies' stomachs are filled with nutritionally poor foods, they will take less breastmilk and their overall diet and health will be inferior. The contribution of breastmilk is often overlooked in the enthusiasm to get complementary feeding started. The challenge is how to feed other foods so that they **add** to the nutritional value of breastmilk, rather than replace it.

Importance of Optimal IYCF

Malnutrition is responsible, directly or indirectly for 60% of 2.4 million under 5 child deaths in India (global: 10.9 million) (Fig. 1). According to Lancet 2003 series on child survival, 19% of child deaths in India can be saved by achieving 90% coverage of exclusive breastfeeding for the first 6 months and continued breastfeeding along with complementary feeding for 6-12 months. Breastfeeding is identified as the No. 1 preventive intervention for three major killer diseases (neonatal sepsis, diarrhea and pneumonia) in India (Fig. 2).



Fig. 1. Under 5 child deaths in India out of global 10.9 million

Optimal IYCF practices not only contribute to survival but also ensure better IQ and proper physical and psychosocial development of the children who survive and their number in India is about 36 million (below 3 years of age).

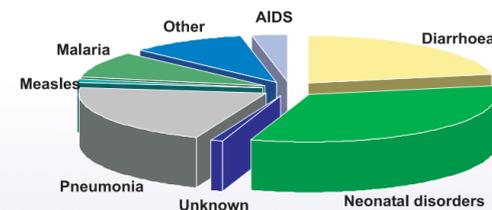


Fig. 2. Major killers of under 5 children

Complementary Feeding

According to the Global Strategy for IYCF and the National Guidelines the complementary foods should be started at the completion of 6 months. The child should be given whatever food that is available at home and is easy to prepare and can be mashed. Mothers can prepare a variety of foods with different combination of ingredients like rice, maize, gram, groundnut, suji, wheat etc. As it takes 10-15 days for a child to get used to a food, any addition should be tried only after such a gap. By the age of 8-9 months children can take food made of any 3 components out of pulse, rice, green vegetables, potato, fruit etc.

6 - 9 months: exploring food and starting to Eat

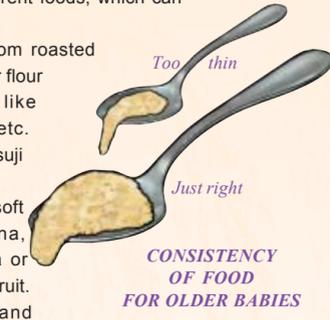
At the completion of 6 months, child needs more nutrients in addition to breastmilk, which can be provided by giving small amounts of soft mashed cereals, dals, vegetables and seasonal fruits. Which food should be given to the child depends upon the local availability that varies from state to state and from district to district in our country. What matters is not any specific food but the food, which is easily, cheaply and seasonally available and can be given in sufficient amount. We should start with one type of food and gradually add different types of foods to make it nutritionally more balanced in calories, proteins, fats, vitamins and minerals.

What to give each day:

Frequent Breastfeeding plus...
Whatever 'Staple' is eaten by the family, such as rice, maize, potato, and wheat.
Legumes/Pulses (beans, peas, lentils, gram, etc.),
Vegetables with most meals. Colored vegetables contain more nutrients than pale.
Fruit as a snack and with meals. Colored fruits are more nutritious
Milk products (curd, cheese)
Nut pastes. Particularly important for vegetarians.
Animal-source foods (meat, poultry, fish or egg). If not daily, then, as often as possible even if the amounts are small.

Some examples of different foods, which can be given, include:

- Thin gruel made from roasted whole wheat flour, or flour of other cereals like jawar, bajra, ragi etc. (any local staple) or suji and milk.
- Mashed potatoes, soft fruits like banana, mango and papaya or any other seasonal fruit.
- Soft cooked and mashed rice and dals.



CONSISTENCY OF FOOD FOR OLDER BABIES

9 - 12 months: eating more

As older babies get used to eating, the number of meals offered can increase to 3 or 4 times a day, with 1 or 2 snacks. Snacks should be nutritious foods which are convenient and easy to prepare at home and babies can feed themselves. New foods should be continually introduced to widen the variety of foods consumed.

12 - 24 months: settling into the family's eating pattern.

By 12-24 months children can have the family diet and should take at least half the amount of a normal adult diet. Some foods will still need to be chopped or softened. Some mothers prepare different snacks, which are handy and can be stored for many days.

Frequency, amount and consistency of foods

As the capacity of the child's stomach is small, he needs to be offered small amounts of foods more frequently.

- At 7-9 months, child should be given at least ½ katori of food at each sitting, 4 times a day (total 2 katoris of food each day).



Feeding is the families responsibility. It is good for fathers to be involved

- At 10-12 months, child should be given at least ½ katori of food at each sitting, 5 times a day (total 2½ katoris of food each day).



- Small amounts of oil or ghee in the child's food makes it energy dense and more palatable.
- Food should be of thick soft consistency, which stays on the spoon will be appropriate to provide sufficient nourishment to the child.

Make feeding playful and enjoyable

Feeding of the child involves his/her interaction with both mother and father. It starts with active feeding where parents feed their child. As the child grows, his/her involvement in feeding increases and later on they learn to feed themselves. During this period, the parents should encourage their children, talk and play with them so that the whole process becomes enjoyable. This has a positive influence on the psychosocial bond between the child and the parents, and also increases the vocabulary of the child. The child needs to be fed slowly and patiently with a variety of foods and a minimum of distractions.

Foods to be avoided

- Packets of fried savoury snacks are of poor nutritional value and much too salty.
- Sugary foods, sweets, fizzy drinks and colas provide energy but no nutrients. They can also lead to tooth decay.
- Juices, teas - these are not nutritious.
- Honey sometimes contains bacteria, which produce toxins leading to infant botulism.
- 'Dal water' because of its low nutritious value.



Young children often like to feed themselves but they may need helping.

Commercial baby foods & infant formula

Commercial foods are generally not necessary. The nutritional content of commercial baby foods is far lower than recommended. Moreover, these foods are usually of same taste, color, consistency and texture so it becomes difficult for the child to change from commercial formula to homemade food. In a study conducted by WHO, *Enterobacter sakazakii* was found in 20% of 141 samples of powdered infant formula from 35 countries. The World Health Assembly (WHA 58.32 dated 25 May 2005) has issued recommendations to all the governments to alert the health professionals about the seriousness of the problem.

Safety of foods

Most diarrhoea episodes in children are due to food contamination whose five main routes are:

- Hands and utensils** – Caregivers and infants both need to wash their hands before feeding or preparing foods, and after changing the baby napkin or touching an animal.
- Raw food and ingredients** – Raw food and ingredients often harbour organisms and they should be peeled or thoroughly washed.
- Storing cooked foods** – Food needs to be given to the child as soon as it is cool enough to eat. If to be fed again, it should be reheated thoroughly until steaming hot. Don't feed cooked foods that have been kept at room temperature for more than 2 hours.
- Water** – Water should be cooled boiled water. This can be stored in a covered container for up to 24 hours.
- Storage and surfaces** – Food should be kept in closed containers.

How to make foods more energy and nutrient rich

- By making the porridge thicker.
- Replacing some of the cooking water with fresh or soured milk, coconut milk, or cream.
- Stirring in groundnut paste (peanut butter) or sesame seeds paste (tahini).
- Adding a spoonful of ghee or oil makes the food softer and energy dense.
- Sugar and jaggery make the food energy rich.

Iron & zinc

Iron and zinc rich foods include dark green leafy vegetables, sprouted pulses and cereals, animal foods, meat, eggs and liver. Iron and zinc are essential for healthy growth of the child's body and brain. Deficiency of iron leads to anemia.

Animal food

The various animal foods are meat, poultry, fish, eggs etc. They provide high quality protein, iron, zinc, vitamin A, and vitamin B12. Egg yolk is rich in fats and vitamin A. Animal foods being expensive if not taken daily, then as often as possible even if in small amounts.

The goals of 10th Five Year Plan are to improve exclusive breastfeeding for the first 6 months to 80% and complementary feeding to 75% between 6-9 months.