

Fundamentals of Child Nutrition

*By Dr. G. K. Khandige

GOOD nutrition is essential for the proper growth and development of children. To avoid nutritional disorders certain basic facts have to be remembered by the parents and medical and para-medical personnel who advise the parents.

1. Facts for parents.
2. Facts for medical and para-medical personnel.

Facts for parents

(a) **Breast milk:** Just as cow's milk is best for the calf, breast milk is best for the baby. So long there is enough breast milk the problems of feeding are negligible. When breast milk is insufficient or absent, the following facts are to be remembered by the parents.

(b) **Selection of the breast milk substitute and preparation of formula:** WHOLE MILK (Cow's milk). 2 parts milk+1 part water (during the first three months of age); 3 parts milk+1 part water (3 to 6 months). One teaspoonful of sugar to be added to every 3 to 4 ozs of the formula. After 6 months no dilution is required.

Total milk required per day is 12 to 18 ozs till 3 months and 20 to 30 ozs from 3 to 6 months.

POWDERED MILK: In case of powdered milk, the directions given on the tin are to be followed. It is advisable to add $\frac{1}{2}$ ounce of extra water, especially during the summer months. The milk powder required is roughly one pound or $\frac{1}{2}$ kg per week for every 8 lbs of the baby's weight.

Note: Preparations like 'Horlicks' Viva', etc. are only additives to milk and not milk substitutes, as they contain less protein and fat but more of carbohydrates.

Beverages like coffee and tea with very little milk are not to be given to babies as they fill up the stomach without giving practically any nutrients. In addition these beverages spoil the appetite.

(c) **TIME SCHEDULE:** Rigid time schedule and quantity per feed are not advisable. There must be a leeway in the time interval between two feeds and in the quantity of food per feed. A sleeping baby is not to be woken up to be fed. Variations in the amount of milk or solids taken at different meals are natural. Periods of likes and dislikes to a particular foodstuff or preparation are quite common.

(d) **WATER BETWEEN FEEDS:** Boiled and cooled water (with or without sugar) be offered to the baby between feeds. This training will be of great help if and when the baby develops diarrhoea which is so common among infants. During diarrhoea, the milk feeds may have to be stopped temporarily and only

clear liquids have to be given to control diarrhoea and to prevent dehydration.

(e) **APPETITE:** (i) During summer months, there is a natural increase in thirst and decrease in hunger. This is normal. Many parents complain 'Doctor, my child takes only water and not food'. (ii) If the child is given odd things like sweets, biscuits, cool drinks, etc. whenever he demands, during meal time, he refuses food, as his stomach is already full. In such cases when the parents complain of the baby's loss of appetite they mean the child is not taking regular meal. Here, there is no real loss of appetite, but is satisfied by odd catables.

(iii) **FORCED FEEDING AND SPANKING** will make the child conditioned against eating. In families where both the parents go out to work, in their hurry, the playful child is forced to eat fast, while the child likes to play and eat slowly. This also makes the child refuse food. It is more so in an intelligent child. This situation becomes worse, when both the parents return home tired after the day's work. Child gets spanking even for his inquisitive questions!

Emotional factors play an important role in child's nutrition. Loving care by the mother or by the person who takes care of the baby, will increase his appetite and digestive power. Similarly task and palatability of food increase the appetite especially in older children.

(f) **INTRODUCTION OF SOLIDS:** Delayed introduction of solids in the diet may make the child refuse them or vomit when coaxed to eat. Well cooked and mashed, cereals (congee or porridge) vegetables like potatoes, carrots and peas and fruits like banana can be started by 3 months of age. At 5 to 6 months of age, the baby is ready to chew and eat coarser food such as pieces of iddli, bread, fruits and cooked vegetables. Before the third month no solids are necessary if the baby gets enough milk. When milk is not available or the parents cannot afford it, well-cooked and mashed cereals (congee or gruel) may be started even at the age of one month. Fruit juice can be started at one month.

(g) **VITAMIN DROPS AND TONICS:** A baby can grow only with proper food and not by tonics and vitamin drops. Many are carried away by the exaggerated advertisements. In our country where the standard of hygiene is very low, it is better not to give even vitamin drops till 3 months of age as contamination of the dropper can cause bowel infection. In breast-fed babies no supplement is necessary till 3 months of age, when they are growing normally.

(h) **HYGIENE:** Parents should have basic idea of hygiene. Cleaning the hands, bottles and teats before preparing the feeds is very important to avoid bowel infections. The vast majority of people are still ignorant of the fact that flies are the worst enemies of mankind (especially of children) as they transmit infections and infestations directly from dirt through food.

Even educated people forget the fact that shoes can carry infections. They enter the house and even the kitchen with shoes on. Shoes can carry infective

* Paediatrician, Children's Hospital, Madras.