

CHILDHOOD

- **Why is good nutrition important during childhood?**

Nutrition plays pivotal role in maintaining good health of children. During the second year, the child increases not only in height by 7-8 cm but also gains 4 times of its birth weight.

Nutrition is necessary for:

- A nutritionally adequate diet is essential for optimal growth and development.
- Appropriate diet during childhood may reduce the risk of diet-related chronic diseases in later life.
- Common infections and malnutrition contribute significantly to child morbidity and mortality.

- **Why calcium requirement of children is high?**

Calcium is required for growth and bone development. Calcium also prevents osteoporosis (thinning of bones). Growing children particularly require more calcium.

- **What measures should be taken to ensure adequate calcium levels in body of children and adolescents?**

Calcium is extremely important for proper growth and development of children. To maintain adequate calcium levels in the body:

- Calcium rich diet should be consumed;
 - Milk, curds and nuts are rich source of bio-available calcium.
 - Ragi and GLV's are also good dietary sources of calcium.
- Regular exercise reduces calcium loss from bones
- Exposure to sunlight maintains Vit-D status which helps in calcium absorption.

- **How can the nutritional requirement of children be met?**

To meet the nutritional requirements of children and adolescents, emphasis should be on the following:

- Young children below the age of 5 years should be given less bulky foods, rich in energy and protein such as legumes, pulses, nuts, edible oil/ghee, sugar, milk and eggs.
- Vegetables including green leafy vegetables and locally available seasonal fruits should be part of their daily menu.
- Snacks make a useful contribution to the nutrient requirements, particularly in older children and adolescents.
- Frequent changes in the menu are often liked by children.
- Older children should consume plenty of milk to fulfil the high calcium requirements.
- Cooking oils/ghee (25-50g) should be consumed.
- Overindulgence in fats may be avoided.

- Excessive salt intake should be avoided particularly by children having a family history of hypertension.

- **How do infections in children lead to malnutrition?**

Common childhood infections like diarrhoea, measles and pneumonia occur in association with malnutrition and contribute to about 70% of mortality. Causes of malnutrition during infections are:

- During periods of infection, children tend to eat less due to reduced appetite.
- Many children vomit frequently.
- Nutrients are also lost in urine and faeces.
- The unhealthy practice of restricting diet, including breast-feeding, by the mother during any sickness could further aggravate the problem.

Hence, extra care is needed in feeding the child appropriately during and after illness to prevent subsequent nutritional deficiencies. . Appropriate feeding during infection is essential, which demands a lot of patience from the mother.

- **How should a child be fed during illness?**

During illness:

- Never starve the child.
- Soft cooked food should be offered at frequent intervals.
- Feed energy rich cereal-pulse diets with milk and mashed vegetables.
- The quantity of the feeds should be increased, after the illness has subsided, till the original weight is regained.
- Give plenty of liquids.

- **What should be done during diarrhoea?**

Diarrhoea is a common childhood disease which leads to dehydration and sometimes death. The child requires prompt correction of fluid and electrolyte loss using oral rehydration solution (ORS) along with appropriate/adequate feeding.

ORS can be prepared by:

- Adding a pinch of salt (between thumb and index finger) and a teaspoon of sugar to a glass of potable water.
- Home-made fluids such as rice or buttermilk with salt can also be used.
- ORS packs can be used by mixing them in specified amount of water.

ORS should be given in small amounts throughout the day to keep the child hydrated.

During diarrhoea:

- Children should frequently be given small quantities of fluids by mouth, including plain water.
- Feeding should be continued, though this goes against the popular practice.
- The diet of 1-2 year old children with diarrhoea should provide energy of about 1000 Kcal/day.
- Calorie-rich, semi-solid, soft diets may be prepared from a variety of cereals and pulses.

- Sprouted grains are easily digestible and provide good nutrition.
- Fat and sugar help in reducing the bulk of the diets and make them energy dense.
- Milk may be mixed with cereal diet to avoid lactose malabsorption.
- If milk is not tolerated, it may be replaced by an equal volume of curd/yogurt/soymilk.
- Mashed vegetables may be incorporated in the diet.
- Feeding becomes easier after the infection subsides. About 6-8 feeds should be given during the day so that the extra food (120-140 Kcal/kg) may be consumed by the child without any difficulty.

Thus, adequate feeding is required during and after diarrhoea to prevent malnutrition.

- **What is lactose intolerance? What should be done in such cases?**

Deficiency of the enzyme *lactase* leads to lactose intolerance. During acute or chronic diarrhoea, lactose intolerance is a mild and transient problem. This problem can be overcome by:

- Reducing the quantity of milk taken at a time or taking milk along with a cereal-pulse meal.
- Milk may be stopped temporarily.
- A diet based on cereals and pulses or chicken and egg white allows the gut to recover.
- Milk should then be slowly introduced.

- **How to stop bottle dependency in the child?**

To stop bottle dependency:

- Offer a very small amount of liquid in a cup with every meal.
- Limit the use of bottle to specific times and places.
- Don't offer a bottle instead of cup when the child refuses the cup (be firm).

- **How to introduce new foods in the diet if a child is a picky eater?**

Introducing new foods in the diet of children is a very difficult task. However here are few tips to guide you:

- Introduce only one new food item at a time.
- Offer small amounts of new food at least 10-14 times, to increase acceptance of the new food.
- Offer new food along with one the child already likes.
- Offer new foods at the beginning of a meal, the child is usually hungrier at this time and accept the new food better in comparison to when the stomach is already full.
- Involve the child in purchasing and preparation of new foods, this can increase the acceptance.
- First refusal of new foods should not be interpreted as not liking the food.
- Don't provide quick substitutes; this hampers the acceptance.
- Don't bribe or reward with treats or sweets.
- Don't force a child to eat or punish for not eating.

- **How to ensure good nutrition for a child with poor growth/ poor eater?**

To ensure adequate nutrition to promote optimum growth in children with poor intake:

- Choose whole milk and dairy products.
- Add oil/ ghee to food to increase nutrient density.
- Add nuts and seeds (in forms suitable to the age of the child) to the preparation for increasing calorie content and overall nutrition.

- **What modifications should be made if the child is having excess weight gain?**

Extra weight gain or obesity is a problem faced due to imbalanced nutrition, inappropriate food choices and lack of physical activity. To combat this, modifications to be made are as follows:

- Offer healthy foods for snacks and meals.
- Offer low fat milk and products.
- Decrease distractions at mealtime so that the child can focus on what is being eaten and how much is being eaten.
- Increase physical activity.
- Have a set time and place for eating any food or liquid.
- Don't bribe to encourage weight loss.

- **What should be done if a child has constipation?**

If a child has constipation:

- Ensure adequacy of fluid intake.
- Include more vegetables and fruits (cooked or raw).
- Include whole grains in diet (whole grain bread, atta, whole pulses).
- Emphasize regular physical activity.

Source:

- Dietitian's pocket guide to nutrition, *Herbold et al.2010*
- India development gateway. <http://www.indg.in/health/>
- UNICEF-India. www.unicef.org/india/children
- Dietary Guidelines for Indians- A Manual. National institute of Nutrition, 2010.