

## THE DANGER OF UNDER FEEDING

Kwashiorkor and marasmus are two diseases caused by insufficient intake of food. This leads to deficiency of calories (energy) and protein (body building material).

### VICTIMS

Kwashiorkor and marasmus occur most commonly in children between 1-5 years of age. Breast milk is sufficient for children only upto the age of 4 months. Supplementation with cereals, pulses, milk and eggs after the age of 4 months is essential. If this is delayed or not done, children do not grow properly and kwashiorkor and marasmus develop.

### SIGNS AND SYMPTOMS:

**OEDEMA:** Children with kwashiorkor first show swelling of the legs. Later, the face and the whole body may also become swollen.

### SKIN CHANGES:

The skin becomes rough and sore.

### HAIR CHANGES:

The hair may become scanty and also change colour from black to various shades of brown. The child also becomes irritable and disinterested in his surroundings.

Children with marasmus become very thin and feeble due to wasting of muscles. However, there is no oedema.

### TREATMENT:

The child should be made to eat more food at frequent intervals. Severe cases with loss of appetite should be treated at the hospital. Milder cases can be treated at home.

The diet must contain protein and energy rich foods. A combination of cereals, millets, pulses and oilseeds will provide the necessary nutrients. If possible, milk, eggs or flesh foods should also be given.

It is important to treat infections and diarrhoea promptly.

The National Institute of Nutrition, Hyderabad has formulated an energy-protein rich mixture to treat protein calorie malnutrition at the home level. It consists of wheat, roasted Bengal gram dhal, groundnuts and jaggery. These ingredients can be suitably changed depending upon local availability. The composition of the mixture is given below:

Whole wheat (roasted)	:	40 grams
Bengal gram (roasted)	:	16 grams
Groundnut (roasted)	:	10 grams
Jaggery	:	<u>20 grams</u>

TOTAL		<u>86</u>
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Calories	:	.350
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Protein	:	11.3 grams.
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Many children with protein calorie malnutrition have been treated with this food mixture. A picture of one of these children is shown below. The child showed improvement after a few weeks and was completely cured within 3 months.

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